10.0 M&R 10: M&R Process Evaluation

This section provides a summary for the M&R-10: M&R Process Evaluation.

10.1 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 retail and wholesale trouble reporting and repair. The objective of Sub-Test 2 was to evaluate BellSouth's performance in making repairs under the conditions of various wholesale maintenance scenarios.

10.2 Evaluation Methods

The evaluation was comprised of two major elements. For Sub-Test 1, process flows for wholesale 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.

10.3 Analysis Methods

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

10.4 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-D.10: M&R-10: M&R Process Evaluation - Summary Results

Evaluation Criteria - Satisfied	
M&R-10-1-1	Review of BellSouth M&R process flows for completeness.
M&R-10-1-2	Review of BellSouth process flows for accuracy.
M&R-10-1-3	Confirm parity between retail and resale process.
M&R-10-1-4	The M&P's reflect the complete M&R process.
M&R-10-1-5	The M&P's provide for a quality improvement process.
M&R-10-1-6	The M&P's provide for an escalation process.
M&R-10-1-7	The M&P's document roles and responsibilities for the M&R escalation process.
M&R-10-1-8	The M&P's include a procedure for severity coding of trouble tickets.
M&R-10-1-9	The M&R process includes performance monitoring.
M&R-10-1-10	Trouble ticket performance is tracked and reported.

M&R-10-1-11	The M&P's include procedures for documentation of unresolved trouble tickets.
M&R-10-1-12	Problem status of trouble tickets is tracked and is readily accessible.
M&R-10-1-13	BLS accurately closes trouble tickets as defined in M&R test bed circuits.
M&R-10-1-14	BLS meets commitment date and times in BellSouth test bed circuits.
M&R-10-1-15	BLS M&R systems accurately capture and track the relevant data used in performance tracking and the measurement of trouble tickets in the test bed circuits.

E. Change Management (CM)

This section provides a summary of the Change Management (CM) domain testing activities. For more information on planned testing, refer to Section VIII: *Change Management Practices Review* in the *Master Test Plan*. For more detailed information on the test design, analysis, and results from the execution of the tests, refer to Section VIII: *Change Management Domain Results and Analysis* in this document.

1.0 CM-1: Change Management Practices Review

This section provides a summary of the CM-1: Change Management Practices Review.

1.1 Objective

The objective of this test was to evaluate overall policies and practices for managing changes to the procedures and Operational Support Systems (OSS) necessary for establishing and maintaining effective operations between BellSouth and Competitive Local Exchange Carriers (CLECs).

1.2 Evaluation Methods

This evaluation encompassed a review of BellSouth's *Electronic Interface Change Control Process (EICCP)*, relevant change control documents, and established process flows. Interviews were conducted with BellSouth personnel responsible for change management, release management, documentation, Carrier Notifications (CNs), and systems and processes for internal change control.

1.3 Analysis Methods

The data collected from the Change Management Practices Review 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-E.1: CM-1: Change Management Practices Review – Summary Results

Evaluation Criteria – Satisfied	
CM-1-1-1	Change management process responsibilities and activities are clearly defined.
CM-1-1-2	Essential elements of the change management process are in place and adequately documented.
CM-1-1-3	The change management process has a framework to evaluate, categorize, and prioritize proposed changes.
CM-1-1-4	The change management process includes procedures for allowing input from all interested parties.

Evaluation Criteria - Satisfied	
CM-1-1-5	The change management process has clearly defined and reasonable intervals for considering and notifying customers about proposed changes.
CM-1-1-6	Documentation regarding proposed changes is distributed on a timely basis.
CM-1-1-7	Procedures and systems are in place to track information such as descriptions of proposed changes, key notification dates, and change status.
CM-1-1-8	Criteria are defined for the prioritization system and for severity coding.

F. Performance Measures Evaluation

1.0 Description

The Performance Measures Evaluations have two aspects: Calculation and Reporting Validation and Data Comparison. The Calculation and Reporting Validation aspect related to every service domain identified in this test (pre-ordering, ordering and provisioning, billing, and maintenance and repair) and the Data Comparison aspect related to each service domain except pre-ordering. Pre-ordering was excluded from the Data Comparison aspect of the evaluation because none of the pre-ordering data were specific to KCI test transactions.

The Calculation and Reporting Validation aspect of the Performance Measures Evaluation determined whether BellSouth's calculations of the Competitive Local Exchange Carrier (CLEC) Service Quality Measurements (SQMs) were accurate during the testing period and whether BellSouth reported the calculated SQM values accurately. KCI based all of its evaluations on the raw data provided by BellSouth[1]. For those SQMs that are calculated for individual CLECs, KCI evaluated BellSouth's values for the KCI test CLEC for the months of November 1999 through January 2001. For those SQMs that are calculated for the CLEC aggregate only, KCI evaluated BellSouth's values for the CLEC aggregate for October 1999, November 1999, or December 1999, with values for additional months being evaluated as part of re-testing activities.

The Data Comparison aspect of Performance Measures Evaluation determined whether certain elements of the raw data provided by BellSouth agreed with the corresponding data collected by KCI during the test. This comparison was necessarily limited to the raw data elements that pertained specifically to the KCI test CLEC and had KCI-collected counterparts. Whereas the Calculation and Reporting aspect of the Performance Measures Evaluation was concerned with the accuracy of SQM calculations, the Data Comparison aspect was concerned with the accuracy of the raw data upon which SQM calculations for individual CLECs are based. KCI evaluated BellSouth's raw data for the months of November 1999 through December 2000.

2.0 Business Process Description

On a monthly basis, BellSouth generates and reports performance measurement statistics called SQMs. The SQM documentation 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

[1] BellSouth uses the term "raw data" to describe the performance measurement data at the stage where it enters into the SQM calculations. KCI uses this nomenclature in this report.

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 comprehensive 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 calculated 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 all to see.

3.0 Methodology

KCI conducted the Calculation and Reporting Validation aspect of the Performance Measures Evaluation in two steps. First, KCI calculated monthly SQMs for the KCI test CLEC using the raw data provided by BellSouth. Second, KCI compared the values it calculated to the SQM values reported by BellSouth. By means of this two-step process, KCI was able to assess the accuracy of the metrics reported by BellSouth.

KCI downloaded each month's SQM reports, as well as the raw data available, from BellSouth's PMAP Web site. KCI also requested and received via e-mail any raw data files that were not available from the PMAP Web site.

For calculation purposes, KCI developed its own computer codes based on the SQM guidelines and other descriptions of calculation procedures (verbal or documented) provided by BellSouth. Upon completing its calculations of the SQMs based on the instructions provided by BellSouth for the months of concern, KCI compared its calculated values to the BellSouth-reported values. When discrepancies arose, KCI discussed them with the appropriate BellSouth personnel. KCI issued an Exception if the discrepancies could not be resolved.

KCI conducted the Data Comparison aspect of the Performance Measures Evaluation by comparing the raw data provided by BellSouth for the KCI test CLEC with the data collected by KCI using its own test management tools or via files furnished by BellSouth. This comparison enabled KCI to determine whether the raw data elements for the SQMs were consistent with the values in the data collected by KCI.

In preparation for Data Comparison, KCI mapped BellSouth's raw data elements to the corresponding KCI data elements. In general, the test data collected by KCI included information recorded directly by KCI as well as information

transmitted by BellSouth to KCI in conjunction with the test. The comparison was meaningful even when the information had been transmitted by BellSouth, because the data being compared had not been extracted from the same BellSouth database.

Based on this mapping, KCI developed computer codes to link each record in the BellSouth raw data to the corresponding record in the KCI test data. KCI used the output files generated from these computer codes to detect any inconsistencies between the BellSouth raw data and the KCI test data.

KCI conducted the Performance Measures Evaluation based only on BellSouth information received through March 15, 2001.

IV. Pre-Ordering (PRE) 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. The Pre-Order (PRE) tests evaluated the systems, processes, and other operational elements associated with BellSouth's ability to provide Competitive Local Exchange Carriers (CLECs) with non-discriminatory access to its Operational Support Systems (OSS) supporting order functions. CLECs submit pre-order queries to validate existing customer information, to verify BellSouth facility availability, and to obtain data (e.g., telephone numbers) that will be input on subsequent service orders. This test assessed the functionality of BellSouth's systems in processing pre-order queries submitted via the Telecommunications Access Gateway (TAG) Client Application Program Interface (API).

2.0 Methodology

The scope of the PRE tests in Georgia encompassed the review and analysis of BellSouth's processes, procedures, interfaces and systems for pre-orders. This was accomplished by reviewing and assessing relevant documentation, testing the functionality of BellSouth's pre-ordering systems, testing the capability to increase system capacity and reviewing metrics reports.

2.1 Business Process Description

TAG

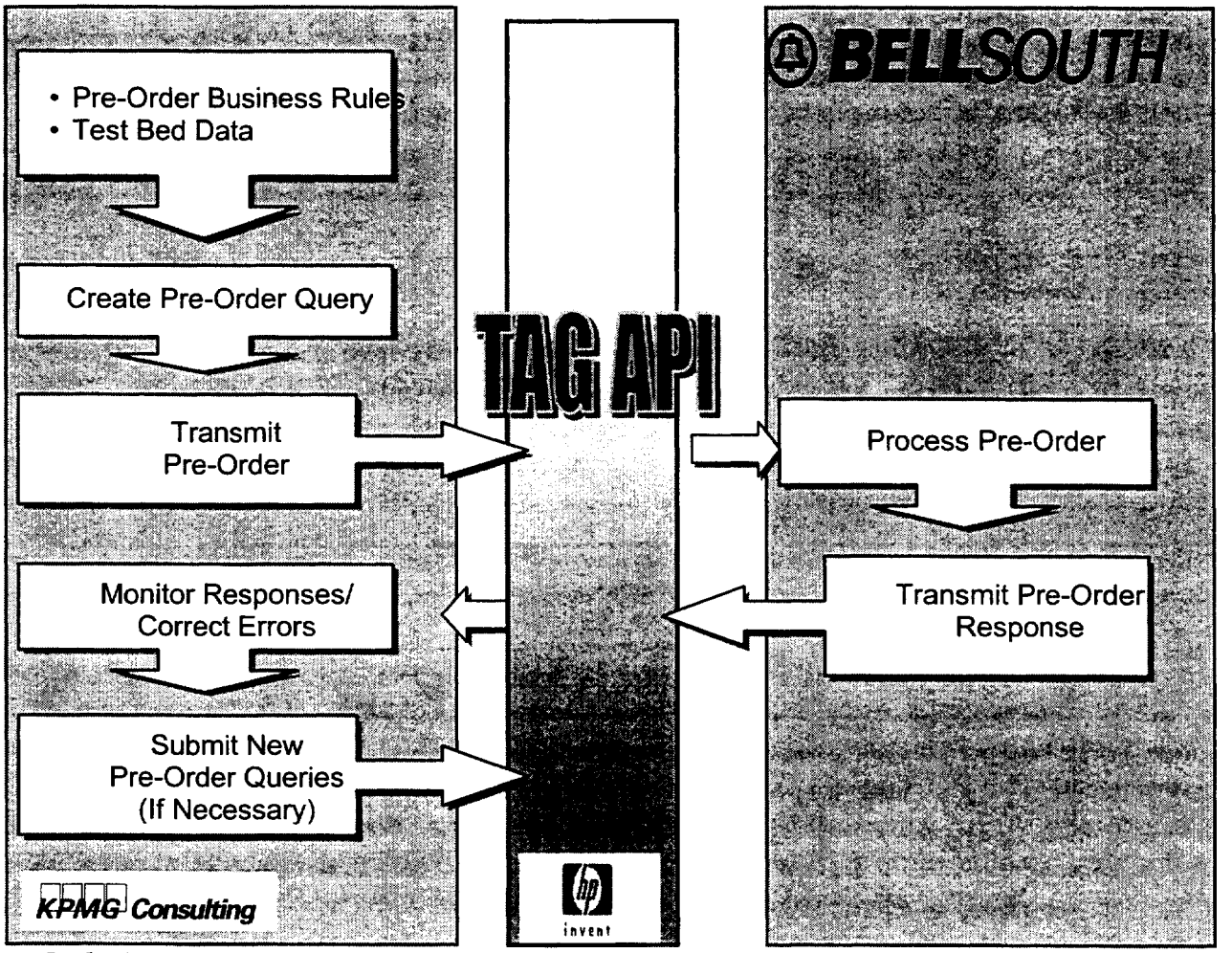
Pre-orders can be submitted electronically to BellSouth through the Telecommunications Access Gateway (TAG), a CORBA-based interface. TAG allows for bi-directional flow of information between BellSouth's Operational Support Systems (OSS) and CLEC customers. CLECs develop their own software applications to obtain information from BellSouth's OSS 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.

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

- Address Validation
- Telephone Number Selection / Reservations / Assignment
- TN Inquiry

- Appointment Availability
- Available Primary Interexchange Carrier (PIC) Inquiry
- Service Availability
- Customer Records
- Due Date Calculation

Figure IV-1: TAG Pre-Order Process Flow



Pre-Ordering

KCI developed pre-order transactions in a text file format using its front-end ordering application. These text files were submitted to Hewlett Packard (HP) according to the pre-ordering schedule, which converted them into TAG pre-order format and transmitted them to BellSouth's TAG Gateway. Pre-order responses from BellSouth were similarly returned to HP and converted from TAG to text file format before reaching KCI's order management application.

Pre-order responses received via the TAG interface fall into one of three categories:

1. *TAG Error Messages*

   The TAG API performs validation activities before a CLEC pre-order query travels to BellSouth's back-end systems. Messages returned by the TAG API in response to errors notify CLECs of invalid or missing data elements on the query; TAG security violation or password expiration at the application level; or BellSouth back-end resource unavailability.

2. *BellSouth Back-end Error Messages*

   Once CLEC pre-order queries have passed through front-end edits on the TAG API, the transactions proceed through BellSouth's back-end pre-order systems for further validation. If the query is incorrectly populated, BellSouth transmits an error or "near match" message.

3. *Successful Pre-order Responses*

   BellSouth transmits a successful pre-order response after the query passes all data element validations. KCI reviewed the pre-order responses for expected customer or facility information (e.g., feature availability, confirmation of TN reservation, customer address).

2.2 *Scenarios*

The *Master Test Plan* defined the pre-ordering scenarios to be tested in this evaluation. The scenarios covered the above mentioned electronic pre-order query types offered by BellSouth. Using these scenarios, KCI developed one or more distinct test cases for each scenario. Test cases contained a more detailed description of the pre-order transaction to be run, including customer type (business or residential); query criteria (certain pre-order queries may be executed using more than one set of data element inputs); and other test conditions (e.g., error introduction). Each test case was then used to generate one or more distinct pre-order test instances.

The table below lists the scenarios used in the pre-order tests.

Table IV-1.1: Pre-Order Scenario Description

Scenario #	Transaction Type	Scenario Description
101	AVQ	Address Validation.
102	CSRQ[1]	Customer Service Record (CSR) Inquiry for BLS residential customer who is a potential CLEC customer.

[1] KCI also submitted several requests for CSRs of SL2 (designed) UNE Loop customers, who are billed from BellSouth's Carrier Access Billing System (CABS). In order to receive CABS CSRs, a request was placed to KCI's Customer Support Manager (CSM) for one or more CABS records. The CSM faxed or mailed these records to KCI.

Scenario #	Transaction Type	Scenario Description
103	CSRQ	CSR Inquiry for a small BLS business customer who is a potential CLEC customer.
104	CSRQ	Deferred CSR Inquiry for a large BLS business customer who is a potential CLEC customer.
105	SAQ	Feature Availability lookup.
106	AAQ	Appointment Availability.
107	TNAQ	Telephone Number (TN) Inquiry.
108	TNAQ/TNSQ/TNCAN	Reserve, extend, and cancel TNs.
109	SAQ	Available Primary Interchange Carrier (PIC) Inquiry.
110	CDD	Due Date Calculation.

2.3 *Test Bed*

For the purpose of submitting pre-order transactions, BellSouth designed test bed accounts according to specifications submitted by KCI. BellSouth also provided KCI with central office and customer information (e.g., telephone numbers, addresses, and switch types) required when populating pre-order transactions. In addition to using test bed accounts, KCI used BellSouth directories to obtain data for address validations.

A. Test Results: TAG Pre-Ordering Functional Test (PRE-1)

1.0 Description

The objective of the Telecommunications Access Gateway (TAG) Pre-Ordering Functional Test (PRE-1) was to evaluate the systems, processes, and other operational elements associated with BellSouth's ability to provide Competitive Local Exchange Carriers (CLECs) with non-discriminatory access to its Operational Support Systems (OSS) supporting pre-order functions. CLECs submit pre-order queries to validate existing customer information, to check BellSouth facility availability, and to obtain data (e.g., telephone numbers and service feature codes) that will be input on subsequent service orders. This evaluation assessed BellSouth's ability to process accurate and timely pre-order transactions via the TAG Client Application Program Interface (API).

2.0 Methodology

This section summarizes the test methodology.

2.1 Business Process Description

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

2.2 Scenarios

KCI generated and transmitted pre-order queries based on the ten pre-order scenarios listed in the *Master Test Plan (MTP)*. The *MTP* defined the pre-order scenarios to be tested in PRE-1, outlining specific requirements for transaction types and customer types.

The list of pre-order scenarios that were used for this test is presented in Section V, Table IV-1.1.

2.3 Test Targets & Measures

The test target was BellSouth's pre-order inquiry process via the TAG interface. 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 IV-1.1: Test Target Cross-Reference

Sub-Process	Function	Evaluation Criteria	Test Cross-Reference
Validate Address	Send address request using Billing Telephone Number (BTN)	Presence of Functionality	PRE-1-1-1 PRE-1-2-1 PRE-1-2-2
	Send address validation request using Working Telephone Number (WTN)	Presence of Functionality	PRE-1-1-1 PRE-1-2-1 PRE-1-2-2
	Send address validation request using full address	Presence of Functionality	PRE-1-1-1 PRE-1-2-1 PRE-1-2-2
	Send address validation request using partial address	Presence of Functionality	PRE-1-1-1 PRE-1-2-1 PRE-1-2-2
	Receive match response	Accuracy of Response Clarity of Information Timeliness of Response	PRE-1-4-1 PRE-1-4-1 PRE-1-3-1 PRE-1-3-2
	Receive near match response	Accuracy of Response Clarity of Information Timeliness of Response	PRE-1-4-2 PRE-1-4-2 PRE-1-3-1 PRE-1-3-2
	Receive no match response	Accuracy of Response Clarity of Information Timeliness of Response	PRE-1-4-2 PRE-1-4-2 PRE-1-3-1 PRE-1-3-2
	Receive error response	Accuracy of Response Clarity of Information Timeliness of Response	PRE-1-4-2 PRE-1-4-2 PRE-1-3-1 PRE-1-3-2
	Correct errors	Clarity of Information	PRE-1-4-2
	Re-send address inquiry	Presence of Functionality	PRE-1-1-1 PRE-1-2-1 PRE-1-2-2
	Receive match response	Accuracy of Response Clarity of Information Timeliness of Response	PRE-1-4-1 PRE-1-4-1 PRE-1-3-1 PRE-1-3-2

Sub-Process	Function	Evaluation Criteria	Test Cross-Reference
Retrieve Customer Service Record	Send CSR request using BTN	Presence of Functionality	PRE-1-1-1 PRE-1-2-1 PRE-1-2-2
	Send CSR request using WTN	Presence of Functionality	PRE-1-1-1 PRE-1-2-1 PRE-1-2-2
	Send CSR request using circuit identifier and state code	Presence of Functionality	PRE-1-1-1 PRE-1-2-1 PRE-1-2-2
	Send CSR request using miscellaneous account number	Presence of Functionality	PRE-1-1-1 PRE-1-2-1 PRE-1-2-2
	Receive match response	Accuracy of Response Clarity of Information Timeliness of Response	PRE-1-4-1 PRE-1-4-1 PRE-1-3-5
	Receive no-match response	Accuracy of Response Clarity of Information Timeliness of Response	PRE-1-4-1 PRE-1-4-1 PRE-1-3-5
	Receive error response	Accuracy of Response Clarity of Information Timeliness of Response	PRE-1-4-1 PRE-1-4-2 PRE-1-3-5
	Correct error(s)	Clarity of Information	PRE-1-4-2
	Resend CSR inquiry	Presence of Functionality	PRE-1-1-1 PRE-1-2-1 PRE-1-2-2
	Receive match response	Accuracy of Response Clarity of Information Timeliness of Response	PRE-1-4-1 PRE-1-4-1 PRE-1-3-5
Determine Product/Service Availability	Send service availability (Local Primary Interexchange Carrier [LPIC], Primary Interexchange Carrier [PIC], Switch Service Availability) request transaction	Presence of Functionality	PRE-1-1-1 PRE-1-2-1 PRE-1-2-2
	Receive availability response	Accuracy of Response Clarity of Information Timeliness of Response	PRE-1-4-1 PRE-1-4-1 PRE-1-3-8
	Receive error response	Accuracy of Response Clarity of Information Timeliness of Response	PRE-1-4-2 PRE-1-4-2 PRE-1-3-8

Sub-Process	Function	Evaluation Criteria	Test Cross-Reference
	Correct errors	Clarity of Information	PRE-1-4-2
	Re-send service availability inquiry	Presence of Functionality	PRE-1-1-1 PRE-1-2-1 PRE-1-2-2
	Receive match response	Accuracy of Response Clarity of Information Timeliness of Response	PRE-1-4-1 PRE-1-4-1 PRE-1-4-8
Request Available Telephone Number(s)	Send Telephone Number (TN) request for specific number(s), i.e., Easy, Sequential, Ascending, Vanity, etc.	Presence of Functionality	PRE-1-1-1 PRE-1-2-1 PRE-1-2-2
	Send TN request for random number(s)	Presence of Functionality	PRE-1-1-1 PRE-1-2-1 PRE-1-2-2
	Send TN request for a range of specific numbers	Presence of Functionality	PRE-1-1-1 PRE-1-2-1 PRE-1-2-2
	Send TN request for a range of random numbers	Presence of Functionality	PRE-1-1-1 PRE-1-2-1 PRE-1-2-2
	Receive available numbers response	Accuracy of Response Clarity of Information Timeliness of Response	PRE-1-4-1 PRE-1-4-1 PRE-1-3-4 PRE-1-3-6 PRE-1-3-7
	Receive error response	Accuracy of Response Clarity of Information Timeliness of Response	PRE-1-4-2 PRE-1-4-2 PRE-1-3-4 PRE-1-3-6 PRE-1-3-7
	Correct errors	Clarity of Information	PRE-1-4-2
	Re-send available telephone number request	Presence of Functionality	PRE-1-1-1 PRE-1-2-1 PRE-1-2-2
	Receive available numbers response	Accuracy of Response Clarity of Information Timeliness of Response	PRE-1-4-1 PRE-1-4-1 PRE-1-3-4 PRE-1-3-6 PRE-1-3-7

Sub-Process	Function	Evaluation Criteria	Test Cross-Reference
Reserve TNs	Send reservation for a single TN	Presence of Functionality	PRE-1-1-1 PRE-1-2-1 PRE-1-2-2
	Send reservation for Multi-Line-Hunt TNs	Presence of Functionality	PRE-1-1-1 PRE-1-2-1 PRE-1-2-2
	Send reservation for Direct In-Dial TNs	Presence of Functionality	PRE-1-1-1 PRE-1-2-1 PRE-1-2-2
	Send reservation extension request	Presence of Functionality	PRE-1-1-1 PRE-1-2-1 PRE-1-2-2
	Receive confirmation response	Accuracy of Response Clarity of Information Timeliness of Response	PRE-1-4-1 PRE-1-4-1 PRE-1-3-4
	Receive error response	Accuracy of Response Clarity of Information Timeliness of Response	PRE-1-4-2 PRE-1-4-2 PRE-1-3-4
	Correct errors	Clarity of Information	PRE-1-4-2
	Re-send TN reservation request	Presence of Functionality	PRE-1-1-1 PRE-1-2-1 PRE-1-2-2
	Receive confirmation response	Accuracy of Response Clarity of Information Timeliness of Response	PRE-1-4-1 PRE-1-4-1 PRE-1-3-4
Cancel TN Reservation	Send cancel reservation request for Single TN	Presence of Functionality	PRE-1-1-1 PRE-1-2-1 PRE-1-2-2
	Send cancel reservation request for Multi-Line Hunt	Presence of Functionality	PRE-1-1-1 PRE-1-2-1 PRE-1-2-2
	Send cancel reservation request for Direct-In-Dial	Presence of Functionality	PRE-1-1-1 PRE-1-2-1 PRE-1-2-2
	Receive confirmation response	Accuracy of Response Clarity of Information Timeliness of Response	PRE-1-4-1 PRE-1-4-1 PRE-1-3-4
	Receive error response	Accuracy of Response Clarity of Information Timeliness of Response	PRE-1-4-2 PRE-1-4-2 PRE-1-3-4

Sub-Process	Function	Evaluation Criteria	Test Cross-Reference
	Correct errors	Clarity of Information	PRE-1-4-2
	Re-send cancel TN reservation request	Presence of Functionality	PRE-1-1-1 PRE-1-2-1 PRE-1-2-2
	Receive valid response	Accuracy of Response Clarity of Information Timeliness of Response	PRE-1-4-1 PRE-1-4-1 PRE-1-3-4
Determine Appointment Availability	Send request for appointment availability	Presence of Functionality	PRE-1-1-1 PRE-1-2-1 PRE-1-2-2
	Receive valid response	Accuracy of Response Clarity of Information Timeliness of Response	PRE-1-4-1 PRE-1-4-1 PRE-1-3-3
	Receive error response	Accuracy of Response Clarity of Information Timeliness of Response	PRE-1-4-2 PRE-1-4-2 PRE-1-3-3
	Correct errors	Clarity of Information	PRE-1-4-2
	Re-send available due date request	Presence of Functionality	PRE-1-1-1 PRE-1-2-1 PRE-1-2-2
	Receive valid response	Accuracy of Response Clarity of Information Timeliness of Response	PRE-1-4-1 PRE-1-4-1 PRE-1-3-3
Calculate Due Date	Send request for due date calculation	Presence of Functionality	PRE-1-1-1 PRE-1-2-1 PRE-1-2-2
	Receive valid response	Accuracy of Response Clarity of Information Timeliness of Response	PRE-1-4-1 PRE-1-4-1 PRE-1-3-9
	Receive error response	Accuracy of Response Clarity of Information Timeliness of Response	PRE-1-4-2 PRE-1-4-2 PRE-1-3-9
	Correct errors	Clarity of Information	PRE-1-4-2
	Re-send due date calculation request	Presence of Functionality	PRE-1-1-1 PRE-1-2-1 PRE-1-2-2
	Receive valid response	Accuracy of Response Clarity of Information Timeliness of Response	PRE-1-4-1 PRE-1-4-1 PRE-1-3-9

Sub-Process	Function	Evaluation Criteria	Test Cross-Reference
Pre-Order/Order Integration	Submit pre-order transactions designated for integration test	Presence of Functionality	PRE-1-1-1 PRE-1-2-1 PRE-1-2-2
	Receive valid response	Accuracy of Response Clarity of Information Timeliness of Response	PRE-1-4-1 PRE-1-4-1 PRE-1-2-1 through PRE-1-2-9
	Receive error response	Accuracy of Response Clarity of Information Timeliness of Response	PRE-1-4-2 PRE-1-4-2 PRE-1-2-1 through PRE-1-2-9
	Correct errors	Clarity of Information	PRE-1-4-2
	Re-send transactions	Presence of Functionality	PRE-1-1-1 PRE-1-2-1 PRE-1-2-2
	Receive valid responses	Accuracy of Response Clarity of Information Timeliness of Response	PRE-1-4-1 PRE-1-4-1 PRE-1-2-1 through PRE-1-2-9

2.4 *Data Sources*

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

Table IV-1.2: Data Sources for TAG Pre-Ordering Functional Test

Document	File Name	Location in Work Papers	Source
Pre-Order Business Rules, Versions 2.0, 3.0, 4.0, 5.0, 6.0, and 7.0	No Electronic Copy	PRE-1-A-1	BLS
Pre-Order Business Rules Data Dictionary, Versions 1.0 and 3.0	No Electronic Copy	PRE-1-A-2	BLS
Telecommunications Access Gateway (TAG) API Reference Guide, Versions 2.2.0.2, 2.2.0.4, 2.2.0.5, 2.2.0.7, 2.2.0.8, and 2.2.0.11	No Electronic Copy	PRE-1-A-3	BLS
TAG Programmers Job Aid	No Electronic Copy	PRE-1-A-4	BLS
Pre-Order Test Case Master	POTestCases.xls	PRE-1-A-5	KCI
Transaction Submission Schedule	Schedule.xls	PRE-1-A-6	KCI

Document	File Name	Location in Work Papers	Source
HP TAG System Availability Logs	TAGSystAvail.mdb	PRE-1-A-7	HP
Pre-Order Response Completeness Results Log	PreOrderResponse.xls	PRE-1-A-8	KCI
Pre-Order Timeliness Report Detail: Initial Test	PreOrderTimes.xls	PRE-1-A-9	KCI
Pre-Order Timeliness Report Detail: Re-Test	PreOrderTimesRetest.xls	PRE-1-A-10	KCI
CDD Interval Tracking Log	CDDTracking.xls	PRE-1-A-11	KCI
Service Availability Query (SAQ) Detail: Re-Test	SAQDetail.xls	PRE-1-A-12	KCI
Help Desk Log - Pre-Orders	Help Desk Log.xls	PRE-1-A-13	KCI
Pre Order Expected Response Log	POExpectedResponses.xls	PRE-1-A-15	KCI

2.4.1 *Data Generation/Volumes*

Data for this test were generated through pre-order transaction submissions via TAG. The number of transactions submitted during functional testing was determined based on the number of pre-order query types available to CLECs via the TAG interface.

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

2.5 *Evaluation Methods*

To facilitate pre-order inquiry submission, BellSouth provided KCI with test bed accounts that were provisioned according to KCI specifications[1]. Using this test bed information, as well as BellSouth Pre-ordering Business Rules[2], KCI developed test cases and instances (individual pre-order transactions) to be submitted via TAG.

Pre-order transactions were submitted and the results logged and compared to expected pre-ordering system functionality and business processes, as outlined in Section V, "Ordering & Provisioning Overview."

---

1 Refer to Section V, "O&P Overview" for a more detailed description of the Ordering and Provisioning test bed. The Pre-Order Functional Test utilized the test bed account information provided for the Ordering and Provisioning tests.

2 An initial version of the *BellSouth Pre-order Business Rules* was distributed on the BellSouth Interconnection Web site on 12/16/99. Prior to this date, KCI utilized the *TAG API Guide*, in conjunction with information distributed during BellSouth TAG training, to populate pre-order transactions.

2.6 *Analysis Methods*

The TAG Pre-Ordering 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 Pre-Ordering Functional Test.

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[3]. 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 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-1.3: Evaluation Criteria and Results

Test Cross-Reference	Evaluation Criteria	Result	Comments
System Availability			
PRE-1-1-1	TAG pre-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[4]. During the course of this test, Hewlett Packard attempted to maintain a constant connection to BLS's TAG interface by implementing regular system 'pinging.' Based on an analysis of HP's TAG system availability logs between 2/15/00 and 7/27/00[5], KCI observed that the TAG interface was available during 99.5% of scheduled hours of availability[6].
Presence of Functionality			
PRE-1-2-1	BLS's TAG interface provides expected system responses.	Satisfied	The KCI standard is 99% of expected system responses received. BLS's TAG interface provided responses (TAG API error, back-end error, or back-end success response) for 100% of 1,317 pre-order transactions submitted during initial functional testing.
PRE-1-2-2	BLS systems or representatives provide required pre-ordering functionality.	Satisfied	BLS systems and representatives provided appropriate functionality to process all of the pre-order transaction types evaluated during the course of this test (see Section V, Table IV-1.1). KCI initially encountered functionality deficiencies when processing Calculate Due Date[7] (CDD) requests for the following

4 Regular scheduled hours of availability for the TAG interface are published on the BellSouth 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 BLS Web site.

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

6 KCI could not conclusively determine the root source for all recorded downtime (BellSouth or HP).

7 CDD queries are performed to determine a standard service provisioning interval for a specified order Requisition (REQ) and Activity (ACT) combination. KCI attempted to execute CDD pre-orders for each REQ ACT combination performed in the order functional evaluation.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			order types: • Loop with Number Portability - Migration as-is • Stand-Alone Number Portability - Migration as-is. When performing due date calculations for the above order types, KCI received error messages indicating that the REQ/ACT type was invalid. KCI issued Exception 65. BLS implemented the required functionality to process Number Portability CDD transactions with version 2.2.0.11 of TAG. KCI performed a re-test of CDD functionality and found that TAG 2.2.0.11 contained the necessary functionality to process Number Portability CDD requests. See Exception 65 for additional information on this issue. Exception 65 is closed. Following the release of TAG 2.2.0.11, KCI was unable to perform CDD transactions associated with UNE Loop-Port Combination accounts. At the time of the interface release, the Pre-Order Business Rules did not provide information on a new field (RSPRODUCT) added to the CDD query. BLS released updated Business Rules on 11/9/00 to address this field. In addition, BLS announced a functionality workaround for processing CDD queries for UNE Loop-Port Combination customers. This workaround was communicated via the Carrier Notification process on December 29, 2000. Following this clarification on valid entries for the RSPRODUCT field, KCI was able to successfully execute CDD

[8] This second ordering re-test was initiated on January 19, 2001. KCI executed pre-order transactions in support of this re-test via TAG Version 2.2.0.11.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			transactions for Loop-Port Combinations. See Exception 116 for additional information on this issue. KCI has recommended closure of Exception 116 to the GPSC. While executing pre-order requests in support of the second ordering functional re-test[8], KCI was unable to perform Telephone Number Selection Queries (TNSQs) for customers served out of Macon or Augusta Central Offices (COs). In response to TNSQs submitted, BLS delivered error messages advising KCI to call BLS's Electronic Commerce (EC) Support Desk. On 2/9/01, BLS determined that an audit table entry was missing from BLS back-end tables and added the appropriate audit record. Following this fix, KCI was able to successfully execute TNSQ transactions for all relevant COs. See Exception 130 for additional information on this issue. KCI has recommended closure of Exception 130 to the GPSC.

Test Cross-Reference	Evaluation Criteria	Result	Comments
Timeliness of Response[9] [10] [11]			
PRE-1-3-1	The TAG interface provides timely pre-order responses from BLS's RSAG-TN back end system[12].	Satisfied[13]	The GPSC-approved standard is parity with retail performance. Based on BLS June performance reports, KCI determined the retail standard response time for AVQ_TN inquiries to be 1.1 seconds. Responses to AVQ_TNs received during KCI's initial testing were delivered in an average of 11.8 seconds. KCI performed a re-test of pre-order response timeliness following BLS TAG system upgrades. Responses to AVQ_TNs received during re-testing were delivered in an average of 1.2 seconds. See Tables IV-1.4 through IV-1.6 for additional detail on pre-order response timeliness.

[9] See Exception 24 for additional information on BellSouth's pre-order response timeliness performance for all query types. Based on BLS system upgrades implemented with TAG Version 2.2.0.7, KCI initiated a re-test on 4/19/00.

[10] In accordance with the GPSC's June 6, 2000 measures and standards to be used for purposes of this evaluation, KPMG reviewed pre-order timeliness results relative to BellSouth retail pre-order timeliness. This standard does not include allowances for transaction transmission time from the test CLEC to BellSouth, and for response transmission time from BellSouth back to the test CLEC. The GPSC's Order specifies that pre-order timeliness results should be disaggregated by the following back-end systems: RSAG-TN; RSAG-ADDR; DSAP; ATLAS; CSRACCTS; CSROCSR.

[11] KCI analyzed BellSouth-published retail performance data for the month of June 2000. Since Bellsouth retail data is reported by business and residential pre-order categories, KCI compared re-test results to a weighted average of BellSouth residential and business results. For those query types where BellSouth retail data was available, KCI performed three "t-tests". The first test compared the average of BellSouth retail business and residence averages to the KCI data. The other two tests separately compared the KCI data to: 1) the average of BellSouth retail business data; and 2) the average of BellSouth retail residence data. The results of the three tests demonstrated consistent variation from the retail performance for each query type. KCI also conducted statistical analysis to determine whether the KCI result was statistically different from the BellSouth combined average.

[12] BellSouth's RSAG-TN system processes Address Validation Queries by Telephone Number (AVQ_TNs).

[13] Although the test performance is above the BellSouth parity threshold of 1.1 seconds, the statistical evidence is not strong enough to conclude that the performance is above the threshold 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 within the standard. The p-value, which indicates the chance of observing this result when the benchmark is being met, is 0.1970 , above the .0500 cutoff for a statistical conclusion of failure.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PRE-1-3-2	The TAG interface provides timely pre-order responses from BLS's RSAG-Address back end system[14].	Satisfied[15]	The GPSC-approved standard is parity with retail performance. Based on BLS June performance reports, KCI determined the retail standard response time for AVQ inquiries to be 1.8 seconds. Responses to AVQs received during KCI's initial testing were delivered in an average of 68.3 seconds. KCI performed a re-test of pre-order response timeliness following BLS TAG system upgrades. Responses to AVQs received during re-testing were delivered in an average of 1.9 seconds. See Tables IV-1.4 through IV-1.6 for additional detail on pre-order response timeliness.

[14] BellSouth's RSAG-Address system processes Address Validation Queries (AVQs).

[15] Although the test performance is above the BellSouth parity threshold of 1.8 seconds, the statistical evidence is not strong enough to conclude that the performance is above the threshold 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 within the standard. The p-value, which indicates the chance of observing this result when the benchmark is being met, is 0.4083, above the .0500 cutoff for a statistical conclusion of failure.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PRE-1-3-3	The TAG interface provides timely pre-order responses from BLS's DSAP back end system[16].	Satisfied[17]	The GPSC-approved standard is parity with retail performance. Based on BLS June performance reports, KCI determined the retail standard response time for AAQ inquiries to be 0.5 seconds. Responses to AAQs received during KCI's initial testing were delivered in an average of 10.5 seconds. KCI performed a re-test of pre-order response timeliness following BLS TAG system upgrades. Responses to AAQs received during re-testing were delivered in an average of 1.0 second. See Tables IV-1.4 through IV-1.6 for additional detail on pre-order response timeliness.
PRE-1-3-4	The TAG interface provides timely pre-order responses from BLS's ATLAS back end system[18].	Satisfied	The GPSC-approved standard is parity with retail performance. Based on BLS June performance reports, KCI determined the retail standard response time for TNAQ, TNSQ, and TNCAN_TN inquiries to be 1.2 seconds. Responses to TNAQs, TNSQs, and TNCAN_TNs received during KCI's initial testing were delivered in an average of 44.9 seconds. KCI performed a re-test of pre-order response timeliness following BLS TAG system upgrades. Responses to TNAQs, TNSQs, and TNCAN_TNs received during re-testing were delivered in an average of 1.2 seconds. See Tables IV-1.4 through IV-1.6 for additional detail on pre-order response timeliness.

[16] BellSouth's DSAP system processes Appointment Availability Queries (AAQs).

[17] Although the result of 1.0 seconds exceeds the BLS retail average of 0.5 seconds by a statistically significant interval, it is KCI's professional judgment that the average response interval for Test-CLEC-submitted AAQ pre-orders is within a reasonable timeframe.

[18] BellSouth's ATLAS system processes Telephone Number Assignment Queries (TNAQs), Telephone Number Selection Queries (TNSQs), and Telephone Number Cancellations by TN (TNCAN_TN).

Test Cross-Reference	Evaluation Criteria	Result	Comments
PRE-1-3-5	The TAG interface provides timely pre-order responses from BLS's CRSECSR and CSRACCTs back end systems[19].	Satisfied	The GPSC-approved standard is parity with retail performance. Based on BLS June performance reports, KCI determined the retail standard response time for AVQ_TN queries to be 3.1 seconds. Responses to CSRQs received during KCI's initial testing were delivered in an average of 8.7 seconds. KCI performed a re-test of pre-order response timeliness following BLS TAG system upgrades. Responses to CSRQs received during re-testing were delivered in an average of 1.8 seconds. See Tables IV-1.4 through IV-1.6 for additional detail on pre-order response timeliness.

[19] BellSouth's CRSECSR and CSRACCT systems process Customer Service Record Queries (CSRQs).

Test Cross-Reference	Evaluation Criteria	Result	Comments
PRE-1-3-6	The TAG interface provides timely pre-order responses from BLS's ATLAS-MLH back-end system[20].	Satisfied[21]	The KCI standard for pre-order response timeliness is an average of eight seconds. Responses to TNAQ_MLH and TNCAN_MLHs received during KCI's initial testing were delivered in an average of 31.9 seconds. KCI performed a re-test of pre-order response timeliness following BLS TAG system upgrades. Responses to TNAQ_MLH and TNCAN_MLHs received during re-testing were delivered in an average of 1.0 second. See Tables IV-1.4 through IV-1.6 for additional detail on pre-order response timeliness.
PRE-1-3-7	The TAG interface provides timely pre-order responses from BLS's ATLAS-DID back-end system[22].	Satisfied[23]	The KCI standard for pre-order response timeliness is an average of eight seconds. Responses to TNAQ_DID and TNCAN_DIDs received during KCI's initial testing were delivered in an average of 9.8 seconds. KCI performed a re-test of pre-order response timeliness following BLS TAG system upgrades. Responses to TNAQ_DID and TNCAN_DIDs received during re-testing were delivered in an average of 2.0 seconds. See Tables IV-1.4 through IV-1.6 for additional detail on pre-order response timeliness.

[20] BellSouth's ATLAS-MLH system processes Telephone Number Assignment and Cancellation Queries for Multi-Line Hunt numbers (TNAQ_MLH and TNCAN_MLH).

[21] BellSouth retail analog data on responses from ATLAS-MLH is not currently available. BellSouth retail ordering representatives currently utilize a manual process for selecting and reserving MLH numbers. As a result, KCI is unable to evaluate TNAQ_MLH and TNCAN_MLH timeliness results in comparison to a retail benchmark for electronic response timeliness. The result for this criteria is based on KCI's professional judgment.

[22] BellSouth's ATLAS-DID system processes Telephone Number Assignment and Cancellation Queries for Direct-In-Dial numbers (TNAQ_DID and TNCAN_DID).

[23] BellSouth retail analog data on responses from ATLAS-DID is not currently available. BellSouth retail ordering representatives currently utilize a manual process for selecting and reserving DID numbers. As

Test Cross-Reference	Evaluation Criteria	Result	Comments
PRE-1-3-8	The TAG interface provides timely pre-order responses from BLS's OASIS back-end system[24].	Satisfied[25]	The GPSC-approved standard is parity with retail performance. Based on BLS June performance reports, KCI determined the retail standard response time for SAQ queries to be 1.3 seconds. Responses to SAQs received during initial testing were delivered in an average of 33.9 seconds. KCI performed a re-test of pre-order response timeliness following BLS TAG system upgrades. Responses to SAQs received during re-testing were delivered in an average of 11.6 seconds[26]. See Tables IV-1.4 through IV-1.6 for additional detail on pre-order response timeliness.

a result, KCI is unable to evaluate TNAQ_DID and TNCAN_DID timeliness results in comparison to a retail benchmark for electronic response timeliness. The result for this criteria is based on KCI's professional judgment.

[24] BellSouth's OASIS system processes Service Availability Queries (SAQs).

[25] Although the result of 11.6 seconds exceeds the BLS retail average of 1.3 seconds by a statistically significant interval, it is KCI's professional judgment that the average response interval for Test-CLEC-submitted SAQ pre-orders is within a reasonable timeframe.

[26] Service Availability Queries (SAQs) may be performed by requesting a) information on a specific service/feature or group of related features; or b) information on all features available from a particular BLS switch. The current SQM-related standard for pre-order response timeliness does not distinguish between variations of SAQs. In addition, BLS retail timeliness results are not disaggregated by "full" versus "partial" SAQ inquiries. The distribution of SAQ pre-order variations executed by KCI may not reflect the distribution of SAQ variations included in the BLS retail results. The average response time for "full" SAQs performed during the KCI re-test was 31 seconds. For SAQs requesting partial information, the average re-test response time was 2 seconds.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PRE-1-3-9	The TAG interface provides timely pre-order responses to Calculate Due Date (CDD) inquiries.	Satisfied[27]	The KCI standard for pre-order response timeliness is an average of eight seconds. Responses to CDDs received during initial testing were delivered in an average of 0.1 seconds. KCI performed a re-test of pre-order response timeliness following BLS TAG system upgrades. Responses to CDDs received during re-testing were delivered in an average of 0.1 seconds. See Tables IV-1.4 through IV-1.6 for additional detail on pre-order response timeliness.
Accuracy of Response[28]			
PRE-1-4-1	BLS system or representative provides clear, accurate, and complete pre-order success responses.	Satisfied	A sample of pre-order responses to all inquiry types was examined for clarity, completeness, and accuracy relative to the BLS Business Rules. Responses were received to valid pre-order inquiries. Responses contained complete information with respect to BLS Business Rules 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 Exceptions 63 and 66 for additional information on this issue. Exceptions 63 and 66 are closed. KCI also encountered discrepancies between service due date intervals obtained via CDD queries and those

[27] BellSouth retail analog data is not available for the CDD query. BellSouth retail representatives do not utilize this function when retrieving information needed to process retail orders. As a result, KCI is unable to evaluate CDD timeliness results in comparison to a retail benchmark. The result for this criteria is based on KCI's professional judgment.

[28] KCI defined an accurate pre-order success or back-end error response to contain: a) all required data values; b) no prohibited data values. Expected and prohibited values should be contained within BellSouth Business Rule documentation.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			obtained via BLS documentation for the same order type. BLS performed several activities to correct these discrepancies: • Implemented a change on July 21, 2000 to update the BLS interval tables used to generate CDD response intervals. • Introduced modifications in TAG Version 2.2.0.11 to correct errors in generating CDD intervals for Loop-Port Combination requests. • Updated the Product and Services Interval Guide (Issue 3b) to more accurately reflect service delivery intervals for REQ TYPE J. KCI performed a re-test to evaluate BLS changes to TAG 2.2.0.11. CDD queries covering the range of electronically-available order types were submitted, and the CDD interval responses were compared to the intervals provided in BLS documentation. 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

Test Cross-Reference	Evaluation Criteria	Result	Comments
			to the GPSC.
PRE-1-4-2	BLS system or representative provides clear, accurate, and complete back-end or TAG API errors.	Satisfied	A sample of error responses to all inquiry types was examined for clarity, completeness, and accuracy relative to the BLS Business Rules. Error messages were received in response to invalid pre-order requests and provided an adequate level of information to determine the cause of error and contained complete information with respect to BLS Business Rule requirements in appropriate cases.

Table IV-1.4: Average Pre-Order Response Timeliness by Category

Pre-Order Category (BLS back-end system)	Query Type(s) within Category	Average Response Time (seconds) – Initial Testing[29]	Average Response Time (seconds) – Retest[30]	BLS Retail Average[31]
RSAG, by TN	AVQ_TN	11.8	1.21	1.1
RSAG, by Address	AVQ	63.3	1.9	1.8
ATLAS	TNAQ; TNSQ; TNCAN_TN;	44.9	1.2	1.2
CRSECSR	CSRQ	8.7	1.8	3.1
DSAP	AAQ	10.5	1.0	0.5
ATLAS - MLH	TNAQ_MLH; TNCAN_MLH	31.9	1.0	N/A
ATLAS - DID	TNAQ_DID; TNCAN_DID	9.8	1.96	N/A
OASIS	SAQ	33.9	11.6	1.3
N/A[32]	CDD	0.1	0.1	N/A

[29] Initial testing was conducted during November 1999 - March 2000.

[30] Re-testing was conducted during April - May 2000.

[31] BellSouth Retail pre-order response times were obtained from the June performance measurement reports.

[32] CDD pre-order queries are not processed by BellSouth back-end systems. Results are generated based on a series of tables and algorithms applied by the TAG API.

Table IV-1.5: Pre-Order Response Timeliness - Initial Test Results [33,34]

AAQ	Appointment Availability Query								
228 Total Transactions	<=6 sec	7-10 sec	11-15 sec	16-20 sec	21-30 sec	31-45 sec	46-60 sec	> 60 sec	TOTAL
TAG API Responses	27	2	1	0	0	0	0	0	30
	90%	7%	3%	0%	0%	0%	0%	0%	100%
BLS Back-end System Responses	36	57	67	20	10	7	0	1	198
	18%	29%	34%	10%	5%	4%	0%	1%	100%
AVQ_TN	**Address Validation Query by Telephone Number**								
107 Total Transactions	<=6 sec	7-10 sec	11-15 sec	16-20 sec	21-30 sec	31-45 sec	46-60 sec	> 60 sec	TOTAL
TAG API Responses	25	4	6	0	0	0	0	2	37
	68%	11%	16%	0%	0%	0%	0%	5%	100%
BLS Back-end System Responses	12	16	14	16	5	6	1	0	70
	17%	23%	20%	23%	7%	9%	1%	0%	100%
TNAQ	**Telephone Number Assignment Query**								
180 Total Transactions	<=6 sec	7-10 sec	11-15 sec	16-20 sec	21-30 sec	31-45 sec	46-60 sec	> 60 sec	TOTAL
TAG API Responses	19	1	0	0	2	0	0	3	25
	76%	4%	0%	0%	8%	0%	0%	12%	100%
BLS Back-end System Responses	44	9	75	13	13	0	1	0	155
	28%	6%	48%	8%	8%	0%	1%	0%	100%
TNSQ	**Telephone Number Selection Query**								
133 Total Transactions	<=6 sec	7-10 sec	11-15 sec	16-20 sec	21-30 sec	31-45 sec	46-60 sec	> 60 sec	TOTAL
TAG API Responses	45	0	0	0	0	0	0	0	45
	100%	0%	0%	0%	0%	0%	0%	0%	100%
BLS Back-end System Responses	23	3	48	11	3	0	0	0	88
	26%	3%	55%	13%	3%	0%	0%	0%	100%

[33] Totals may not equal 100% due to rounding.

[34] Timeliness results in the following tables (IV-1.5 and IV-1.6) are disaggregated by response source to provide a more detailed view of timeliness of responses from both the TAG API and the BLS back-end systems. TAG API errors are generated by the CLEC's interface, prior to the transaction being sent through the BLS TAG gateway. Response timeliness results presented in Table IV - 1.4 represent an average of total (API and back-end) responses.

AVQ	Address Validation Query								
137 Total Transactions	<=6 sec	7-10 sec	11-15 sec	16-20 sec	21-30 sec	31-45 sec	46-60 sec	> 60 sec	TOTAL
TAG API Responses	17	0	0	0	0	0	0	3	20
	85%	0%	0%	0%	0%	0%	0%	15%	100%
BLS Back-end System Responses	11	6	26	23	25	23	3	0	117
	9%	5%	22%	20%	21%	20%	3%	0%	100%
SAQ	**Service Availability Query**								
97 Total Transactions	<=6 sec	7-10 sec	11-15 sec	16-20 sec	21-30 sec	31-45 sec	46-60 sec	> 60 sec	TOTAL
TAG API Responses	33	4	1	0	0	0	0	0	38
	87%	11%	3%	0%	0%	0%	0%	0%	100%
BLS Back-end System Responses	2	5	5	0	4	0	21	22	59
	3%	8%	8%	0%	7%	0%	36%	37%	100%
CSRQ	**Customer Service Record Query**								
148 Total Transactions	<=6 sec	7-10 sec	11-15 sec	16-20 sec	21-30 sec	31-45 sec	46-60 sec	> 60 sec	TOTAL
TAG API Responses	35	22	24	3	2	0	0	0	86
	41%	26%	28%	3%	2%	0%	0%	0%	100%
BLS Back-end System Responses	27	0	20	13	2	0	0	0	62
	44%	0%	32%	21%	3%	0%	0%	0%	100%
CDD	**Calculated Due Date**								
154 Total Transactions	<=6 sec	7-10 sec	11-15 sec	16-20 sec	21-30 sec	31-45 sec	46-60 sec	> 60 sec	TOTAL
TAG API Responses	40	0	0	0	0	0	0	0	40
	100%	0%	0%	0%	0%	0%	0%	0%	100%
BLS Back-end System Responses	114	0	0	0	0	0	0	0	114
	100%	0%	0%	0%	0%	0%	0%	0%	100%
TNAQ_MLH	**Telephone Number Assignment Query for Multi-Line Hunting Numbers**								
46 Total Transactions	<=6 sec	7-10 sec	11-15 sec	16-20 sec	21-30 sec	31-45 sec	46-60 sec	> 60 sec	TOTAL
TAG API Responses	10	1	0	0	1	0	0	3	15
	67%	7%	0%	0%	7%	0%	0%	20%	100%
BLS Back-end System Responses	9	1	13	5	2	0	0	1	31
	29%	3%	42%	16%	6%	0%	0%	3%	100%

TNAQ_DID	Telephone Number Assignment Query for Direct Inward Dial Numbers								
29 Total Transactions	<=6 sec	7-10 sec	11-15 sec	16-20 sec	21-30 sec	31-45 sec	46-60 sec	> 60 sec	TOTAL
TAG API Responses	5	1	0	0	0	0	0	0	6
	83%	17%	0%	0%	0%	0%	0%	0%	100%
BLS Back-end System Responses	8	0	9	4	2	0	0	0	23
	35%	0%	39%	17%	9%	0%	0%	0%	100%

TNCAN-TN	Telephone Number Cancellation for General Pool TNs								
26 total transaction	<=6 sec	7-10 sec	11-15 sec	16-20 sec	21-30 sec	31-45 sec	46-60 sec	> 60 sec	TOTAL
TAG API Responses	4	0	0	0	0	0	0	0	4
	100%	0%	0%	0%	0%	0%	0%	0%	100%
BLS Back-end System Responses	11	0	9	2	0	0	0	0	22
	50%	0%	41%	9%	0%	0%	0%	0%	100%
TNCAN-MLH	**Telephone Number Cancellation for Multi-Line Hunting Numbers**								
14 total transaction	<=6 sec	7-10 sec	11-15 sec	16-20 sec	21-30 sec	31-45 sec	46-60 sec	> 60 sec	TOTAL
TAG API Responses	4	0	0	0	0	0	0	0	4
	100%	0%	0%	0%	0%	0%	0%	0%	100%
BLS Back-end System Responses	9	0	1	0	0	0	0	0	10
	90%	0%	10%	0%	0%	0%	0%	0%	100%
TNCAN-DID	**Telephone Number Cancellation for Direct Inward Dial Numbers**								
18 total transaction	<=6 sec	7-10 sec	11-15 sec	16-20 sec	21-30 sec	31-45 sec	46-60 sec	> 60 sec	TOTAL
TAG API Responses	1	0	0	0	0	0	0	0	1
	100%	0%	0%	0%	0%	0%	0%	0%	100%
BLS Back-end System Responses	9	0	7	1	0	0	0	0	17
	53%	0%	41%	6%	0%	0%	0%	0%	100%
TOTAL	**ALL QUERY TYPES**								
1317 Total Transactions	<=6 sec	7-10 sec	11-15 sec	16-20 sec	21-30 sec	31-45 sec	46-60 sec	> 60 sec	TOTAL
TAG API Responses	265	35	32	3	5	0	0	11	351
	75%	10%	9%	1%	1%	0%	0%	3%	100%
BLS Back-end System Responses	315	97	294	108	66	36	26	24	966
	33%	10%	30%	11%	7%	4%	3%	2%	100%

Table IV-1.6: Pre-Order Re-Test Response Timeliness[35]

AAQ	Appointment Availability Query								
73 Total Transactions	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	>= 21 sec	TOTAL
TAG API Responses	29	0	0	0	0	0	0	0	29
	100%	0%	0%	0%	0%	0%	0%	0%	100%
BLS Back-end System Responses	29	11	3	1	0	0	0	0	44
	66%	25%	7%	2%	0%	0%	0%	0%	100%
AVQ_TN	**Address Validation Query by Telephone Number**								
57 Total Transactions	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	>= 21 sec	TOTAL
TAG API Responses	24	0	0	1	0	0	0	0	25
	96%	0%	0%	4%	0%	0%	0%	0%	100%
BLS Back-end System Responses	12	11	8	1	0	0	0	0	32
	38%	34%	25%	3%	0%	0%	0%	0%	100%
TNAQ	**Telephone Number Assignment Query**								
68 Total Transactions	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	>= 21 sec	TOTAL
TAG API Responses	22	0	0	1	0	0	0	0	23
	96%	0%	0%	4%	0%	0%	0%	0%	100%
BLS Back-end System Responses	20	13	7	3	1	1	0	0	45
	44%	29%	16%	7%	2%	2%	0%	0%	100%
TNSQ	**Telephone Number Selection Query**								
52 Total Transactions	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	>= 21 sec	TOTAL
TAG API Responses	26	0	0	0	0	0	0	0	26
	100%	0%	0%	0%	0%	0%	0%	0%	100%
BLS Back-end System Responses	13	8	2	2	0	1	0	0	26
	50%	31%	8%	8%	0%	4%	0%	0%	100%
AVQ	**Address Validation Query**								
68 Total Transactions	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	>= 21 sec	TOTAL
TAG API Responses	30	1	0	0	0	0	0	0	31
	97%	3%	0%	0%	0%	0%	0%	0%	100%
BLS Back-end System Responses	8	9	6	9	1	2	2	0	37
	22%	24%	16%	24%	3%	5%	5%	0%	100%

[35] Totals may not equal 100% due to rounding.

SAQ	Service Availability Query								
96 Total Transactions	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	>= 21 sec	TOTAL
TAG API Responses	30	2	0	0	0	1	0	1	34
	88%	6%	0%	0%	0%	3%	0%	3%	100%
BLS Back-end System Responses	0	11	28	4	0	0	0	19	62
	0%	18%	45%	6%	0%	0%	0%	31%	100%
CSRQ	**Customer Service Record Query**								
51 Total Transactions	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	>= 21 sec	TOTAL
TAG API Responses	25	0	0	0	0	0	1	0	26
	96%	0%	0%	0%	0%	0%	4%	0%	100%
BLS Back-end System Responses	0	15	7	3	0	0	0	0	25
	0%	60%	28%	12%	0%	0%	0%	0%	100%
CDD	**Calculated Due Date**								
83 Total Transactions	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	>= 21 sec	TOTAL
TAG API Responses	34	0	0	0	0	0	0	0	34
	100%	0%	0%	0%	0%	0%	0%	0%	100%
BLS Back-end System Responses	49	0	0	0	0	0	0	0	49
	100%	0%	0%	0%	0%	0%	0%	0%	100%
TNAQ_MLH	**Telephone Number Assignment Query for Multi-Line Hunting Numbers**								
56 Total Transactions	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	>= 21 sec	TOTAL
TAG API Responses	27	0	0	0	0	0	0	0	27
	100%	0%	0%	0%	0%	0%	0%	0%	100%
BLS Back-end System Responses	15	10	2	0	1	1	0	0	29
	52%	34%	7%	0%	3%	3%	0%	0%	100%
TNAQ_DID	**Telephone Number Assignment Query for Direct Inward Dial Numbers**								
54 Total Transactions	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	>= 21 sec	TOTAL
TAG API Responses	26	0	0	0	0	0	0	2	28
	93%	0%	0%	0%	0%	0%	0%	7%	100%
BLS Back-end System Responses	2	3	10	4	1	5	1	0	26
	8%	12%	38%	15%	4%	19%	4%	0%	100%

TNCAN-TN	Telephone Number Cancellation for General Pool TNs								
52 total transaction	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	>= 21 sec	TOTAL
TAG API Responses	25	0	0	0	0	0	0	0	25
	100%	0%	0%	0%	0%	0%	0%	0%	100%
BLS Back-end System Responses	11	13	1	1	0	0	1	0	27
	41%	48%	4%	4%	0%	0%	4%	0%	100%
TNCAN-MLH	**Telephone Number Cancellation for Multi**								
51 total transaction	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	>= 21 sec	TOTAL
TAG API Responses	24	0	0	0	0	0	0	0	24
	100%	0%	0%	0%	0%	0%	0%	0%	100%
BLS Back-end System Responses	18	6	3	0	0	0	0	0	27
	67%	22%	11%	0%	0%	0%	0%	0%	100%
TNCAN-DID	**Telephone Number Cancellation for Direct Inward Dial Numbers**								
66 total transaction	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	>= 21 sec	TOTAL
TAG API Responses	28	0	0	0	0	0	0	0	28
	100%	0%	0%	0%	0%	0%	0%	0%	100%
BLS Back-end System Responses	16	14	5	2	0	1	0	0	38
	42%	37%	13%	5%	0%	3%	0%	0%	100%
ALL QUERY TYPES									
827 Total Transactions	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	>= 21 sec	TOTAL
TAG API Responses	350	3	0	2	0	1	1	3	360
	97%	1%	0%	1%	0%	0%	0%	1%	100%
BLS Back-end System Responses	193	124	82	30	4	11	4	19	467
	41%	26%	18%	6%	1%	2%	1%	4%	100%

B. Test Results: Pre-Ordering Performance Measures Evaluation (PRE-2)

1.0 Description

The Pre-Ordering Performance Measures Evaluation (PRE-2) involved Calculation and Reporting Validation for the pre-order Service Quality Measurements (SQMs) produced by BellSouth. Unlike the performance measures in other categories, neither of the measures in the pre-order category were defined in a manner such that BellSouth would produce data, or report SQM values, at the individual Competitive Local Exchange Carrier (CLEC) level. Therefore, Data Comparison was not part of the evaluation for the pre-order category. The activities undertaken to execute Performance Measures Evaluation are described in Section III-F, "Performance Measures Evaluation Overview."

2.0 Methodology

This section summarizes the test methodology.

2.1 Business Process Description

The process description for metrics data processing and reporting at BellSouth is contained in Section III-F, "Performance Measures Evaluation Overview."

2.2 Scenarios

Scenarios were not applicable to this test.

2.3 Test Targets & Measures

The test target for Calculation and Reporting Validation is the set of values reported by BellSouth for pre-ordering Service Quality Measurements (SQMs). 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 IV-2.1: Test Target Cross-Reference

Sub-Process	Function	Evaluation Criteria	Test Cross-Reference
Average OSS Response Time and Response Interval[1]	RSAG - Address RSAG - TN ATLAS COFFI DSAP HAL P/SIMS OASIS	BLS reports are correctly disaggregated and complete.	PRE-2-1-1
		KCI-calculated SQM values agree with BLS-reported SQM values.	PRE-2-1-2
OSS Interface Availability[1]	Not disaggregated	BLS reports are correctly disaggregated and complete.	PRE-2-2-1
		KCI-calculated SQM values agree with BLS-reported SQM values.	PRE-2-2-2

2.4 *Data Sources*

The data collected for the Pre-Ordering Performance Measures Evaluation are summarized in the table below.

Table IV-2.2: Data Sources for Pre-Ordering Performance Measures Evaluation

Document	File Name	Location in Work Papers	Source
Response Raw Data by month (October 1999), Data Dictionary, Server Listing, System Listing - BLS and CLEC Proprietary	Response data for October 1999.xls	PRE-2-A-3	BLS - Interconnection Operations - CLEC Performance Measurements
Response Raw Data by month (December 1999), Data Dictionary, Server Listing, System Listing - BLS and CLEC Proprietary	Pre-Ord OSS Response Intvl.xls	PRE-2-A-3	BLS - Interconnection Operations - CLEC Performance Measurements
October 1999 OSS Response Time report - BLS and CLEC Proprietary	OSS_Response_Time_ Interval_101999.xls	PRE-2-A-1	BLS - Interconnection Operations - CLEC Performance Measurements

[1] This SQM is reported only for the CLEC aggregate and is not specific to the KCI test CLEC.

Document	File Name	Location in Work Papers	Source
December 1999 OSS Response Time report – BLS and CLEC Proprietary	DECOSSRESP.xls	PRE-2-A-1	BLS – Interconnection Operations – CLEC Performance Measurements
December 1999 OSS Interface Availability raw data – BLS and CLEC Proprietary	KPMG1_18.xls	PRE-2-A-10	BLS – Interconnection Operations – CLEC Performance Measurements
December 1999 OSS Interface Availability report – BLS and CLEC Proprietary	OSS Interface Availability SQM.txt	PRE-2-A-8	BLS (PMAP Web site)
Memorandum of November 2, 1999 – Audit Data for KCI – BLS and CLEC Proprietary	AUDITK~1.DOC	PRE-2-A-9	BLS – Interconnection Operations – CLEC Performance Measurements
Mapping of Components to Applications – BLS and CLEC Proprietary	AVRP1099.xls	PRE-2-A-9	BLS – Interconnection Operations – CLEC Performance Measurements
Mapping of Components to Applications – BLS and CLEC Proprietary	AVRP109R.xls	PRE-2-A-9	BLS – Interconnection Operations – CLEC Performance Measurements
10/22/99 Georgia SQM documentation – BLS and CLEC Proprietary	No Electronic copy	PMR-A-9	BLS (PMAP Web site)
May 2000 Georgia SQM documentation – BLS and CLEC Proprietary	No Electronic copy	PMR-A-11	BLS (PMAP Web site)
KCI – Pre-ordering - Evaluation and Results Table – Performance Measures Evaluation – BLS and CLEC Proprietary	Table IV-2.3.doc	PRE-2-A-15	KCI
KCI – Pre-ordering - Evaluation and Results Table – Performance Measures Evaluation - References – BLS and CLEC Proprietary	Table IV-2.3wp.doc	PRE-2-A-16	KCI

2.4.1 Data Generation/Volumes

The data for this test are the pre-order-related SQM values reported by BellSouth for the CLEC aggregate.

2.5 *Evaluation Methods*

The Evaluation Methods for the Performance Measures Evaluation tests are described in Section III-F, "Performance Measures Evaluation Overview."

2.6 *Analysis Methods*

The Performance Measures Evaluation 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 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 below. Definitions of evaluation criteria, possible results, and exceptions are provided in Section II.

Table IV-2.3: PRE-2 Evaluation Criteria and Results

Test Cross-Reference	Evaluation Criteria	Result	Comments
Average OSS Response Time and Response Interval			
PRE-2-1-1	BLS reports are correctly disaggregated and complete.	Satisfied	BLS reports an SQM value for every level of disaggregation in the May 2000 Georgia SQM documentation.
PRE-2-1-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Satisfied	The SQM value calculated by KCI at each level of disaggregation matched the corresponding value reported by BLS. Hence, KCI confirmed that BLS accurately calculated and reported these SQM values. Initially, the KCI-calculated SQM values did not agree with BLS-reported values for the DSAP system/TAG server. After it was discovered that BLS had reported these values in error on the SQM report, BLS provided KCI with an updated SQM report for which KCI matched all reported values, including those for the DSAP system/TAG server. KCI was also provided with an additional month of data and reports. For this

Test Cross-Reference	Evaluation Criteria	Result	Comments
			month (December 1999), the SQM value calculated by KCI at each level of disaggregation matched the corresponding value reported by BLS. See Exception 45 for additional information on this issue. Exception 45 is closed.
OSS Interface Availability			
PRE-2-2-1	BLS reports are correctly disaggregated and complete.	Satisfied	BLS reports an SQM value for every level of disaggregation in the May 2000 Georgia SQM documentation. No disaggregation is required by the SQM guidelines, but BLS disaggregates SQM values by application.
PRE-2-2-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Satisfied	The SQM value calculated by KCI at each level of disaggregation matched the corresponding value reported by BLS. Hence, KCI confirmed that BLS accurately calculated and reported these SQM values. Initially, the KCI-calculated SQM values did not agree with BLS-reported values for CLEC TAG and LEO Mainframe. Exception 46 was issued. However, BLS clarified the computation instructions for the CLEC TAG application, and provided a new mapping of components to the LEO Mainframe application. KCI then determined that the updated KCI-calculated SQM values agreed with the BLS-reported SQM values exactly. See Exception 46 for additional information on this issue. Exception 46 is closed.

C. Test Results: TAG Pre-Ordering Documentation Evaluation (PRE-3)

1.0 Description

The Telecommunications Access Gateway (TAG) Pre-Ordering Documentation Evaluation (PRE-3) was an operational review of the documentation developed by BellSouth to provide support to Competitive Local Exchange Carriers (CLECs) carrying out the business processes of pre-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 pre-order-related documentation. Rather, it focused primarily on the pre-ordering business rules. The Georgia Public Service Commission's May 20, 1999 *Order* authorizing third party testing did not call for development of a TAG pre-order interface; therefore, documentation pertaining to interface development (e.g., the *TAG API Guide*) was not formally reviewed.

2.0 Methodology

This section summarizes the test methodology.

2.1 Business Process Description

BellSouth offers CLECs the ability to access its OSS supporting pre-order functions through an electronic interface. Responses to pre-order inquiries provide CLECs with customer information prior to submitting an order for products or services. CLECs can submit pre-order inquiries electronically through the TAG interface. TAG programming instruction and associated documentation is available to CLECs in training classes.

BellSouth provides pre-ordering documentation to define the pre-order business rules, field formats and required fields for pre-order queries and responses. In addition to the documentation provided during training, BellSouth posts pre-order documentation on its Web site for CLECs to access. Notifications of updates to the documents are provided in Carrier Notifications, which are posted on the BellSouth Web site prior to actual delivery of the new version of the document. In addition, Carrier Notifications provide CLECs with BellSouth operations information (i.e., system down time, holiday hours of operation).

See Section IV, "Pre-Ordering Overview" for a complete description of the pre-order/order submission process.

2.2 *Scenarios*

The scenarios developed for TAG Pre-Order Functional Test (PRE-1) were used to evaluate BellSouth business rules for this evaluation.

2.3 *Test Targets & Measures*

The test targets were the availability, organization, usability, comprehensiveness, and accuracy of the documentation. Sub-processes, functions, and evaluations are summarized in the following tables. The last column "Test Cross-Reference" indicates where the particular measures are addressed in section 3.1 "Results and Analysis."

Table IV-3.1: Test Target Cross-Reference

Sub-Process	Function	Evaluation Criteria	Test Cross-Reference
Pre-order documentation	Release Management	Existence and adequacy of the update process Availability of document(s)	PRE-3-1-1 PRE-3-1-2 PRE-3-1-3 PRE-3-1-4 PRE-3-1-5
	Document Structure and Format	Existence of structural elements Completeness of data	PRE-3-2-1 PRE-3-2-2 PRE-3-2-3 PRE-3-2-4 PRE-3-2-5 PRE-3-2-6 PRE-3-2-7 PRE-3-2-8 PRE-3-2-9
	Document Content	Content of document(s)	PRE-3-3-1 PRE-3-3-2 PRE-3-3-3
	Document Accurary	Accuracy of document(s)	PRE-3-4-1 PRE-3-4-2 PRE-3-4-3 PRE-3-4-4 PRE-3-4-5

Sub-Process	Function	Evaluation Criteria	Test Cross-Reference
Validate Address	Create address validation request transaction	Content of document(s) Accuracy of document(s)	PRE-3-3-1 PRE-3-3-2 PRE-3-3-3 PRE-3-4-1 PRE-3-4-2 PRE-3-4-3 PRE-3-4-4 PRE-3-4-5
	Correct errors	Content of document(s) Accuracy of document(s)	PRE-3-3-1 PRE-3-3-2 PRE-3-3-3 PRE-3-4-1 PRE-3-4-2 PRE-3-4-3 PRE-3-4-4 PRE-3-4-5
Retrieve CSR	Determine type of inquiry to send	Content of document(s) Accuracy of document(s)	PRE-3-3-1 PRE-3-3-2 PRE-3-3-3 PRE-3-4-1 PRE-3-4-2 PRE-3-4-3 PRE-3-4-4 PRE-3-4-5
	Create CSR request transaction	Content of document(s) Accuracy of document(s)	PRE-3-3-1 PRE-3-3-2 PRE-3-3-3 PRE-3-4-1 PRE-3-4-2 PRE-3-4-3 PRE-3-4-4 PRE-3-4-5
	Correct errors	Content of document(s) Accuracy of document(s)	PRE-3-3-1 PRE-3-3-2 PRE-3-3-3 PRE-3-4-1 PRE-3-4-2 PRE-3-4-3 PRE-3-4-4 PRE-3-4-5

Sub-Process	Function	Evaluation Criteria	Test Cross-Reference
Request available telephone number(s)	Create available telephone number request transaction	Content of document(s) Accuracy of document(s)	PRE-3-3-1 PRE-3-3-2 PRE-3-3-3 PRE-3-4-1 PRE-3-4-2 PRE-3-4-3 PRE-3-4-4 PRE-3-4-5
	Correct errors	Content of document(s) Accuracy of document(s)	PRE-3-3-1 PRE-3-3-2 PRE-3-3-3 PRE-3-4-1 PRE-3-4-2 PRE-3-4-3 PRE-3-4-4 PRE-3-4-5
Reserve TN(s)	Create telephone number reservation transaction	Content of document(s) Accuracy of document(s)	PRE-3-3-1 PRE-3-3-2 PRE-3-3-3 PRE-3-4-1 PRE-3-4-2 PRE-3-4-3 PRE-3-4-4 PRE-3-4-5
	Correct errors	Content of document(s) Accuracy of document(s)	PRE-3-3-1 PRE-3-3-2 PRE-3-3-3 PRE-3-4-1 PRE-3-4-2 PRE-3-4-3 PRE-3-4-4 PRE-3-4-5
Cancel TN reservation	Create telephone number cancellation or exchange transaction	Content of document(s) Accuracy of document(s)	PRE-3-3-1 PRE-3-3-2 PRE-3-3-3 PRE-3-4-1 PRE-3-4-2 PRE-3-4-3 PRE-3-4-4 PRE-3-4-5

Sub-Process	Function	Evaluation Criteria	Test Cross-Reference
	Correct errors	Content of document(s) Accuracy of document(s)	PRE-3-3-1 PRE-3-3-2 PRE-3-3-3 PRE-3-4-1 PRE-3-4-2 PRE-3-4-3 PRE-3-4-4 PRE-3-4-5
Determine product/service availability	Create service availability request transaction	Content of document(s) Accuracy of document(s)	PRE-3-3-1 PRE-3-3-2 PRE-3-3-3 PRE-3-4-1 PRE-3-4-2 PRE-3-4-3 PRE-3-4-4 PRE-3-4-5
	Correct errors	Content of document(s) Accuracy of document(s)	PRE-3-3-1 PRE-3-3-2 PRE-3-3-3 PRE-3-4-1 PRE-3-4-2 PRE-3-4-3 PRE-3-4-4 PRE-3-4-5
Calculate Due Date	Create due date calculation request transaction	Content of document(s) Accuracy of document(s)	PRE-3-3-1 PRE-3-3-2 PRE-3-3-3 PRE-3-4-1 PRE-3-4-2 PRE-3-4-3 PRE-3-4-4 PRE-3-4-5
	Correct errors	Content of document(s) Accuracy of document(s)	PRE-3-3-1 PRE-3-3-2 PRE-3-3-3 PRE-3-4-1 PRE-3-4-2 PRE-3-4-3 PRE-3-4-4 PRE-3-4-5

Sub-Process	Function	Evaluation Criteria	Test Cross-Reference
Determine Appointment Availability	Create appointment availability request transaction	Content of document(s) Accuracy of document(s)	PRE-3-3-1 PRE-3-3-2 PRE-3-3-3 PRE-3-4-1 PRE-3-4-2 PRE-3-4-3 PRE-3-4-4 PRE-3-4-5
	Correct errors	Content of document(s) Accuracy of document(s)	PRE-3-3-1 PRE-3-3-2 PRE-3-3-3 PRE-3-4-1 PRE-3-4-2 PRE-3-4-3 PRE-3-4-4 PRE-3-4-5
Pre-order/Order Integration	Submit pre-order transactions designated for integration	Content of document(s) Accuracy of document(s)	PRE-3-3-1 PRE-3-3-2 PRE-3-3-3 PRE-3-4-1 PRE-3-4-2 PRE-3-4-3 PRE-3-4-4 PRE-3-4-5

2.4 *Data Sources*

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

Table IV-3.2: Data Sources for Pre-Ordering Documentation Evaluation

Document	File Name	Location in Work Papers	Source
Pre-Order Business Rules Version 2.0	PRE3_Pre-Order Business Rules Issue 2.0.pdf	PRE-3-A-Disk 1	BLS
Pre-Order Business Rules Version 3.0	PRE3_Pre-Order Business Rules Issue 3.0.pdf	PRE-3-A-Disk 3	BLS
Pre-Order Business Rules Version 4.0	PRE3_Pre-Order Business Rules Issue 4.0.pdf	PRE-3-A-Disk 4	BLS

Document	File Name	Location in Work Papers	Source
Pre-Order Business Rules Version 5.0	PO Bus Rules Ver5.pdf	PRE-3-A-Disk 7	BLS
Pre-Order Business Rules Version 6.0	PO Bus Rules Ver6.pdf	PRE-3-A-Disk 8	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 Version 8.0	BellSouth Pre-Order Business Rules _Version 8.pdf	PRE-3-A-Disk 12	BLS
Pre-Order Business Rules Version 9.0	BellSouth Pre-Order Business Rules_Ver90.pdf	PRE-3-A-Disk 13	BLS
Pre-Order Business Rules Data Dictionary Version 1.0	PRE3 _Pre-Order Business Rules Data Dictionary Issue 1.0.doc	PRE-3-A-Disk 1	BLS
Pre-Order Business Rules Data Dictionary Version 2.0	PRE3 _Pre-Order Business Rules Data Dictionary Issue 2.0.doc	PRE-3-A-Disk 1	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 Data Dictionary Version 4.0	BellSouth Pre-Order Business Rules Data Dic Version 4.pdf	PRE-3-A-Disk 11	BLS
Pre-Order Business Rules Data Dictionary Version 5.0	BellSouth Pre-Order Business Rules data_dic Ver5.pdf	PRE-3-A-Disk 14	BLS
Pre-Order Business Rules Appendix Version 3.0	PRE3 _Pre-Order Business Rules Appendix Version 3.pdf	PRE-3-A-Disk 2	BLS
Pre-Order Business Rules Appendix Version 4.0	PRE3 _Pre-Order Business Rules Appendix Version 4.pdf	PRE-3-A-Disk 2	BLS
Pre-Order Business Rules Appendix Version 5.0	PO Bus Rules Appendix Ver5.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
Pre-Order Business Rules Appendix Version 7.0	BellSouth Pre-Order Business Rules Appendix-70.pdf	PRE-3-A-Disk 12	BLS
Pre-Order Business Rules Appendix Version 8.0	BellSouth Pre-Order Business Rules - appendix_Ver80.pdf	PRE-3-A-Disk 13	BLS
BellSouth Pre-order and Ordering Overview Issue 1	PRE3 _ BellSouth Pre-order and Ordering Overview Issue 1.pdf	PRE-3-A-Disk 1	BLS

Document	File Name	Location in Work Papers	Source
Carrier Notifications (Pre-Order related)	No Electronic Copies	PRE-3-A-7	BLS
Evaluation Checklists	PRE3_Documentation Checklist.xls	PRE-3-A-8	BLS
TAG API Reference Guide	TAG API Reference Guide _2208.pdf	PRE-3-A-Disk 9	BLS
Documentation Issues Log	No Electronic Copy	O&P-8-A-3	KCI
BellSouth Pre-Order Interview Report	BLS Pre-Order Interview Report.doc	PRE-3-A-Disk 5	KCI

2.4.1 Data Generation/Volumes

This test relied on input from KCI subject matter experts who reviewed BellSouth pre-ordering documentation in order to conduct the TAG Pre-Ordering Functional Test (PRE-1), as well as structured reviews of the format of the documentation and interviews with BellSouth and CLEC personnel.

2.5 Evaluation Methods

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 documentation based on standard KCI criteria. KCI performed a structured review of BellSouth pre-ordering documentation, visited Web sites where documentation is issued, conducted interviews with BellSouth and CLECs, and verified the accuracy of documentation during functional testing of BellSouth's TAG interface. The documentation review undertaken during TAG Pre-Ordering Functional Evaluation (PRE-1) allowed for evaluation of the accuracy and usability of the documentation in a business environment.

BellSouth did not have pre-ordering business rules at the start of the TAG and EDI Functional Testing. As a result, KCI issued Exception 1. At that time, KCI conducted a review of the *TAG API Guide* to understand the pre-order business rules. Subsequently, BellSouth published Pre-Order Business Rules Version 1.0 in December 1999. Once published, the business rules document was used for the remainder of this evaluation.

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. 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 filed 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 TAG Pre-Ordering Documentation Evaluation 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 test.

The data collected from documentation reviews and interviews with BellSouth - GA and CLEC personnel were analyzed employing the evaluation criteria referenced above. Data analyzed for this report include test results collected through October 4, 2000.

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 IV-3.3: PRE-3 Evaluation Criteria and Results

Test Cross-Reference	Evaluation Criteria	Result	Comments
Release Management			
PRE-3-1-1	BLS's documentation is readily available via the BLS Web site or in hard copy.	Satisfied	During the course of transaction testing KCI was able to obtain pre-order documentation via the BLS Web site.
PRE-3-1-2	BLS makes updates to documents readily available to the CLECs.	Satisfied	KCI obtained pre-order documentation updates via the Web site.
PRE-3-1-3	Training is available for use of documentation.	Satisfied	KCI's attendance at training courses indicated that BLS pre-order documentation is used in concert with the BLS CLEC training course.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PRE-3-1-4	Responsibilities and procedures for developing, updating, and correcting documentation are clearly defined.	Satisfied	Through interviews with BLS pre-order Subject Matter Experts (SMEs), KCI validated pre-order documentation development, update, and correction responsibilities, and the procedures that were instituted in the Quality Documentation Review process implemented May 31, 2000. BLS instituted the Quality Documentation Review process to address the occurrence of consistent format errors or deficiencies in BLS documentation, as identified by KCI. See Exceptions 53 and 55 for additional information on this issue. Exceptions 53 and 55 are closed.
PRE-3-1-5	Responsibilities and procedures for distributing documentation are clearly defined.	Satisfied	Interviews indicate that responsibilities and procedures for the distribution of BLS documentation are clearly defined and supported through Carrier Notifications on the BLS Web site.
Document Structure and Format			
PRE-3-2-1	Document version is indicated clearly within and throughout each document.	Satisfied	KCI's initial testing revealed that the BLS Pre-Order Business Rules Data Dictionary lacked version identifiers throughout the document. In response to this deficiency, KCI issued Exception 55. To address this issue, BLS added version numbers to the Pre-Order Business Rules Data Dictionary so that all BLS pre-order documentation contains version identifiers throughout the documents. See Exception 55 for additional information on this issue. Exception 55 is closed.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PRE-3-2-2	BLS document organization is consistent with its intended use.	Satisfied	KCI's initial testing indicated that BLS Pre-Order Business Rules did not relate the application of business rules to a specific BLS pre-order application (e.g., TAG or Local Exchange Navigation System [LENS]). In response to this deficiency, KCI issued Exception 55. To address this issue, BLS has added additional table columns to identify the LENS and TAG versions applicable to the business rule. See Exception 55 for additional information on this issue. Exception 55 is closed.
PRE-3-2-3	BLS documents contain information that is relevant to its intended audience.	Satisfied	KCI transaction testing and documentation reviews revealed that BLS pre-order documentation contains information appropriate to its intended audience. For example, the pre-order business rules contain steps to complete pre-order inquiries.
PRE-3-2-4	BLS documents contain a table of contents.	Satisfied	BLS pre-order documentation contains a table of contents. For example, pre-order business rules, data dictionary, and appendices all include a standardized table of contents.
PRE-3-2-5	BLS documents are logically organized with clear page numbering and section labeling.	Satisfied	KCI's initial testing revealed that BLS Pre-Order Business Rules sections are labeled only at the beginning of each section, rather than on each page. To address this issue, BLS added a header row to each table on each page identifying the appropriate section. See Exception 55 for additional information on this issue. Exception 55 is closed.
PRE-3-2-6	BLS documents contain contact/help desk numbers.	Satisfied	KCI's initial testing revealed that BLS pre-order documentation did not contain contact or help desk numbers. As a result of this deficiency, KCI issued Exception 55. To address this issue, BLS added a comment to each pre-order document directing the user to contact their assigned Account Team for assistance.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			See Exception 55 for additional information on this issue. Exception 55 is closed.
PRE-3-2-7	BLS documents clearly indicate purpose and scope.	Satisfied	KCI's initial testing revealed that the BLS Pre-Order Business Rules Data Dictionary did not state purpose or intended scope. In response to this deficiency, KCI issued Exception 55. To address this issue, BLS added comments to the objective section so that all BLS pre-order documents state a purpose and scope. See Exception 55 for additional information on this issue. Exception 55 is closed.
PRE-3-2-8	Cross-references are clearly stated directing readers to relevant sources of additional information.	Satisfied	KCI's initial testing revealed that while the *BLS Pre-Order Business Rules Data Dictionary* and *Appendix*, Versions 3.0 and 6.0 respectively, identified as their scope to provide additional information to the *BLS Pre-Order Business Rules*, the *Pre-Order Business Rules*, however, didn't reference the *Dictionary* or the *Appendix*. To address this issue, BLS added a sentence in the objective statement of the *BLS Pre-Order Business Rules* identifying the *Dictionary* and the *Appendix* as its companion documents.
PRE-3-2-9	BLS documents clearly instruct users how to notify BLS of document errors and omissions.	Satisfied	KCI's initial testing revealed that BLS pre-order documentation did not provide contact information for error and/or omission reporting. In response to this deficiency, KCI issued Exception 55. To address this issue, BLS added a standardized comment to all pre-order documentation referring users to Account Team for error and/or omission reporting. See Exception 55 for additional information on this issue. Exception 55 is closed.

Test Cross-Reference	Evaluation Criteria	Result	Comments
Document Content			
PRE-3-3-1	BLS documents provide description of error messages and potential steps for resolution.	Satisfied	Based on KCI document reviews, BLS Pre-Order Business Rule appendices L-S effectively identify errors and error handling procedures.
PRE-3-3-2	BLS documents clearly identify inputs/outputs of the specific processes.	Satisfied	KCI's initial testing revealed the majority of BLS pre-order documentation provided defined inputs and outputs. However, the Calculate Due Date (CDD) query process did not contain inputs or outputs. In response to this deficiency, KCI issued Exception 1. To address this issue, BLS added inputs/outputs specific to the CDD process in the Pre-Order Business Rules version 7. See Exception 1 for additional information on this issue. Exception 1 is closed.
PRE-3-3-3	BLS documents include expected results of process and cycle times.	Satisfied	Based on KCI document review, BLS pre-order documentation lists expected responses for pre-order queries. Additionally, the Georgia Public Service Commission-approved standard for pre-order response timeliness is Parity with Retail[1].
Document Accuracy			
PRE-3-4-1	BLS documents correctly define data fields.	Satisfied	During KCI's initial document reviews, the Pre-Order Business Rules did not define, for each data element or query type, the corresponding TAG Application Programming Interface (API) release. In response to this deficiency, KCI issued Exception 63. To address this issue, BLS documented the correlation between the *API Reference Guide* and *Pre-Order Business Rules* by matching the TAG fields with the business rules. See Exception 63 for additional

[1] The BLS Retail data can be found in the monthly Performance Measurement and Analysis Platform (PMAP) reports that are posted on the BLS Web site.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			information on this issue. Exception 63 is closed.
PRE-3-4-2	BLS documents accurately define acceptable formats for data fields.	Satisfied	KCI's initial testing revealed that BLS pre-order documentation did not contain a definition of the 8 character or 11 character CLLI code for Telephone Number Availability Query (TNAQ) and Telephone Number Availability Response (TNAR). To address this issue, BLS added a definition for 8 character and 11 character CLLI codes.
PRE-3-4-3	BLS documents clearly identify required and optional fields.	Satisfied	During KCI's initial document reviews, the Pre-Order Business Rules did not define, for each data element or query type, the corresponding TAG API release. In response to this deficiency, KCI issued Exception 63. To address this issue, BLS documented the correlation between the *API Reference Guide* and *Pre-Order Business Rules* by matching the TAG fields with the business rules. See Exception 63 for additional information on this issue. Exception 63 is closed.
PRE-3-4-4	BLS documents clearly describe expected system responses/outputs.	Satisfied	KCI's initial testing identified that BLS's *Pre-Order Business Rules* do not clearly distinguish system responses/outputs for each interface (e.g., TAG and LENS). In response to this deficiency, KCI issued Exception 55. BLS subsequently added columns to distinguish between TAG and LENS in the *BellSouth Pre-Order Business Rules*, Version 6.0, released on June 16, 2000. See Exception 55 for more information on this issue. Exception 55 is closed.
PRE-3-4-5	BLS documents contain methods and procedures to correctly execute processes.	Satisfied	KCI's initial testing revealed that the majority of BLS pre-order documentation defined methods and procedures to correctly execute methods and procedures. However methods and procedures were not defined for the Calculate Due Date (CDD) process. In response to this deficiency, KCI issued Exception 1.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			To address this issue, BLS added methods and procedures specific to the CDD process in the Pre-Order Business Rules version 7. See Exception 1 for additional information on this issue. Exception 1 is closed.

D. Test Results: TAG Normal Volume Pre-Order Performance Test (PRE-4)

1.0 Description

The objective of the Telecommunications Access Gateway (TAG) Normal Volume Pre-Order Performance Test (PRE-4) was to evaluate BellSouth's Operating Support Systems (OSS) associated with pre-ordering at specified volumes. Competitive Local Exchange Carriers (CLECs) submit pre-order queries to validate existing customer information and the availability of BellSouth facilities, and to obtain data (e.g., telephone numbers, service feature codes, etc.) that will be entered on subsequent service orders. This evaluation assessed BellSouth's ability to process accurate and timely pre-order transactions via the TAG Client Application Program Interface (API) under "normal" year-end 2001 (YE01) projected transaction load conditions[1] in the Reengineered Services, Installation and Maintenance Management System (RSIMMS) environment[2].

2.0 Methodology

This section summarizes the test methodology.

2.1 Business Process Description

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

2.2 Scenarios

KCI generated and transmitted pre-order queries based on the scenarios listed in the *Master Test Plan (MTP)*, which defined the pre-order scenarios for testing in PRE-4.

For the list of pre-order scenarios refer to Section V, Table IV-1.1: "Pre-Order Scenario Description."

2.3 Test Targets & Measures

The test target was the TAG interface and back-end systems supporting pre-order queries[3]. Sub-processes, functions, and evaluation criteria are summarized

[1] KCI forecasted hourly transaction rates for individual order and pre-order types drawing on data from current order and pre-order daily volume rates, BellSouth 2001 transaction forecasts, and from CLEC 2001 transaction forecasts, where obtainable.

[2] See RSIMMS and Production Systems Review for a description of the difference between the production and RSIMMS environments.

[3] The RSIMMS environment is designed to access copies of the PSIMMS, COFFI, BOCRIS, BOCABS and LMOS/Host systems, and to access the production COFIUSOC, ATLAS, RSAG, and DSAP systems.

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

Sub-Process	Function	Evaluation Criteria	Test Cross-Reference
Submit Pre-Orders in Projected Normal Volumes	Address Validation	Availability of Interface Accuracy of Response Timeliness of Response	PRE-4-1-1 PRE-4-2-1 PRE-4-3-1 PRE-4-3-2 PRE-4-4-1 PRE-4-4-2
	CSR Retrieval	Availability of Interface Accuracy of Response Timeliness of Response	PRE-4-1-1 PRE-4-2-1 PRE-4-3-5 PRE-4-4-1 PRE-4-4-2
	Switched Service Availability	Availability of Interface Accuracy of Response Timeliness of Response	PRE-4-1-1 PRE-4-2-1 PRE-4-3-8 PRE-4-4-1 PRE-4-4-2
	PIC/LPIC Availability	Availability of Interface Accuracy of Response Timeliness of Response	PRE-4-1-1 PRE-4-2-1 PRE-4-3-8 PRE-4-4-1 PRE-4-4-2
	Product / Service Availability	Availability of Interface Accuracy of Response Timeliness of Response	PRE-4-1-1 PRE-4-2-1 PRE-4-3-8 PRE-4-4-1 PRE-4-4-2
	Telephone Number(s) Availability	Availability of Interface Accuracy of Response Timeliness of Response	PRE-4-1-1 PRE-4-2-1 PRE-4-3-4 PRE-4-3-6 PRE-4-3-7 PRE-4-4-1 PRE-4-4-2
	Reserve TNs	Availability of Interface Accuracy of Response Timeliness of Response	PRE-4-1-1 PRE-4-2-1 PRE-4-3-4 PRE-4-4-1 PRE-4-4-2

Sub-Process	Function	Evaluation Criteria	Test Cross-Reference
	Cancel TN Reservation	Availability of Interface Accuracy of Response Timeliness of Response	PRE-4-1-1 PRE-4-2-1 PRE-4-3-4 PRE-4-3-6 PRE-4-3-7 PRE-4-4-1 PRE-4-4-2
	Determine Due Date/ Appointment Availability	Availability of Interface Accuracy of Response Timeliness of Response	PRE-4-1-1 PRE-4-2-1 PRE-4-3-3 PRE-4-3-9 PRE-4-4-1 PRE-4-4-2

2.4 *Data Sources*

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

Table IV-4-2: Data Sources for TAG Normal Volume Performance Test (PRE-4)

Document	File Name	Location in Work Papers	Source
Pre-Order Business Rules, Versions 2.0, 3.0, 4.0, 5.0, 6.0, and 7.0	No Electronic Copy	PRE-1-A-1	BLS
Pre-Order Business Rules Data Dictionary, Versions 1.0 and 3.0	No Electronic Copy	PRE-1-A-2	BLS
Telecommunications Access Gateway (TAG) API Reference Guide, Versions 2.2.0.2, 2.2.0.4, 2.2.0.5, 2.2.0.7, 2.2.0.8, and 2.2.1.1	No Electronic Copy	PRE-1-A-3	BLS
TAG Programmers Job Aid	No Electronic Copy	PRE-1-A-4	BLS
BellSouth Three Month Hourly Order History	BLS Order History.xls	PRE-4-A-1	BLS
2000, 2001 BellSouth LSR Volume Forecasts	BSTFORECAST.xls	PRE-4-A-2	BLS
2000, 2001 Aggregated CLEC Forecasts	CLEC_BST_FORECAST.xls	PRE-4-A-3	CLEC
YE2001 Normal and Peak Forecast Methodology	Fcast Summary.ppt	PRE-4-A-4	KCI
Normal Volume Test Schedule	schedule.xls	PRE-4-A-5	KCI
System Readiness Test Log	SRT_by_date.xls	PRE-4-A-6	KCI

Document	File Name	Location in Work Papers	Source
Results Data Tables	Resutls Data CD-ROM	PRE-4-A-7	KCI
GPSC *Order* Adopting Standards and Benchmarks	GPSC_standards.tif	PRE-4-A-8	GPSC
Pre-Order Response Data for June, July, August 2000	Response Data Fro June-August 2000.xls	PRE-4-A-9	BLS
Statistical Signifcance Analysis Results	Volume Stats Analysis.xls	PRE-4-A-10	KCI

2.4.1 Data Generation/Volumes

The TAG Normal Volume Test (PRE-4) evaluated BellSouth's performance by sending approximately 118,000 pre-orders with 35,000 associated orders[4] on two distinct days over two 10-hour periods. This test and the ordering (O&P-3) volume test were executed concurrently.

Volumes for this test were determined by forecasting BellSouth's expected order volume for year-end 2001 (YE01). KCI obtained anticipated transaction growth rates from CLECs and BellSouth. Transaction types were forecasted individually based on expected growth rates for each order, and corresponding pre-order query types. KCI also analyzed the distribution of transactions over the course of a normal business day. These data were then combined to determine the number and types of pre-orders to be sent each hour. Pre-orders were then scheduled for transmission to BellSouth via TAG.

Table IV-4.3 shows the pre-order volumes submitted during each day of the Normal Volume Test.[5]

Table IV-4.3: Normal Test Generated Volumes

Query Type	Day 1, 06/02/00	Day 1, Retest 1[6] 06/14/00	Day 1, Retest 2 06/20/00	Day 1, Retest 3 07/24/00	Day 2, 08/01/00
AAQ	13,403	13,403	13,403	13,403	13,402
AVQ-TN	1,888	1,888	1,888	1,888	1,887

[4] Ordering test results are reported in the TAG/EDI Normal Volume Test (O&P-3).

[5] Two normal volume test days were initially planned. However, BellSouth performance failure required "re-testing" of Normal Volume Day 1 on three subsequent days. Following implementation of system fixes by BellSouth, KCI/HP conducted System Readiness Testing (SRTs) to verify that BellSouth's system was functioning. After these SRTs, additional Normal Volume Day 1 tests were conducted. Normal Volume Day 2 was executed successfully in one attempt.

[6] The normal volume test was originally scheduled for two test cycles. KCI elected to conduct day 1 retests in accordance with the "test until you pass" philosophy referenced in the *MTP* (i.e., volume test "day one" was re-executed until all evaluation criteria were believed to be satisfied.

Query Type	Day 1, 06/02/00	Day 1, Retest 1[6] 06/14/00	Day 1, Retest 2 06/20/00	Day 1, Retest 3 07/24/00	Day 2 08/01/00
TNAQ	13,398	13,398	13,398	13,398	13,397
TNSQ	13,398	13,398	13,398	13,398	13,397
AVQ	18,681	18,681	18,681	18,681	18,680
SAQ	19,654	19,654	19,654	19,654	19,653
CSRQ	8,030	8,030	8,030	8,030	8,029
CDD	21,941	21,941	21,941	21,941	21,940
TNAQ_MLH	2,287	2,287	2,287	2,287	2,286
TNAQ_DID	828	827	828	828	827
TNCAN	3,733	3,733	3,733	3,733	3,736
TNCAN_MLH	828	827	828	828	827
TNCAN_DID	828	828	828	828	827
Total	118,897	118,895	118,897	118,897	118,888

2.5 *Evaluation Methods*

In preparation for the test, pre-order transaction seeds were written according to BellSouth business rules[7] and loaded into the KCI transaction test system. These templates were submitted to Hewlett Packard (HP) and transferred to BellSouth during Systems Readiness Testing (SRT)[8]. SRT confirmed the functionality of HP and KCI's transactional systems and verified that orders would flow-through the BellSouth system. The pre-order seeds were used as templates to build the volumes for the subsequent tests. Pre-orders were submitted on a scheduled submission date and time determined by KCI prior to the start of the test. As appropriate, testers made final updates (e.g., desired due dates or other information) and processed the transactions.

The TAG Normal Volume Performance Test evaluated BellSouth's interfaces at YE01 projected order volumes in BellSouth's RSIMMS environment for two 10-hour periods. This test was executed by submitting pre-order requests in support of Resale and UNE orders against BellSouth test-bed accounts and continued through the return of successful pre-order responses or error notices. The test

[7] Pre-orders were written according to business rules outlined in BellSouth Pre-order Business Rules (V. 7.0).

[8] KCI conducted a number of SRTs between April 11, 2000 and August 1, 2000. After completing the required SRTs, BellSouth requested KCI/HP participation in additional testing. These additional tests were used by BellSouth to ensure that its back-end systems and interfaces were functioning correctly.

bed accounts[9] were provisioned by BellSouth according to KCI's specifications and verified by KCI prior to initiation of the test.

In order to fully test the capacity of BellSouth's OSS supporting pre-order and ordering, the test was conducted simultaneously with the EDI/TAG Normal Volume Performance Test (O&P-3). The pre-order transaction loads were distributed geographically across four Central Offices (COs) in the state of Georgia. BellSouth established and configured customer test accounts prior to initiation of the test.

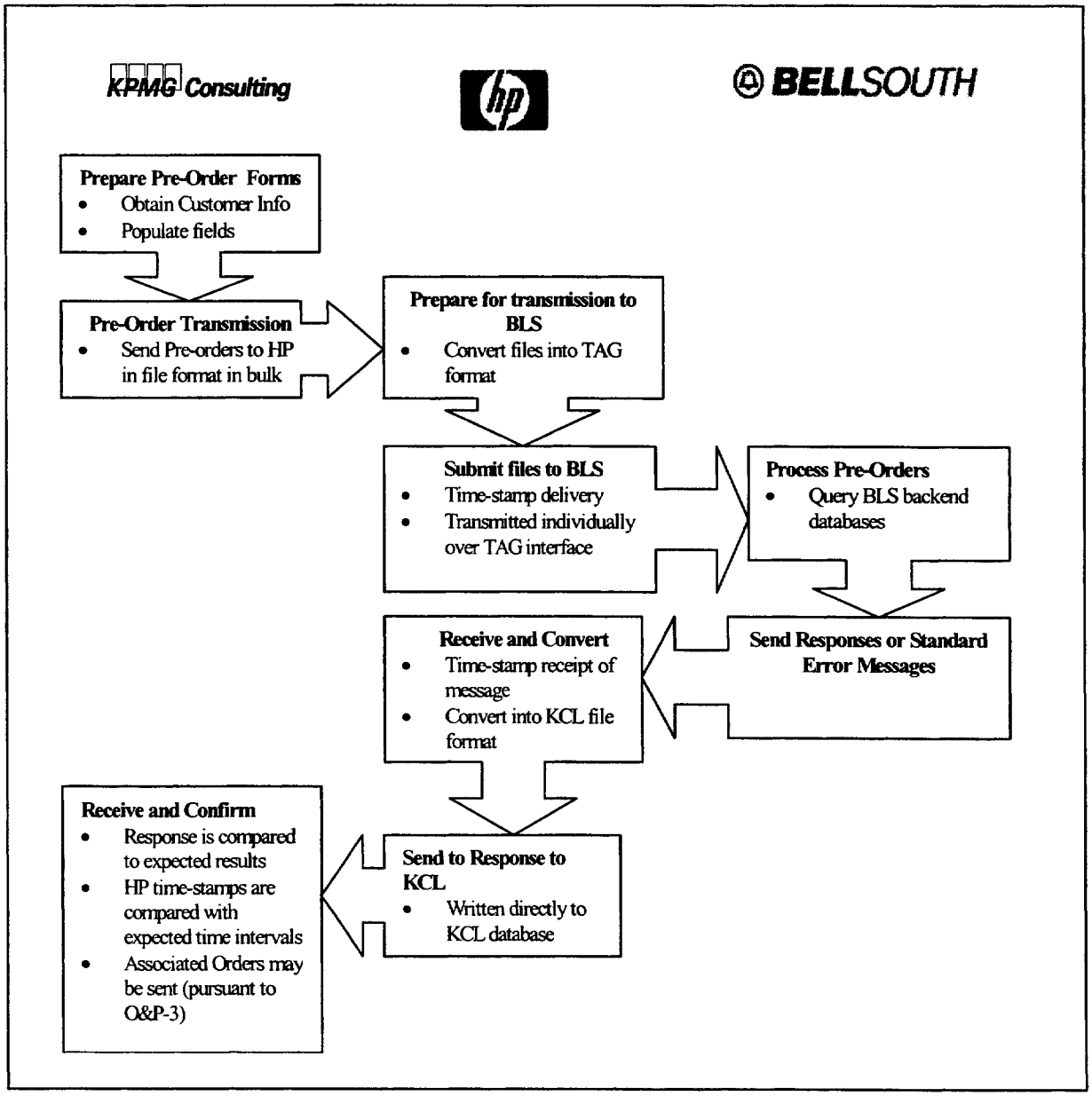
The test cases for the TAG Normal Volume Test were submitted in an automated fashion. Transactions were provided in bulk to HP for conversion from the business file format to the TAG format. HP time-stamped and forwarded the transactions to BellSouth for processing according to the schedule provided by KCI. BellSouth processed the transactions and returned responses to HP. The test process is depicted in Figure IV-4.1[10]

As pre-order volume transactions were submitted, error messages or positive responses were returned. A transaction was deemed complete if a positive pre-order response or an error message was received. The results were logged and compared to expected pre-ordering system functionality and business processes, as outlined in Section IV, "Pre-Ordering Overview."

[9] Refer to Section IV, "Pre-Ordering Overview" for a detailed description of the Pre-Ordering test bed process and detail of accounts.

[10] See Section IV, "Pre-Ordering Overview" for a complete description of the file transfer process.

Figure IV-4.1: TAG Normal Volume Test Process



2.6 *Analysis Methods*

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

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[11]. In many cases, results in this section were calculated based on KCI/HP time-stamps, which may differ significantly from the BellSouth time measurement points reported in the SQMs[12]. For those evaluation criteria that do not map to the GPSC-approved measures, KCI has applied its own standard, based on our professional judgment.

Pre-order response times for the KCI Test CLEC queries on each volume test day were compared to BellSouth retail performance data for the corresponding day (e.g., July 25, 2000 test data were compared to July 25, 2000 retail data). 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.

Table IV-4.4: PRE-4 Test Evaluation Criteria and Results[13]

Test Cross-Reference	Evaluation Criteria	Result	Comments
System Availability			
PRE-4-1-1	TAG pre-order transaction capability is consistently available during scheduled hours of operation.	Satisfied	The GPSC-approved standard is system availability 99.5% of scheduled up time. HP continuously sent orders and pre-orders throughout each iteration of the test. While connectivity was maintained throughout the test, HP and BLS conducted "coordinated bounces" of their servers on several occasions. These system restarts were

[11] 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 test standards.

[12] 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.

[13] Results in percentages are rounded to the nearest whole number.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			conducted primarily to recover BLS back-end functionality. The combined duration of downtime resulting from these restarts was less than 0.5% of total test time.
Presence of Functionality			
PRE-4-2-1	BLS's TAG interface provides expected system responses. [14]	Satisfied	The KCI standard is 99% of expected system responses received. Day 1 - Initial: – 94% (112,255/118,885) of pre-order requests received expected system responses Day 1 - Retest 1: – 91% (108,269/118,887)of pre-order requests received expected system responses Day 1 - Retest 2: – 100% (118,875/118,884) of pre-order requests received expected system responses Day 1 - Retest 3: – 100% (118,884/118,897) of pre-order requests received expected system responses Day 2: – 100% (118,807/118,884) of pre-order requests received expected system responses

[14] An expected system response is defined for this criterion as any response that is consistent with technical specifications for EDI and TAG responses. Type of response received is not considered. The accuracy by type of response is evaluated in 4-4-1 and 4-4-2.

Test Cross-Reference	Evaluation Criteria	Result	Comments
Timeliness of Response[15] [16] [17]			
PRE-4-3-1	The TAG interface provides timely pre-order responses from BLS's Regional Street Access Guide-Telephone Number (RSAG-TN) back-end system.	Satisfied[18]	The GPSC-approved standard is parity with retail performance. Based on BLS performance reports, KCI determined the standard response time for AVQ_TN inquiries to be an average of: – 0.9 seconds (6/2/00 BLS Retail data) – 0.9 seconds (6/14/00 BLS Retail data) – 1.1 seconds (6/20/00 BLS Retail data) – 0.9 seconds (7/24/00 BLS Retail data) – 0.9 seconds (8/1/00 BLS Retail data) Responses to AVQ_TNs were received in an average of: – Day 1 - Initial: 8.0 seconds. – Day 1 - Retest 1: 11.2 seconds. – Day 1 - Retest 2: 4.6 seconds. – Day 1 - Retest 3: 1.6 seconds. – Day 2: 2.6 seconds Although the KCI results exceed the BLS retail averages by a statistically significant amount, it is KCI's professional judgment that the response interval for Test-CLEC-submitted AVQ_TN pre-orders is within a reasonable timeframe.

[15] See *Table IV-4.5: Pre-Order Response Timeliness* for detailed timeliness test results.

[16] In accordance with the GPSC's June 6, 2000 measures and standards to be used for purposes of this evaluation, KCI reviewed pre-order timeliness results relative to BellSouth Retail pre-order timeliness. This standard does not include allowances for transaction transmission time from the test CLEC to BellSouth and for response transmission time from BellSouth back to the test CLEC.

[17] KCI analyzed BellSouth-published Retail performance data for the months corresponding to the KCI volume test execution dates. Test data for volume Day 1 Re-test 3 (performed on July 24, 2000) was compared against BellSouth July Retail performance reports, whereas test data for volume Day 2 (performed on August 1, 2000) was analyzed relative to BellSouth August Retail data. Since BellSouth data are separated into business and residential pre-order categories, KCI compared test results to a weighted average of BellSouth residential and business results.

[18] See *Figure IV-4.2: AVQ_TN Response Distribution* for a distribution of the AVQ_TN response times KCI experienced.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PRE-4-3-2	The TAG interface provides timely pre-order responses from BLS's RSAG-Address back-end system.	Satisfied[19]	The GPSC-approved standard is parity with retail performance. Based on BLS performance reports, KCI determined the standard response time for AVQ inquiries to be an average of: – 1.9 seconds (6/2/00 BLS Retail data) – 1.5 seconds (6/14/00 BLS Retail data) – 1.5 seconds (6/20/00 BLS Retail data) – 1.3 seconds (7/24/00 BLS Retail data) – 1.3 seconds (8/01/00 BLS Retail data) Responses to AVQs received during KCI's testing were delivered in an average of: – Day 1 - Initial: 8.3 seconds. – Day 1 - Retest 1: 12.0 seconds. – Day 1 - Retest 2: 5.2 seconds. – Day 1- Retest 3: 2.0 seconds. – Day 2: 2.9 seconds Although the KCI results exceed the BLS retail averages by a statistically significant amount, it is KCI's professional judgment that the response interval for Test-CLEC-submitted AVQ pre-orders is within a reasonable timeframe.
PRE-4-3-3	The TAG interface provides timely pre-order responses from BLS's Direct Order Entry Support Application Program (DSAP) back-end system.	Satisfied[20]	The GPSC-approved standard is parity with retail performance. Based on BLS performance reports, KCI determined the standard response time for AAQ inquiries to be an average of: – 0.3 seconds (6/2/00 BLS Retail data) – 0.3 seconds (6/14/00 BLS Retail

[19] See *Figure IV-4.3: AVQ Response Distribution* for a distribution of the AVQ response times KCI experienced.

[20] See *Figure IV-4.4: AAQ Response Distribution* for a distribution of the AAQ response times KCI experienced.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			data) – 0.7 seconds (6/20/00 BLS Retail data) – 0.4 seconds (7/24/00 BLS Retail data) – 0.3 seconds (8/01/00 BLS Retail data) Responses to AAQs received during KCI's testing were delivered in an average of: – Day 1 – Initial: 4.9 seconds. – Day 1 – Retest 1: 7.2 seconds. – Day 1 – Retest 2: 2.3 seconds. – Day 1 – Retest 3: 1.1 seconds. – Day 2: 1.4 seconds Although the KCI results exceed the BLS retail averages by a statistically significant amount, it is KCI's professional judgment that the response interval for Test-CLEC-submitted AAQ pre-orders is within a reasonable timeframe.
PRE-4-3-4	The TAG interface provides timely pre-order responses from BLS's Application for Telephone Number Load Administration and Selection (ATLAS) back- end system[21].	Satisfied	The GPSC-approved standard is parity with retail performance. Based on BLS performance reports, KCI determined the standard response time for TNAQ, TNSQ and TNCAN_TN inquiries to be an average of: – 0.6 seconds (6/2/00BLS Retail data) – 3.7 seconds (6/14/00 BLS Retail data) – 1.0 seconds (6/20/00 BLS Retail data) – 0.8 seconds (7/24/00 BLS Retail data) – 0.8 seconds (8/01/00 BLS Retail data) Responses to TNAQs, TNSQs, and

[21] See *Figure IV-4.5: ATLAS Response Distribution* for a distribution of the response times KCI experienced from the ATLAS back end system.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			TNCAN_TNs received during KCI's testing were delivered in an average of: – Day 1 - Initial: 25.4 seconds. – Day 1 - Retest 1: 16.5 seconds. – Day 1 - Retest 2: 5.5 seconds. – Day 1 - Retest 3: 1.7 seconds. – Day 2: 1.6 seconds Although the KCI results exceed the BLS retail averages by a statistically significant amount, it is KCI's professional judgment that the response interval for Test-CLEC-submitted TNAQ, TNSQ and TNCAN_TN pre-orders is within a reasonable timeframe.
PRE-4-3-5	The TAG interface provides timely pre-order responses from BLS's CRSECSR back-end system.	Satisfied	The GPSC-approved standard is parity with retail performance. Based on BLS performance reports, KCI determined the standard response time for CSRQ inquiries to be an average of: – 1.0 seconds (6/2/00 BLS Retail data) – 4.0 seconds (6/14/00 BLS Retail data) – 2.6 seconds (6/20/00 BLS Retail data) – 1.1 seconds (7/24/00 BLS Retail data) – 1.0 seconds (8/01/00 BLS Retail data) Responses to CSRQs received during KCI's testing were delivered in an average of: – Day 1 - Retest 1: 11.3 seconds. – Day 1 - Retest 1: 7.6 seconds. – Day 1 - Retest 2: 3.3 seconds. – Day 1 - Retest 3: 2.4 seconds. – Day 2: 2.6 seconds Although the KCI results exceed the BLS retail averages by a statistically significant amount, it is KCI's professional judgment that the

Test Cross-Reference	Evaluation Criteria	Result	Comments
			response interval for Test-CLEC-submitted CSRQ pre-orders is within a reasonable timeframe.
PRE-4-3-6	The TAG interface provides timely pre-order responses from BLS's ATLAS-MLH back-end system.	Satisfied[22]	The KCI standard for pre-order timeliness is an average of 8.0 seconds. Responses to TNAQ_MLHs and TNCAN_MLHs received during KCI's testing were delivered in an average of: – Day 1 - Initial: 13.3 seconds. – Day 1 - Retest 1: 14.1 seconds. – Day 1 - Retest 2: 4.8 seconds. – Day 1 - Retest 3: 1.8 seconds. – Day 2: 1.5 seconds
PRE-4-3-7	The TAG interface provides timely pre-order responses from BLS's ATLAS-DID back-end system.	Satisfied[23]	The KCI standard for pre-order timeliness is an average of 8.0 seconds. Responses to TNAQ_DIDs and TNCAN_DIDs received during KCI's testing were delivered in an average of: – Day 1 - Initial: 22.1 seconds. – Day 1 - Retest 1: 19.9 seconds. – Day 1 - Retest 2: 7.7 seconds. – Day 1 - Retest 3: 2.7 seconds. – Day 2: 2.3 seconds

[22] BellSouth retail analog data on responses from ATLAS-MLH is not currently available. BellSouth retail ordering representatives currently utilize a manual process for selecting and reserving MLH numbers. As a result, KCI is unable to evaluate TNAQ_MLH and TNCAN_MLH timeliness results in comparison to a retail benchmark for electronic response timeliness.

[23] BellSouth retail analog data on responses from ATLAS-DID is not currently available. BellSouth retail ordering representatives currently utilize a manual process for selecting and reserving DID numbers. As a result, KCI is unable to evaluate TNAQ_DID and TNCAN_DID timeliness results in comparison to a retail benchmark for electronic response timeliness.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PRE-4-3-8	The TAG interface provides timely pre-order responses from BLS's OASIS back-end system.	Satisfied[24]	The GPSC-approved standard is parity with retail performance. Based on BLS performance reports, KCI determined the standard response time for SAQ[25] queries to be an average of: – 0.9 seconds (6/2/00 BLS Retail data) – 1.0 seconds (6/14/00 BLS Retail data) – 0.9 seconds (6/20/00 BLS Retail data) – 1.0 seconds (7/24/00 BLS Retail data) – 1.4 seconds (8/01/00 BLS Retail data) Responses to SAQs received during KCI's testing were delivered in an average of: – Day 1 - Initial: 11.6 seconds. – Day 1 - Retest 1: 9.8 seconds. – Day 1 - Retest 2: 10.5 seconds. – Day 1 - Retest 3: 2.9 seconds. – Day 2: 3.3 seconds Although the KCI results exceed the BLS retail averages by a statistically significant amount, it is KCI's professional judgment that the response interval for Test-CLEC-submitted SAQ pre-orders is within a reasonable timeframe.

[24] See *Figure IV-4.6: SAQ Response Distribution* for a distribution of the response times KCI experienced from the OASIS back end system.

[25] Service Availability Queries (SAQs) may be performed by requesting a) information on a specific service/feature or group of related features; or b) information on all features available from a particular BellSouth switch.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PRE-4-3-9	The TAG interface provides timely pre-order responses to Calculate Due Date (CDD) inquiries[26].	Satisfied	The KCI standard for pre-order timeliness is an average of 8.0 seconds. Responses to CDDs received during KCI's testing were delivered in an average of: Day 1 - Initial: 0.1 Seconds. Day 1 - Retest 1: 0.1 Seconds. Day 1 - Retest 2: 0.2 Seconds. Day 1 - Retest 3: 0.01 Seconds. Day 2: 0.01 Seconds
Accuracy of Response[27]			
PRE-4-4-1	BLS system provides accurate pre-order success responses .	Satisfied	The expected pre-order success responses received during the test were accurate. Responses received by KCI were consistent with the pre-order types associated with them (e.g., CSRQ received a CSR).
PRE-4-4-2	BLS system provides accurate back-end or TAG API errors.	Satisfied	The expected pre-order error responses received during the test were accurate. Responses received by KCI were consistent with the orders expected.

[26] BellSouth retail analog data is not available for the CDD query. BellSouth retail representatives do not utilize this function when retrieving information needed to process retail orders. As a result, KCI is unable to evaluate CDD timeliness results in comparison to a retail benchmark.

[27] For these criteria, KCI defined an accurate response to be a system response that is consistent with the technical specifications for EDI and TAG successful responses *and* to be consistent with the transaction type that initiated the response (e.g., a correctly formatted CSRQ received a Customer Services Record response). In the case of error responses, KCI verified that these were only received for incorrectly formatted queries. The contents of the response files (successes and errors) were evaluated for accuracy and completeness for purposes of this test on a sample basis only. A more complete accuracy evaluation for conformance to the BellSouth business rules was undertaken in feature/function testing (PRE-1 and PO&P11).

Table IV-4.5: Pre-Order Response Timeliness[28]

AAQ	Appointment Availability Query									
	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	> 20 sec	No Response	TOTAL
Day 1 Retest 3	12533	712	26	48	35	16	23	10	0	13403
	94%	5%	0%	0%	0%	0%	0%	0%	0%	100%
Day 2	12732	598	14	7	6	5	17	18	5	13402
	95%	4%	0%	0%	0%	0%	0%	0%	0%	100%
AVQ-TN	**Address Validation Query by Telephone Number**									
	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	> 20 sec	No Response	TOTAL
Day 1 Retest 3	1466	313	73	9	4	4	6	13	0	1888
	78%	17%	4%	0%	0%	0%	0%	0%	0%	100%
Day 2	858	572	307	109	22	10	3	4	2	1887
	45%	30%	16%	6%	1%	1%	0%	0%	0%	100%
TNAQ	**Telephone Number Assignment Query**									
	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	> 20 sec	No Response	TOTAL
Day 1 Retest 3	9317	2983	474	170	98	211	82	63	0	13398
	70%	22%	4%	1%	1%	2%	0%	0%	0%	100%
Day 2	10155	2640	420	73	27	24	21	30	7	13397
	76%	20%	3%	1%	0%	0%	0%	0%	0%	100%
TNSQ	**Telephone Number Selection Query**									
	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	> 20 sec	No Response	TOTAL
Day 1 Retest 3	9746	2591	455	181	95	174	0	61	0	13398
	72%	19%	3%	1%	1%	1%	0%	0%	0%	100%
Day 2	10932	1916	365	74	28	21	24	32	5	13397
	82%	14%	3%	1%	0%	0%	0%	0%	0%	100%

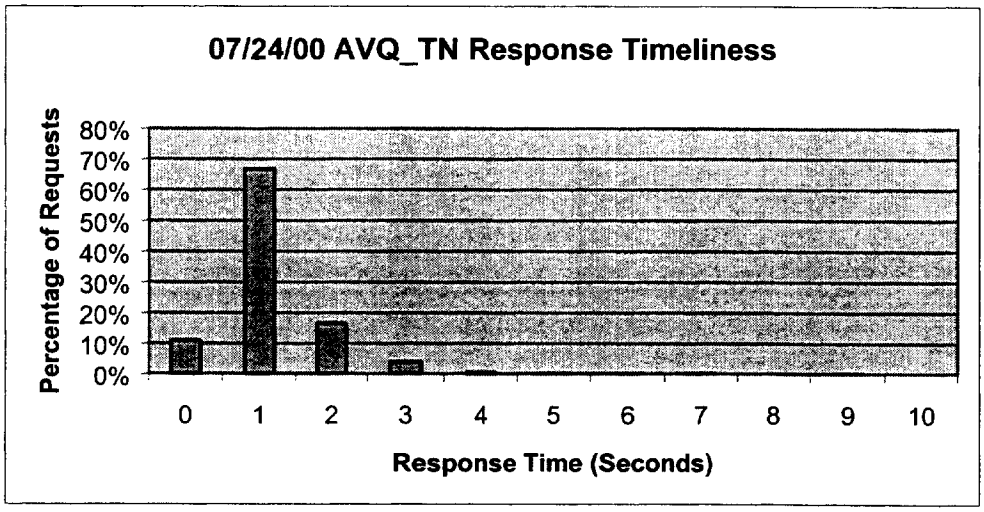
[28] Data is presented here only for the last two instances of the Normal Volume Test. Totals may not equal 100% due to rounding.

AVQ	Address Validation Query									
	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	> 20 sec	No Response	TOTAL
Day 1 Retest 3	10626	6411	1115	205	62	58	50	154	0	18681
	57%	34%	6%	1%	0%	0%	0%	0%	0%	100%
Day 2	5677	6014	4114	1968	561	271	30	27	18	18680
	30%	32%	22%	11%	3%	1%	0%	0%	0%	100%
SAQ	**Service Availability Query**									
	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	> 20 sec	No Response	TOTAL
Day 1 Retest 3	0	7902	10584	852	183	50	17	66	0	19654
	0%	40%	54%	4%	1%	0%	0%	0%	0%	100.0%
Day 2	0	8384	9990	918	218	49	9	68	17	19653
	0%	43%	51%	5%	1%	0%	0%	0%	0%	100%
CSRQ	**Customer Service Record Query**									
	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	> 20 sec	No Response	TOTAL
Day 1 Retest 3	546	5820	1269	228	72	57	15	12	11	8030
	7%	72%	16%	3%	1%	1%	0%	0%	0%	100%
Day 2	601	5493	1337	326	93	83	37	39	20	8029
	7%	68%	17%	4%	1%	1%	0%	0%	0%	100%
CDD	**Calculated Due Date**									
	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	> 20 sec	No Response	TOTAL
Day 1 Retest 3	21941	0	0	0	0	0	0	0	0	21941
	100%	0%	0%	0%	0%	0%	0%	0%	0%	100%
Day 2	21940	0	0	0	0	0	0	0	0	21940
	100%	0%	0%	0%	0%	0%	0%	0%	0%	100%
TNAQ_MLH	**Telephone Number Availability Query for Multi-Line Hunting Numbers**									
	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	> 20 sec	No Response	TOTAL
Day 1 Retest 3	1473	666	70	15	9	30	14	10	0	2287
	64%	3%	3%	0%	0%	1%	0%	0%	0%	100%
Day 2	1919	283	50	18	5	1	3	7	0	2286
	84%	12%	2%	1%	0%	0%	0%	0%	0%	100%

TNAQ_DID	Telephone Number Availability Query for Direct Inward Dial Numbers									
	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	> 20 sec	No Response	TOTAL
Day 1 Retest 3	243	417	109	20	7	12	9	10	1	828
	29%	50%	13%	2%	1%	1%	0%	0%	0%	100%
Day 2	343	392	71	14	1	1	2	3	0	827
	41%	47%	9%	2%	0%	0%	0%	0%	0%	100%
TNCAN	**Telephone Number Cancellation Query**									
	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	> 20 sec	No Response	TOTAL
Day 1 Retest 3	2743	701	125	34	31	62	28	9	0	3733
	73%	19%	3%	1%	1%	2%	0%	0%	0%	100%
Day 2	2996	592	100	17	6	4	21	31	2	3736
	80%	16%	3%	0%	0%	0%	0%	0%	0%	100%
TNCAN_MLH	**Telephone Number Cancellation Query for Multi-Line Hunting Numbers**									
	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	> 20 sec	No Response	TOTAL
Day 1 Retest 3	515	230	40	13	5	15	6	4	0	828
	62%	28%	5%	2%	1%	2%	0%	0%	0.0%	100%
Day 2	595	183	40	4	0	1	1	3	0	827
	72%	22%	5%	0%	0%	0%	0%	0%	0%	100%
TNCAN_DID	**Telephone Number Cancellation Query for Direct Inward Dial Numbers**									
	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	> 20 sec	No Response	TOTAL
Day 1 Retest 3	457	271	55	8	7	9	9	11	1	828
	55%	33%	7%	1%	1%	1%	0%	1%	0%	100.%
Day 2	500	269	46	3	3	2	1	2	1	827
	60%	32%	6%	0%	0%	0%	0%	0%	0%	100.%

ALL QUERY TYPES										
	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	> 20 sec	<=1 sec	TOTAL
Day 1 Retest 3	71606	29017	14395	1783	608	698	354	423	13	118897
	60%	24%	12%	1%	1%	1%	0%	0%	0%	100%
Day 2	69248	27336	16854	3531	970	472	169	264	77	118888
	58%	23%	14%	3%	1%	0%	0%	0%	0%	100%

Figure IV-4.2: AVQ_TN Response Distribution



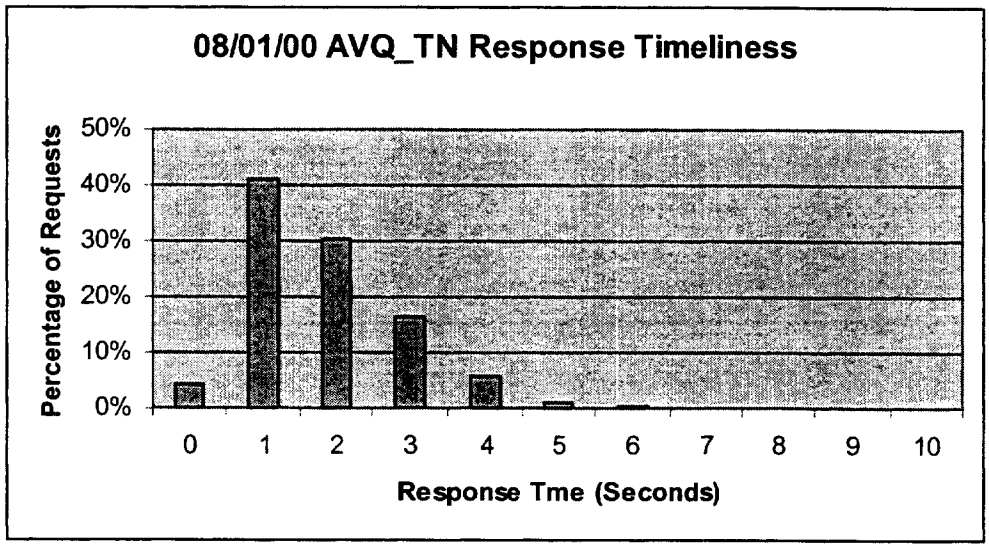
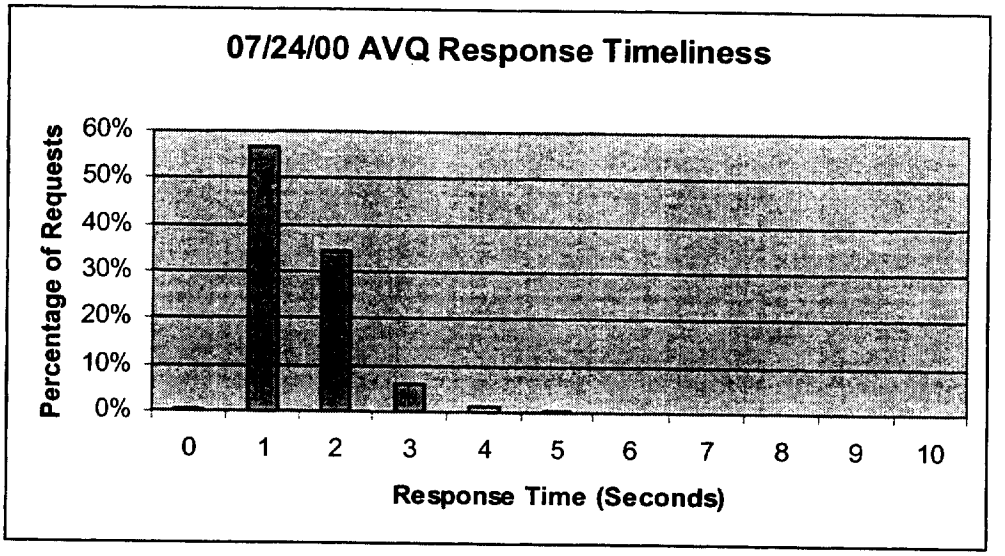


Figure IV-4.3: AVQ Response Distribution



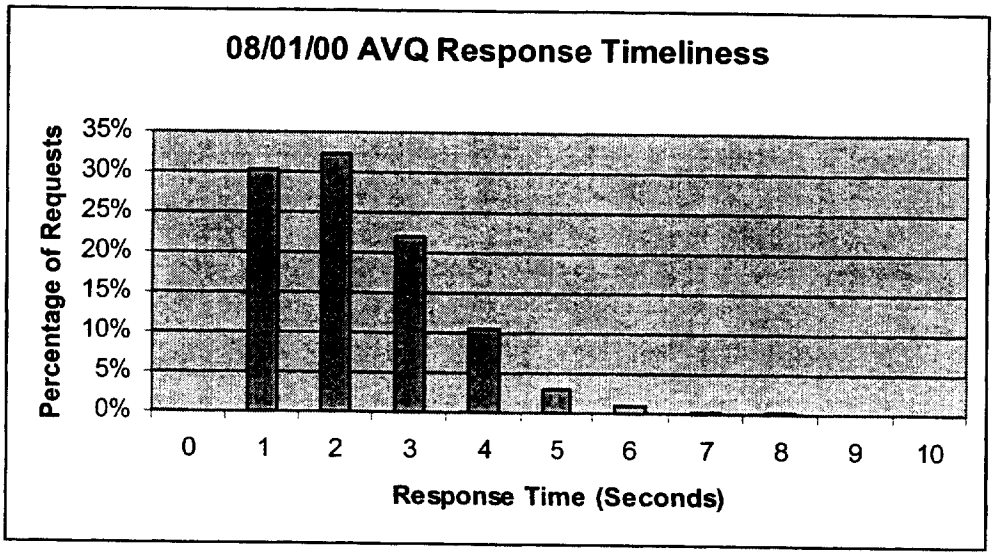
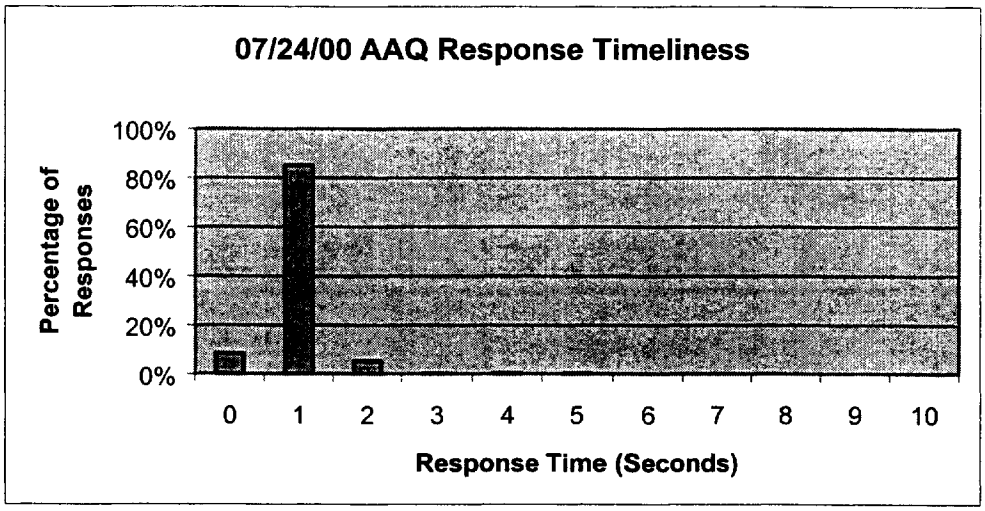


Figure IV-4.4: AAQ Response Distribution



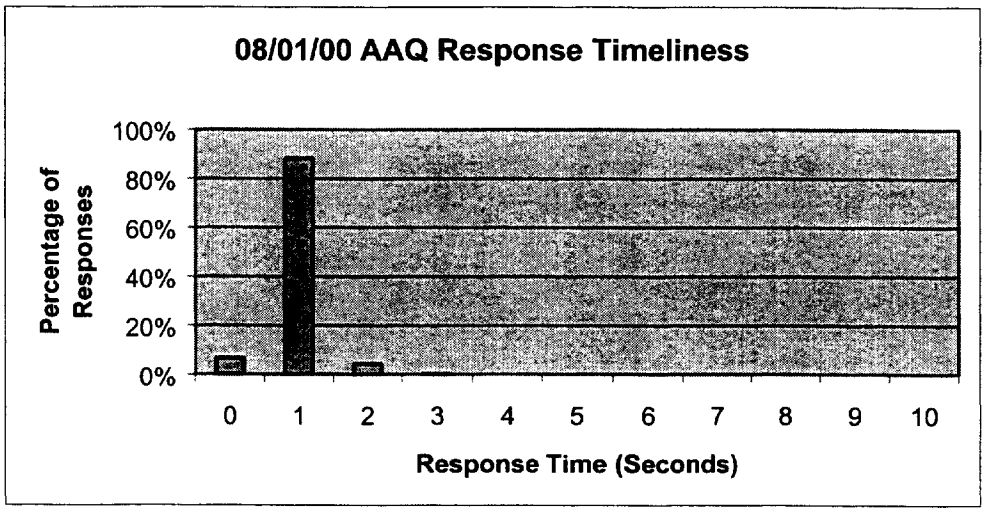
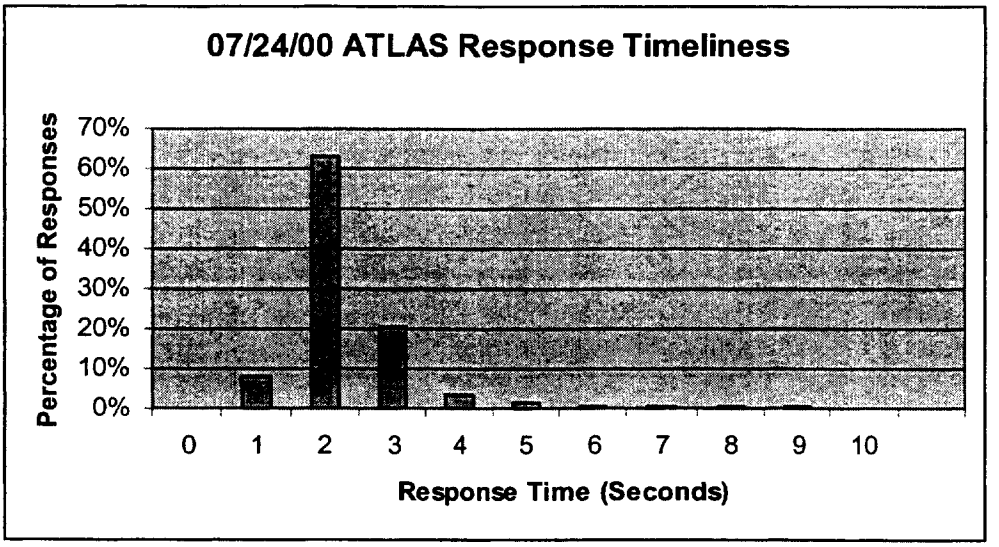
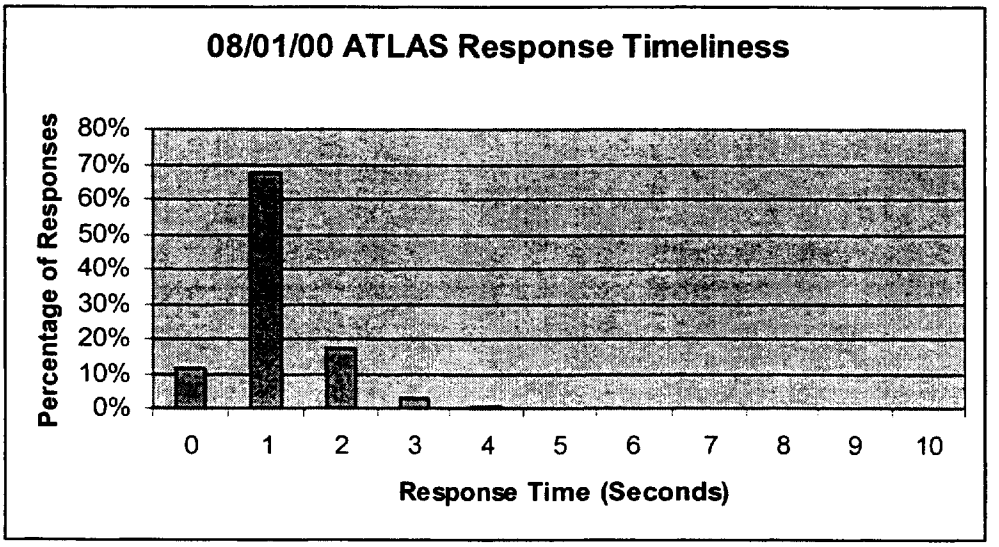


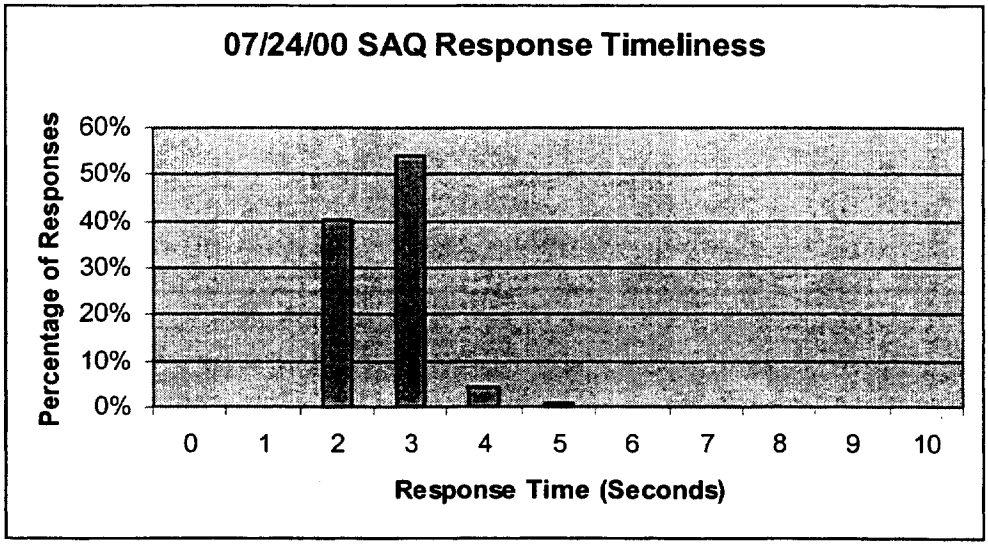
Figure IV-4.5: ATLAS Response Distribution[29]

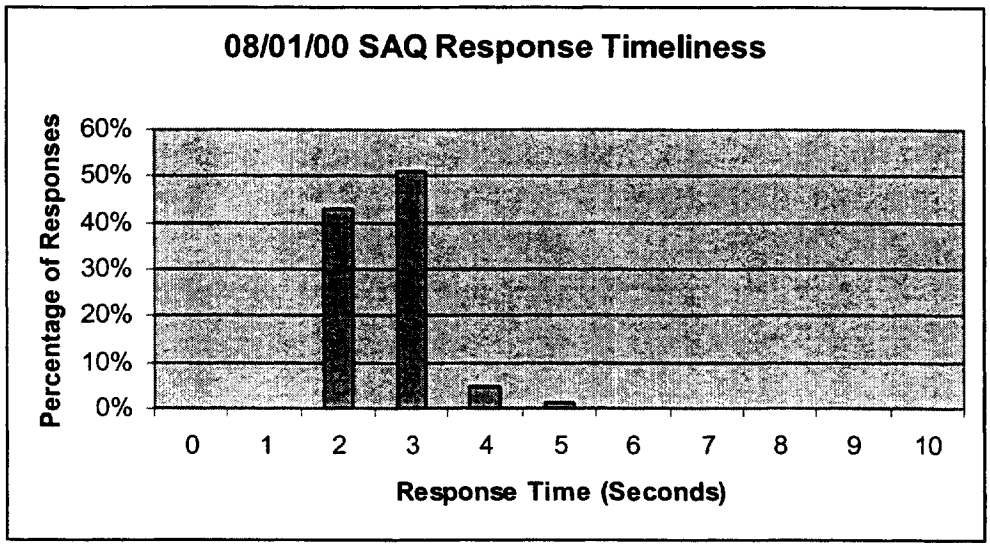




[29] Contains aggregated response times for all pre-order queries on the ATLAS back-end system, including TNAQs, TNSQs, and TN_CANs.

Figure IV-4.6: SAQ Response Distribution





E. Test Results: TAG Peak Volume Pre-Order Performance Test (PRE-5)

1.0 Description

The objective of the Telecommunications Access Gateway (TAG) Peak Volume Pre-Order Performance Test (PRE-5) was to evaluate BellSouth's Operating Support Systems (OSS) associated with pre-ordering at specified volumes. Competitive Local Exchange Carriers (CLECs) submit pre-order queries to validate existing customer information and the availability of BellSouth facilities, and to obtain data (e.g., telephone numbers, service feature codes, etc.) that will be entered on subsequent service orders. This evaluation assessed BellSouth's ability to process accurate and timely pre-order transactions via the TAG Client Application Program Interface (API) under "peak" year-end 2001 (YE01) projected transaction load conditions[1] in the Reengineered Services, Installation and Maintenance Management System (RSIMMS) environment[2].

2.0 Methodology

This section summarizes the test methodology.

2.1 Business Process Description

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

2.2 Scenarios

KCI generated and transmitted pre-order queries based on the scenarios listed in the *Master Test Plan (MTP)*, which defined the pre-order scenarios for testing in PRE-5.

For the list of pre-order scenarios refer to Section V, Table IV-1.1: "Pre-Order Scenario Description."

2.3 Test Targets & Measures

The test target was the TAG interface and back-end systems supporting pre-order queries[3]. 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."

---

[1] KCI forecasted hourly transaction rates for individual order and pre-order types drawing on data from current order and pre-order daily volume rates, BellSouth 2001 transaction forecasts, and from CLEC 2001 transaction forecasts where obtainable.

[2] See RSIMMS and Production Systems Review for a description of the difference between the production and RSIMMS environments.

[3] The RSIMMS environment is designed to access copies of the PSIMMS, COFFI, BOCRIS, BOCABS and LMOS/Host systems, and to access the production COFIUSOC, ATLAS, RSAG, and DSAP systems.

Table IV-5.1: Test Target Cross-Reference

Sub-Process	Function	Evaluation Criteria	Test Cross-Reference
Submit Pre-Orders in Projected Peak Volumes	Adress Validation	Availability of Interface Accuracy of Response Timeliness of Response	PRE-5-1-1 PRE-5-2-1 PRE-5-3-1 PRE-5-3-2 PRE-5-4-1 PRE-5-4-2
	CSR Retrieval	Availability of Interface Accuracy of Response Timeliness of Response	PRE-5-1-1 PRE-5-2-1 PRE-5-3-5 PRE-5-4-1 PRE-5-4-2
	Switched Service Availability	Availability of Interface Accuracy of Response Timeliness of Response	PRE-5-1-1 PRE-5-2-1 PRE-5-3-8 PRE-5-4-1 PRE-5-4-2
	PIC/LPIC Availability	Availability of Interface Accuracy of Response Timeliness of Response	PRE-5-1-1 PRE-5-2-1 PRE-5-3-8 PRE-5-4-1 PRE-5-4-2
	Product / Service Availability	Availability of Interface Accuracy of Response Timeliness of Response	PRE-5-1-1 PRE-5-2-1 PRE-5-3-8 PRE-5-4-1 PRE-5-4-2
	Telephone Number(s) Availability	Availability of Interface Accuracy of Response Timeliness of Response	PRE-5-1-1 PRE-5-2-1 PRE-5-3-4 PRE-5-3-6 PRE-5-3-7 PRE-5-4-1 PRE-5-4-2
	Reserve TNs	Availability of Interface Accuracy of Response Timeliness of Response	PRE-5-1-1 PRE-5-2-1 PRE-5-3-4 PRE-5-4-1 PRE-5-4-2
	Cancel TN Reservation	Availability of Interface Accuracy of Response Timeliness of Response	PRE-5-1-1 PRE-5-2-1 PRE-5-3-4 PRE-5-3-6 PRE-5-3-7 PRE-5-4-1 PRE-5-4-2

Sub-Process	Function	Evaluation Criteria	Test Cross-Reference
	Determine Due Date/ Appointment Availability	Availability of Interface Accuracy of Response Timeliness of Response	PRE-5-1-1 PRE-5-2-1 PRE-5-3-3 PRE-5-3-9 PRE-5-4-1 PRE-5-4-2

2.4 *Data Sources*

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

Table IV-5.2: Data Sources for TAG Peak Volume Performance Test (PRE-5)

Document	File Name	Location in Work Papers	Source
Pre-Order Business Rules, Versions 2.0, 3.0, 4.0, 5.0, 6.0, and 7.0	No Electronic Copy	PRE-1-A-1	BLS
Pre-Order Business Rules Data Dictionary, Versions 1.0 and 3.0	No Electronic Copy	PRE-1-A-2	BLS
Telecommunications Access Gateway (TAG) API Reference Guide, Versions 2.2.0.2, 2.2.0.4, 2.2.0.5, 2.2.0.7, 2.2.0.8, and 2.2.1.1	No Electronic Copy	PRE-1-A-3	BLS
TAG Programmers Job Aid	No Electronic Copy	PRE-1-A-4	BLS
BellSouth Three Month Hourly Order History	BLS Order History.xls	PRE-5-A-1	BLS
2000, 2001 BellSouth LSR Volume Forecasts	BSTFORECAST.xls	PRE-5-A-2	BLS
2000, 2001 Aggregated CLEC Forecasts	CLEC_BST_FORECAST.xls	PRE-5-A-3	CLEC
YE2001 Normal and Peak Forecast Methodology	Fcast Summary.ppt	PRE-5-A-4	KCI
Peak Volume Test Schedule	schedule.xls	PRE-5-A-5	KCI
System Readiness Test Log	SRT_by_date.xls	PRE-5-A-6	KCI
Results Data Tables	Resutls Data CD-ROM	PRE-5-A-7	KCI
GPSC *Order* Adopting Standards and Benchmarks	GPSC_standards.tif	PRE-5-A-8	GPSC
Pre-Order Response Data for June, July, August 2000	Response Data Fro June-August 2000.xls	PRE-5-A-9	BLS

Document	File Name	Location in Work Papers	Source
Statistical Signifcance Analysis Results	Volume Stats Analysis.xls	PRE-5-A-10	KCI

2.4.1 *Data Generation/Volumes*

The TAG Peak Volume Test (PRE-5) evaluated BellSouth's performance by sending approximately 147,000 pre-orders with 43,000[4] associated orders on two distinct days, over two eight-hour periods. This test and the ordering (O&P-4) peak volume test were executed concurrently.

Peak Volumes were defined as 150% of transaction volume levels during the busiest consecutive eight hours of the Normal Volume Test.

Volumes for this test were determined by forecasting BellSouth's expected order volume for year-end 2001 (YE01). KCI obtained anticipated transaction growth rates from CLECs and BellSouth. Transaction types were forecasted individually based on expected growth rates for each order and pre-order type. KCI also analyzed the distribution of transactions over the course of a normal business day. These data were then combined to determine the number and types of orders to be sent each hour. Orders were then scheduled for transmission to BellSouth via TAG.

Table IV-5.3 shows the pre-order volumes submitted during each day of the Peak Volume Test[5].

Table IV-5.3: Peak Test Generated Volumes

Query Type	Day 1[6] 07/10/00	Day 1, Retest 1 07/13/00	Day 2 07/17/00
AAQ	19,284	21,918	21,919
AVQ-TN	2,455	2,456	2,456
TNAQ	15,342	17,475	17,476
TNSQ	400	401	401
AVQ	21,432	24,368	24,368

[4] Associated orders were sent as part of the TAG/EDI Peak Volume Test (O&P-4).

[5] Two peak volume test days were initially planned. However, BellSouth performance failure required "re-testing" of Peak Volume Day 1 on one subsequent occasion. Following implementation of system fixes by BellSouth, KCI conducted SRTs to verify that BellSouth's system was functioning. After these SRTs, an additional Peak Volume Day 1 test was conducted.

[6] The Peak volume test was originally scheduled for two test cycles. KCI elected to conduct Day 1 retests in accordance with the "test until you pass" philosophy referenced in the *MTP* (i.e., volume test "day one" was re-executed until all evaluation criteria were believed to be satisfied).

Query Type	Day 1[6] 07/10/00	Day 1, Retest 1 07/13/00	Day 2 07/17/00
SAQ	22,569	25,652	25,652
CSRQ	11,141	11,142	11,142
CDD	28,674	32,552	32,552
TNAQ_MLH	2,983	2,989	2,990
TNAQ_DID	1,077	1,078	1,078
TNCAN	19,486	4,870	4,870
TNCAN_MLH	1,078	1,077	1,078
TNCAN_DID	1,077	1,078	1,078
Total	146,998	147,056	147,062

2.5 *Evaluation Methods*

In preparation for the test, pre-order transaction seeds were written according to BellSouth business rules[7] and loaded into the KCI transaction test system. These templates were then submitted to Hewlett Packard (HP) and to BellSouth during Systems Readiness Testing (SRT)[8]. SRT confirmed the functionality of HP and KCI's transactional systems and verified that orders would flow-through the BellSouth system. The pre-order seeds were used as templates to build the volumes for the subsequent tests. Pre-orders were submitted on a scheduled submission date and time determined by KCI prior to the start of the test. As appropriate, testers made final updates (e.g., desired due dates or other information) and processed the transactions.

The TAG Peak Volume Performance Test (PRE-5) evaluated BellSouth's interfaces at year-end, 2001 (YE01) projected order volumes in BellSouth's RSIMMS environment for two eight-hour periods. This test was executed by submitting pre-order requests in support of Resale and UNE orders against BellSouth test-bed accounts and continued through the return of successful pre-order responses, rejections, or error notices. The test bed accounts[9] were provisioned by BellSouth according to KCI's specifications and verified by KCI prior to initiation of the test.

[7] Pre-orders were written according to business rules outlined in BellSouth Pre-order Business Rules (V. 7.0).

[8] KCI conducted 24 SRTs between April 11, 2000 and August 1, 2000. After completing the required SRTs, BellSouth requested KCI/HP participation in additional testing. These additional tests were used by BellSouth to ensure that its back-end systems and the Interfaces were functioning correctly.

[9] Refer to Section IV, "Pre-Ordering Overview" for a detailed description of the Pre-Ordering test bed process and detail of accounts.

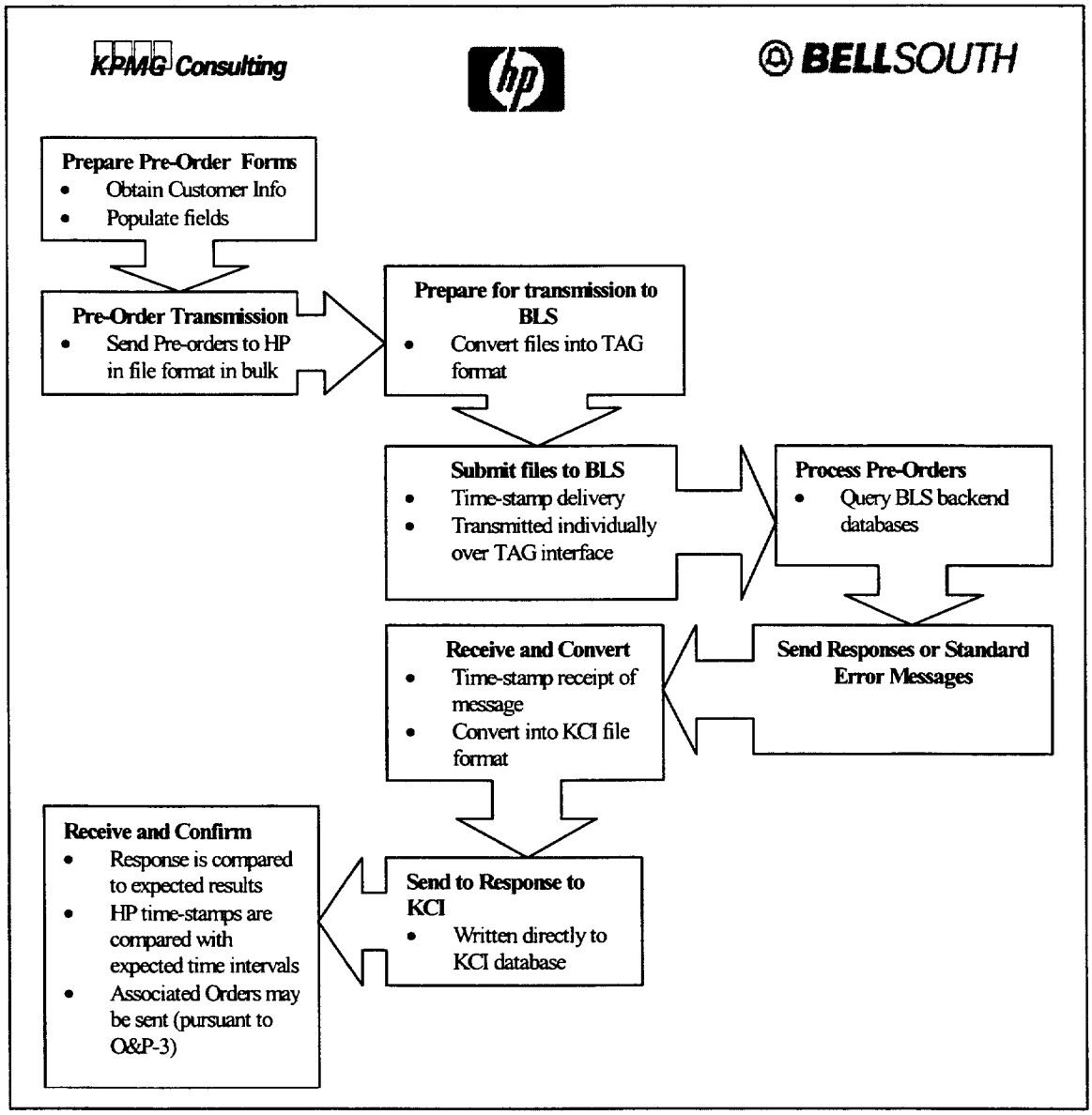
In order to fully test the capacity of BellSouth's OSS supporting pre-order and ordering, the test was conducted simultaneously with the EDI/TAG Peak Volume Performance Test (O&P-4). The pre-order transaction loads were distributed geographically across four Central Offices (COs) in the state of Georgia. BellSouth established and configured customer test accounts prior to initiation of the test.

The test cases for the TAG Peak Volume Test (PRE-5) were submitted in an automated fashion. Transactions were provided in bulk to HP for conversion from the business file format to the TAG format. HP time-stamped and forwarded the transactions to BellSouth for processing according to the schedule provided by KCI. BellSouth processed the transactions and returned responses to HP. The test process is depicted in Figure IV-5.1[10]

As pre-order and order volume transactions were submitted, error messages or positive responses were returned. A transaction was deemed complete if a positive pre-order response or an error message was received. The results were logged and compared to expected pre-ordering system functionality and business processes, as outlined in Section IV, "Pre-Ordering Overview."

[10] See Section IV, "Pre-Ordering Overview" for a complete description of the file transfer process.

Figure IV-5.1: TAG Peak Volume Test Process



2.6 *Analysis Methods*

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

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[11]. In many cases, results in this section were calculated based on KCI/HP time-stamps, which may differ significantly from the BellSouth time measurement points reported in the SQMs[12]. For those evaluation criteria that do not map to the GPSC-approved measures, KCI has applied its own standard, based on our professional judgment.

Pre-order response times for the KCI Test CLEC queries on each volume test day were compared to BellSouth retail performance data for the corresponding day (e.g., July 25, 2000 test data were compared to July 25, 2000 retail data).

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.

Table IV-5.4: PRE-5 Evaluation Criteria and Results[13]

Test Cross-Reference	Evaluation Criteria	Result	Comments
System Availability			
PRE-5-1-1	TAG pre-order transaction capability is consistently available during scheduled hours of operation.	Satisfied	The GPSC-approved standard is system availability 99.5% of scheduled up time. HP continuously sent orders and pre-orders throughout each iteration of the test. While connectivity was maintained throughout the test, HP and BLS conducted "coordinated bounces" of their servers on several occasions. These system restarts were conducted primarily to recover BLS back-end functionality. The combined duration of

[11] 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 test standards.

[12] 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 that an LSR is sent, and the time that 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.

[13] Results in percentages are rounded to the nearest whole number.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			downtime resulting from these restarts was less than 0.5% of total test time.
Presence of Functionality			
PRE-5-2-1	BLS's interface provides expected system responses. [14]	Satisfied	The KCI standard is 99% of expected system responses received. Day 1: – 100% (146,715/146,998) of pre-order requests received expected system responses. Day 1, Retest 1: – 100% (146,188/147,056) of pre-order requests received expected system responses Day 2: – 100% (146,240/147,049) of pre-order requests received expected system responses
Timeliness of Response[15] [16] [17]			
PRE-5-3-1	The TAG interface provides timely pre-order responses from BLS's Regional Street Access Guide-Telephone Number (RSAG-TN) back-end system.	Satisfied[18]	The GPSC-approved standard is parity with retail performance. Based on BLS July performance reports, KCI determined the standard response time for AVQ_TN inquiries to be: – 1.5 seconds (7/10/00 BLS Retail data) – 0.9 seconds (7/13/00 BLS Retail data) – 0.9 seconds (7/17/00 BLS Retail

[14] An expected system response is defined for this criterion as any response that is consistent with technical specifications for EDI and TAG responses. Type of response received is not considered. The accuracy by type of response is evaluated in 5-4-1 and 5-4-2 (e.g., Customer Service Record Query [CSRQ] received a CSR).

[15] See *Table IV-5.5: Pre-Order Response Timeliness* for detailed timeliness test results.

[16] In accordance with the GPSC's June 6, 2000 measures and standards to be used for purposes of this evaluation, KCI reviewed pre-order timeliness results relative to BellSouth Retail pre-order timeliness. This standard does not include allowances for transaction transmission time from the test CLEC to BellSouth and for response transmission time from BellSouth back to the test CLEC.

[17] KCI analyzed BellSouth-published Retail performance data for the month of July 2000. Since BellSouth data is separated into business and residential pre-order categories, KCI compared test results to a weighted average of BellSouth residential and business results.

[18] See *Figure IV-5.2: AVQ_TN Response Distribution* for a distribution of the AVQ_TN response times KCI experienced.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			data) Responses to AVQ_TNs were received in an average of: — Day 1- Initial: 6.8 seconds. — Day 1 - Retest: 2.7 seconds. — Day 2: 2.0 seconds. Although the KCI results exceed the BLS retail averages by a statistically significant amount, it is KCI's professional judgment that the response interval for Test-CLEC-submitted AVQ_TN pre-orders is within a reasonable timeframe.
PRE-5-3-2	The TAG interface provides timely pre-order responses from BLS's RSAG-Address back-end system.	Satisfied[19]	The GPSC-approved standard is parity with retail performance. Based on BLS July performance reports, KCI determined the standard response time for AVQ inquiries to be: – 1.5 seconds (7/10/00 BLS Retail data) – 1.3 seconds (7/13/00 BLS Retail data) – 1.3 seconds (7/17/00 BLS Retail data) Responses to AVQs were received in an average of : — Day 1 - Initial: 7.4 seconds. — Day 1 - Retest: 3.2 seconds. — Day 2: 2.5 seconds. Although the KCI results exceed the BLS retail average by a statistically significant amount, it is KCI's professional judgment that the response interval for Test-CLEC-submitted AVQ pre-orders is within a reasonable timeframe.

[19] See *Figure IV-5.3: AVQ Response Distribution* for a distribution of the AVQ response times KCI experienced during Day 1 - Retest and Day 2 of testing.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PRE-5-3-3	The TAG interface provides timely pre-order responses from BLS's Direct Order Entry Support Application Program (DSAP) back- end system.	Satisfied[20]	The GPSC-approved standard is parity with retail performance. Based on BLS July performance reports, KCI determined the standard response time for AAQ inquiries to be: – 0.6 seconds (7/10/00 BLS Retail data) – 0.3 seconds (7/13/00 BLS Retail data) – 0.6 seconds (7/17/00 BLS Retail data) Responses to AAQs were received in an average of: — Day 1 – Initial: 2.8 seconds. — Day 1 – Retest: 1.6 seconds. — Day 2: 1.3 seconds. Although the KCI results exceed the BLS retail average by a statistically significant amount, it is KCI's professional judgment that the response interval for Test-CLEC-submitted AAQ pre-orders is within a reasonable timeframe.
PRE-5-3-4	The TAG interface provides timely pre-order responses from BLS's Application for Telephone Number Load Administration and Selection (ATLAS) back- end system.	Satisfied[21]	The GPSC-approved standard is parity with retail performance. Based on BLS July performance reports, KCI determined the standard response time for TNAQ, TNSQ and TNCAN_TN inquiries to be: – 1.0 seconds (7/10/00 BLS Retail data) – 0.9 seconds (7/13/00 BLS Retail data) – 1.0 seconds (7/17/00 BLS Retail data) Responses to TNAQs, TNSQs, and TNCAN_TNs were received in an average of:

[20] See *Figure IV-5.4: AAQ Response Distribution* for a distribution of the AAQ response times KCI experienced during Day 1 – Retest and Day 2 of testing.

[21] See *Figure IV-5.5: ATLAS Response Distribution* for a distribution of the response times KCI experienced during Day 1 – Retest and Day 2 of testing from the ATLAS back-end system.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			— Day 1 – Initial: 8.3 seconds. — Day 1 – Retest: 3.2 seconds. — Day 2: 1.8 seconds. Although the KCI results exceed the BLS retail average by a statistically significant amount, it is KCI's professional judgment that the response interval for Test-CLEC-submitted TNAQ, TNSQ, TNCAN_TN pre-orders is within a reasonable timeframe.
PRE-5-3-5	The TAG interface provides timely pre-order responses from BLS's CRSECSR back-end system.	Satisfied	The GPSC-approved standard is parity with retail performance. Based on BLS July performance reports, KCI determined the standard response time for CSRQ inquiries to be: – 1.7 seconds (7/10/00 BLS Retail data) – 0.9 seconds (7/13/00 BLS Retail data) – 1.4 seconds (7/17/00 BLS Retail data) Responses to CSRQs were received in an average of: — Day 1 – Initial: 4.0 seconds. — Day 1 – Retest: 4.1 seconds. — Day 2: 2.8 seconds Although the KCI results exceed the BLS retail average by a statistically significant amount, it is KCI's professional judgment that the response interval for Test-CLEC-submitted CSRQ pre-orders is within a reasonable timeframe.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PRE-5-3-6	The TAG interface provides timely pre-order responses from BLS's ATLAS-MLH back-end system.	Satisfied[22]	The KCI standard for pre-order timeliness is an average of 8.0 seconds. Responses to TNAQ_MLHs and TNCAN_MLHs were received in an average of: – Day 1 - Initial: 5.3 seconds. – Day 1 - Retest: 3.1 seconds. – Day 2: 1.7 seconds
PRE-5-3-7	The TAG interface provides timely pre-order responses from BLS's ATLAS-DID back-end system.	Satisfied[23]	The KCI standard for pre-order timeliness is an average of 8.0 seconds. Responses to TNAQ_DIDs and TNCAN_DIDs were received in an average of: – Day 1 - Initial: 7.5 seconds. – Day 1 - Retest: 4.1 seconds. – Day 2: 2.4 seconds
PRE-5-3-8	The TAG interface provides timely pre-order responses from BLS's OASIS back-end system.	Satisfied[24]	The GPSC-approved standard is parity with retail performance. Based on BLS July performance reports, KCI determined the standard response time for SAQ[25] queries to be: – 0.9 seconds (7/10/00 BLS Retail data) – 0.9 seconds (7/13/00 BLS Retail data) – 1.0 seconds (7/17/00 BLS Retail data) Responses to SAQs were received in an average of: – Day 1 - Initial: 17.9 seconds.

[22] BellSouth retail analog data on responses from ATLAS-MLH is not currently available. BellSouth retail ordering representatives currently utilize a manual process for selecting and reserving MLH numbers. As a result, KCI is unable to evaluate TNAQ_MLH and TNCAN_MLH timeliness results in comparison to a retail benchmark for electronic response timeliness.

[23] BellSouth retail analog data on responses from ATLAS-DID is not currently available. BellSouth retail ordering representatives currently utilize a manual process for selecting and reserving MLH numbers. As a result, KCI is unable to evaluate TNAQ_DID and TNCAN_DID timeliness results in comparison to a retail benchmark for electronic response timeliness.

[24] See *Figure IV-5.6: SAQ Response Distribution* for a distribution of the response times KCI experienced during Day 1 - Retest and Day 2 of testing from the OASIS back-end system.

[25] Service Availability Queries (SAQs) may be performed by requesting a) information on a specific service/feature or group of related features; or b) information on all features available from a particular BLS switch.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			– Day 1 - Retest: 4.8 seconds. – Day 2: 4.0 seconds Although the KCI results exceed the BLS retail average by a statistically significant amount, it is KCI's professional judgment that the response interval for Test-CLEC-submitted SAQ pre-orders is within a reasonable timeframe.
PRE-5-3-9	The TAG interface provides timely pre-order responses to Calculate Due Date (CDD) inquiries.	Satisfied[26]	The KCI standard for pre-order timeliness is an average of 8.0 seconds. The number of responses received within 6.0 seconds by KCI from BLS are: – Day 1 - Initial: 0.1 Seconds – Day 1 - Retest: 0.02 Seconds – Day 2: 0.02 Seconds
Accuracy of Response[27]			
PRE-5-4-1	BLS system provides clear and accurate pre-order success responses.	Satisfied	The expected pre-order success responses received during the test were accurate. Responses received by KCI were consistent with the pre-order types associated with them (e.g. CSRQ received a CSR).
PRE-5-4-2	BLS system provides clear, accurate, and complete back-end or TAG API errors.	Satisfied	The expected pre-order error responses received during the test were accurate. Responses received by KCI were consistent with the errors expected.

[26] BellSouth retail analog data is not available for the CDD query. BellSouth retail representatives do not utilize this function when retrieving information needed to process retail orders. As a result, KCI is unable to evaluate CDD timeliness results in comparison to a retail benchmark.

[27] For these criteria, KCI defined an accurate response to be a system response that is consistent with the technical specifications for EDI and TAG success responses *and* to be consistent with the transaction type that initiated the response (e.g., a correctly formatted CSRQ received a Customer Service Record). In the case of error responses, KCI verified that these were only received for incorrectly formatted inquiries. The contents of the response files (successes and errors) were evaluated for accuracy and completeness for purposes of this test on a sample basis only. A more complete accuracy evaluation for conformance to the BellSouth business rules was undertaken in feature/function testing (OP-1, OP-2 and PRE-1).

Table IV-5.5: Pre-Order Response Timeliness[28]

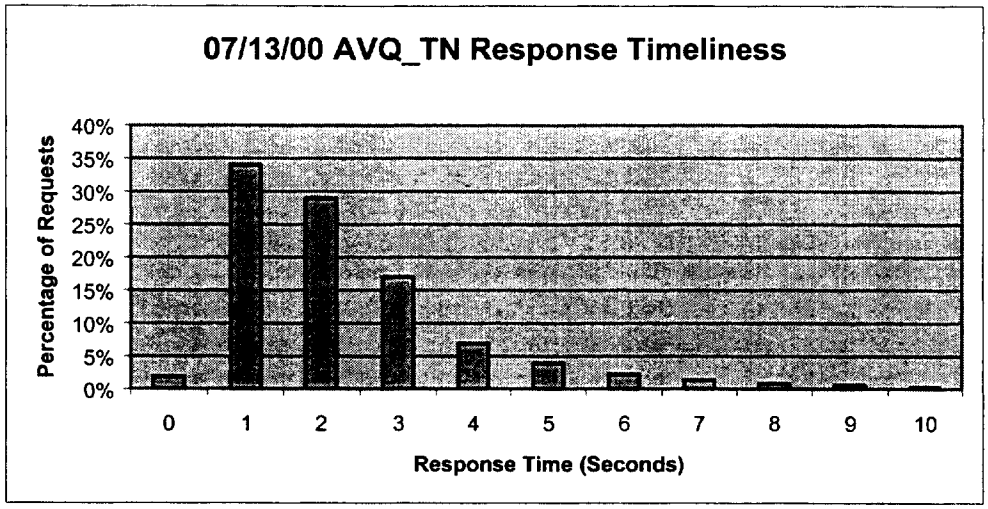
AAQ	Appointment Availability Query									
	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	> 20 sec	No Response	TOTAL
Day 1 Retest 1	16691	3888	455	216	118	160	57	84	249	21918
	76%	18%	2%	1%	1%	1%	0%	0%	1%	100%
Day 2	17240	4067	274	26	11	19	16	33	233	21919
	79%	19%	1%	0%	0%	0%	0%	0%	1%	100%
AVQ-TN	**Address Validation Query by Telephone Number**									
	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	> 20 sec	No Response	TOTAL
Day 1 Retest 1	881	711	417	170	96	130	21	8	22	2456
	36%	29%	17%	7%	4%	5%	0%	0%	1%	100%
Day 2	1092	881	295	95	38	25	7	3	20	2456
	44%	36%	12%	4%	1%	1%	0%	0%	1%	100%
TNAQ	**Telephone Number Assignment Query**									
	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	> 20 sec	No Response	TOTAL
Day 1 Retest 1	6258	5073	2485	1279	711	1059	218	150	242	17475
	36%	29%	14%	7%	4%	6%	0%	0%	1%	100%
Day 2	10911	4903	966	256	96	68	49	43	184	17476
	62%	28%	6%	1%	1%	0%	0%	0%	1%	100%
TNSQ	**Telephone Number Selection Query**									
	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	> 20 sec	No Response	TOTAL
Day 1 Retest 1	167	109	52	25	12	23	4	5	4	401
	44%	27%	13%	6%	3%	6%	1%	1%	1%	100%
Day 2	254	116	18	3	3	2	0	1	4	401
	63%	29%	4%	1%	1%	0%	0%	0%	1%	100%
AVQ	**Address Validation Query**									
	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	> 20 sec	No Response	TOTAL
Day 1 Retest 1	4200	8969	5208	2587	1344	1545	191	107	217	24368
	17%	37%	21%	11%	6%	6%	0%	0%	1%	100%
Day 2	6104	9950	5221	1732	615	375	75	46	251	24369
	25%	41%	21%	7%	3%	2%	0%	0%	1%	100%

[28] Data is presented here only for the last two instances of the Peak Volume Test (PRE-5). Totals may not equal 100% due to rounding.

SAQ	Service Availability Query									
	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	> 20 sec	No Response	TOTAL
Day 1 Retest 1	0	2940	11084	5483	3120	2709	79	234	3	25652
	0%	11%	43%	21%	12%	11%	0%	1%	0%	100%
Day 2	0	4491	11979	5384	2200	1319	107	170	2	25652
	0%	18%	47%	21%	9%	5%	0%	1%	0%	100%
CSRQ	**Customer Service Record Query**									
	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	> 20 sec	No Response	TOTAL
Day 1 Retest 1	431	5380	3192	1049	400	414	95	176	5	11142
	4%	48%	29%	9%	4%	4%	0%	1%	0%	100%
Day 2	541	6672	2483	800	371	204	47	21	3	11142
	5%	60%	22%	7%	2%	2%	0%	0%	0%	100%
CDD	**Calculated Due Date**									
	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	> 20 sec	No Response	TOTAL
Day 1 Retest 1	32536	00		0	0	0	0	0	16	32552
	100%	0%	0%	0%	0%	0%	0%	0%	0%	100%
Day 2	32549	0	0	0	0	1	0	0	3	32553
	100%	0%	0%	0%	0%	0%	0%	0%	0%	100%
TNAQ_MLH	**Telephone Number Availability Query for Multi-Line Hunting Numbers**									
	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	> 20 sec	No Response	TOTAL
Day 1 Retest 1	1298	655	406	245	134	173	28	20	30	2989
	43%	22%	14%	8%	4%	6%	0%	0%	1%	100%
Day 2	1994	736	140	41	23	12	4	6	34	2990
	67%	25%	5%	1%	1%	0%	0%	0%	1%	100%
TNAQ_DID	**Telephone Number Availability Query for Direct Inward Dial Numbers**									
	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	> 20 sec	No Response	TOTAL
Day 1 Retest 1	91	283	208	120	106	220	30	10	10	1078
	8%	26%	19%	11%	10%	20%	0%	0%	1%	100%
Day 2	177	502	255	86	17	18	6	6	11	1078
	16%	47%	24%	8%	2%	2%	0%	0%	1%	100%

TNCAN	Telephone Number Cancellation Query									
	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	> 20 sec	No Response	TOTAL
Day 1 Retest 1	2014	1245	658	323	179	297	58	48	48	4870
	41%	26%	14%	7%	4%	6%	0%	0%	1%	100%
Day 2	3392	1083	213	69	20	16	16	11	50	4870
	70%	22%	4%	1%	0%	0%	0%	0%	1%	100%
TNCAN_MLH	**Telephone Number Cancellation Query for Multi-Line Hunting Numbers**									
	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	> 20 sec	No Response	TOTAL
Day 1 Retest 1	414	253	165	91	54	67	16	8	9	1077
	38%	23%	15%	8%	5%	6%	1%	1%	1%	100%
Day 2	640	315	69	23	10	5	3	2	11	1078
	59%	29%	6%	2%	1%	0%	0%	0%	1%	100%
TNCAN_DID	**Telephone Number Cancellation Query for Direct Inward Dial Numbers**									
	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	> 20 sec	No Response	TOTAL
Day 1 Retest 1	311	226	178	81	79	157	24	9	13	1078
	29%	21%	17%	8%	7%	15%	0%	0%	1%	100%
Day 2	495	367	131	52	6	8	3	5	11	1078
	46%	34%	12%	5%	1%	1%	%	0%	1%	100%
ALL QUERY TYPES										
	<=1 sec	2 sec	3 sec	4 sec	5 sec	6-10 sec	11-20 sec	> 20 sec	No Response	TOTAL
Day 1 Retest 1	65301	29732	24508	11669	6353	6954	821	859	868	147056
	44%	20%	17%	8%	4%	5%	1%	1%	1%	100%
Day 2	75380	34083	22044	8567	3420	2066	333	347	822	147062
	51%	23%	15%	6%	2%	1%	0.0%	0%	1%	100%

Figure IV-5.2: AVQ_TN Response Distribution



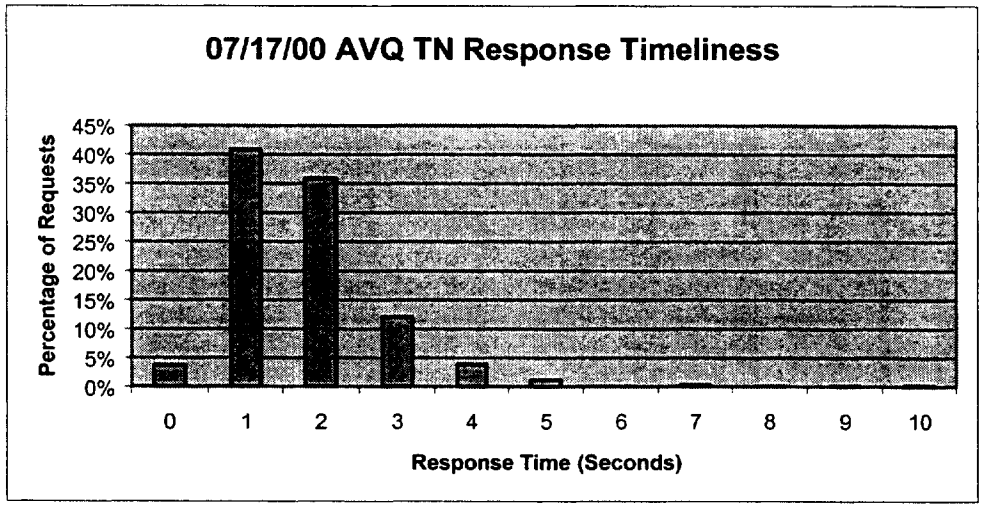
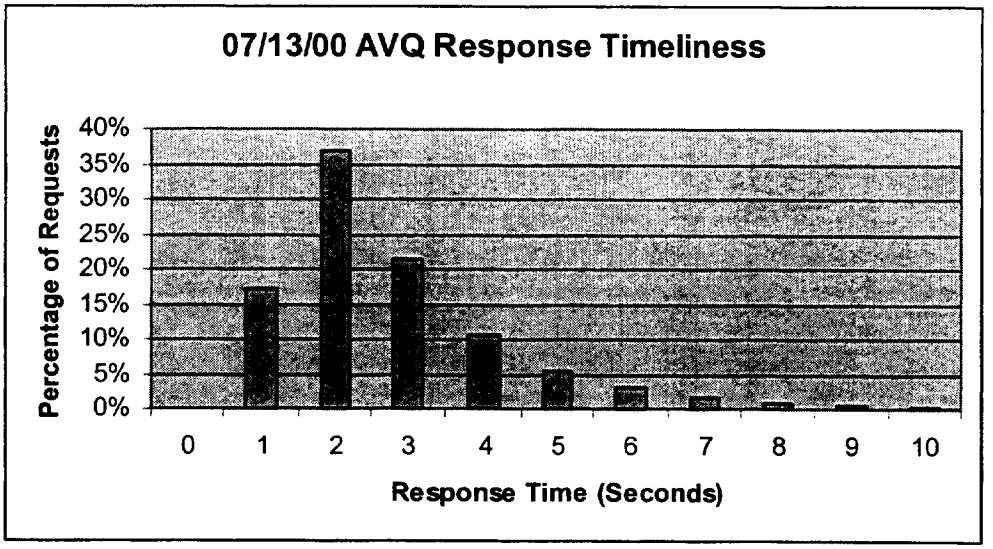


Figure IV-5.3: AVQ Response Distribution



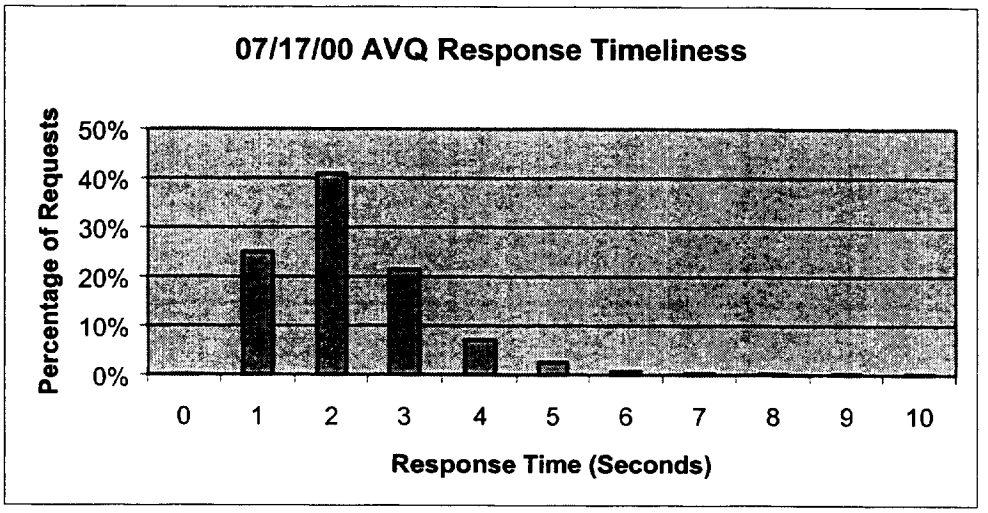
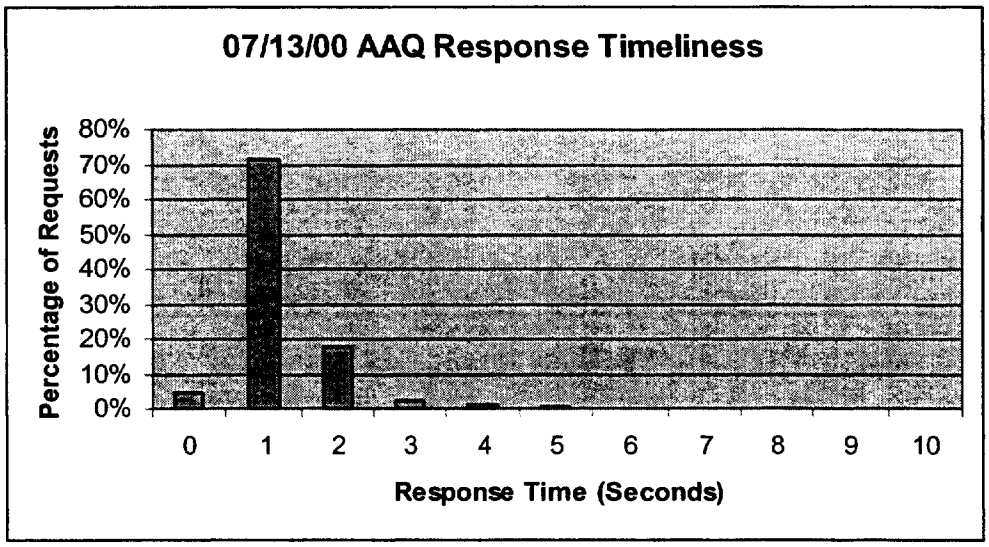


Figure IV-5.4: AAQ Response Distribution



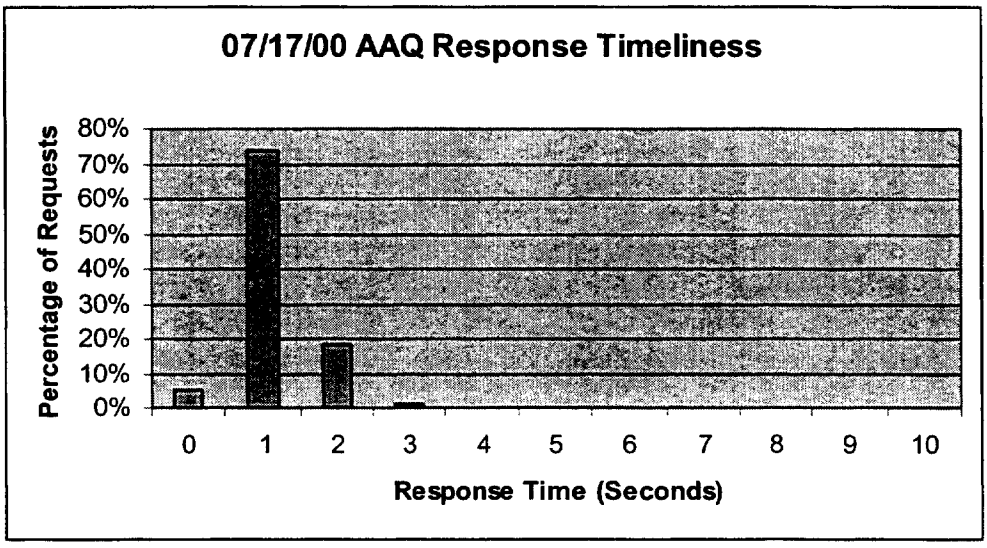
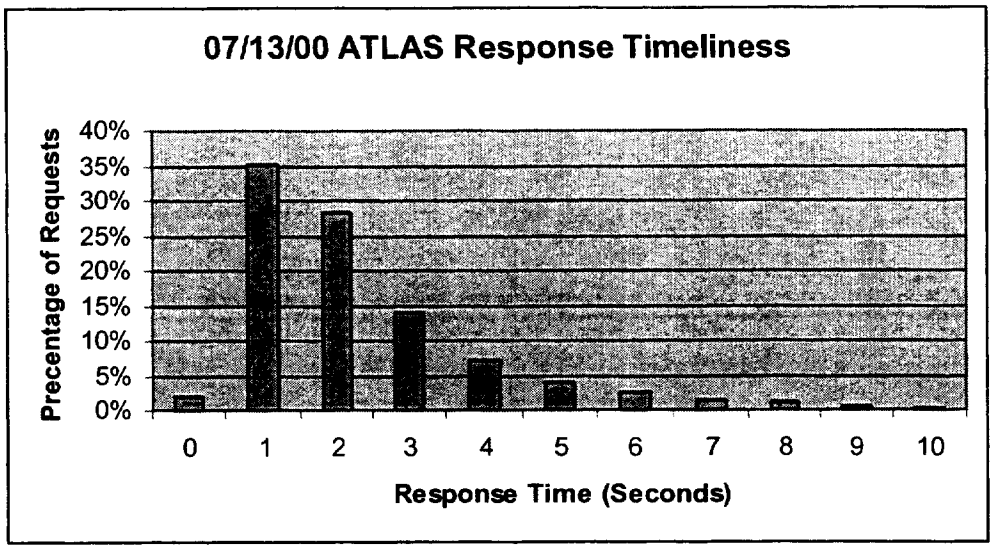
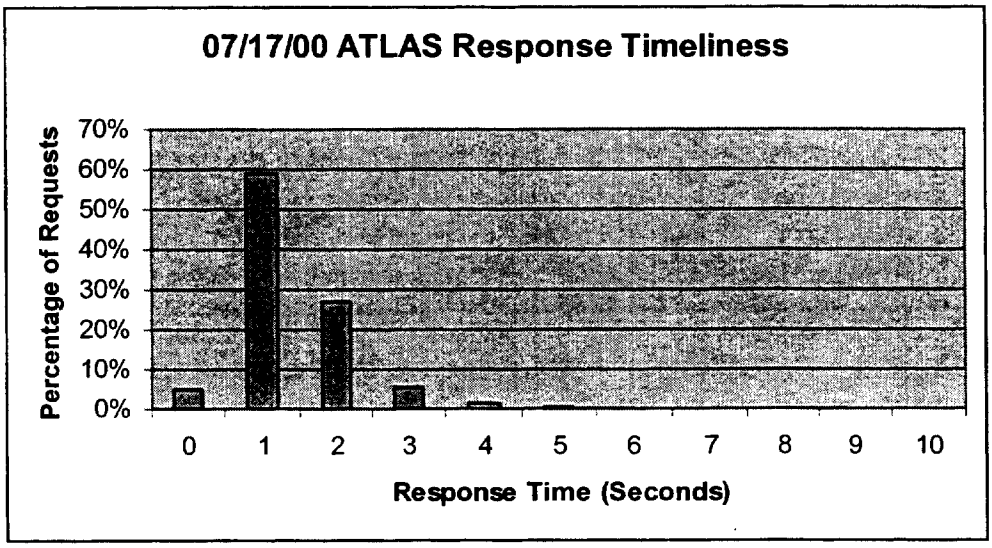


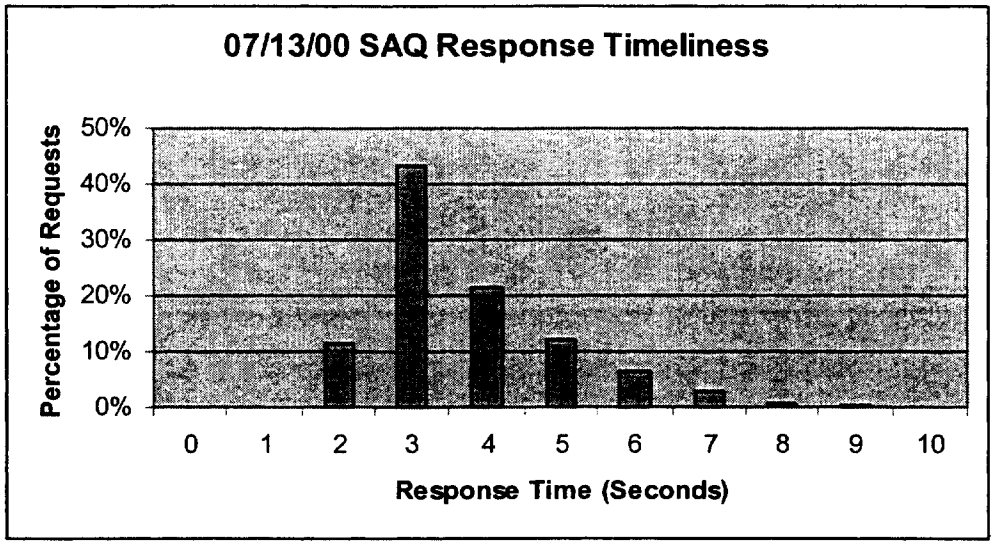
Figure IV-5.5: ATLAS Response Distribution[29]

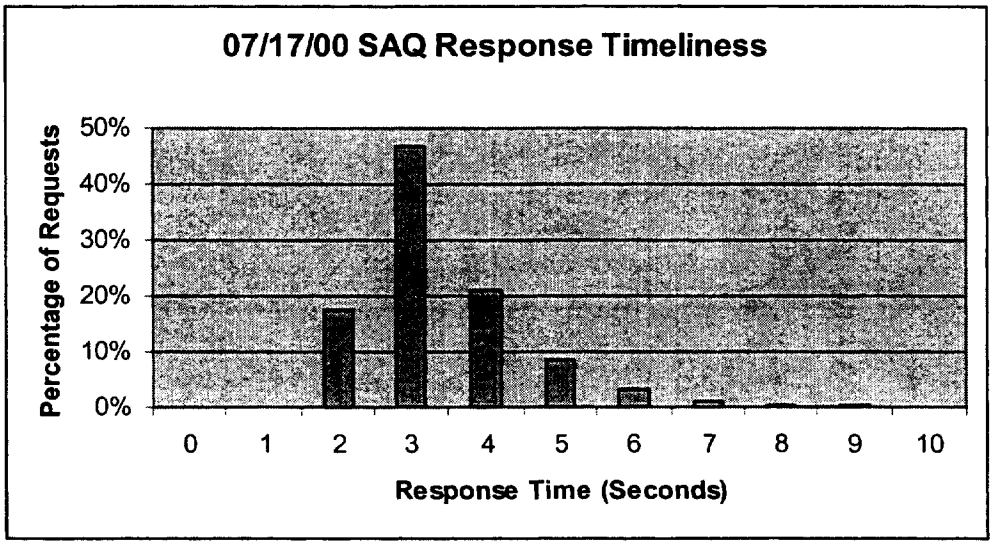




[29] Contains aggregated response times for all pre-order queries on the ATLAS back-end system, including TNAQs, TNSQs, and TN_CANs.

Figure IV-5.6: SAQ Response Distribution





F. Test Results: Pre-Order Processing Systems Capacity Management Evaluation (PRE-6)

1.0 Description

The Pre-Order Processing Systems Capacity Management Evaluation entailed a detailed review of the methods and procedures in place to plan for and manage projected growth in the use of the Telecommunications Access Gateway (TAG) interface and the other shared systems for pre-order processing. The test evaluated the functions for pre-order transaction volume tracking and forecasting, resource usage tracking and forecasting, performance management procedures, and capacity management. The objective of this evaluation was to determine the extent to which procedures to accommodate increases in the pre-order TAG interface transaction volumes and users are actively managed.

2.0 Methodology

This section summarizes the test methodology.

2.1 Business Process Description

See Section IV, "Pre-Ordering Overview" for a complete description of the pre-order processing systems. The capacity management process for TAG and other shared pre-order processing systems is distributed along various lines of responsibility. BellSouth has outsourced operations and application support for mainframe and mid-range systems. The Customer Records Information System (CRIS), Regional Street Address Guide (RSAG), Application for Telephone Number Load Administration and Selection (ATLAS), Product/Services Inventory Management System (P/SIMS), Central Office Feature File Interface (COFFI) and Direct Order Entry Support Application (DSAP) systems operate in a mainframe environment. The mainframe operations groups manage the mainframe hardware, which includes Central Processing Unit (CPU), core memory, Direct Access Storage Device (DASD), and tape library systems. The application teams manage the production software applications and databases.

The TAG system operates in a midrange environment. The midrange operations groups manage the midrange hardware. The application teams provide mid-range software support. The BellSouth Transport Team manages day-to-day operations for the network and collects data on network performance. The BellSouth Architecture & Standards group is responsible for network capacity planning.

2.2 Scenarios

Scenarios were not applicable to this test.

2.3 Test Targets & Measures

The test target was the pre-order processing systems capacity management process. 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 IV-6.1: Test Target Cross-Reference

Sub-Process	Function	Evaluation Criteria	Test Cross-Reference
Pre-Order Processing Systems Capacity Management	Data collection and reporting of business volumes, resource utilization, and performance monitoring	Adequacy and completeness of data collection and reporting	PRE-6-1-1, PRE-6-1-2, PRE-6-1-3, PRE-6-1-4, PRE-6-1-5, PRE-6-1-6
	Data verification and analysis of business volumes, resource utilization, and performance monitoring	Adequacy and completeness of data verification and analysis	PRE-6-1-7, PRE-6-1-8, PRE-6-1-9, PRE-6-1-10, PRE-6-1-11
	Systems and capacity planning	Adequacy and completeness of systems and capacity planning	PRE-6-1-12, PRE-6-1-13, PRE-6-1-14, PRE-6-1-15

2.4 Data Sources

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

Table IV-6.2: Data Sources for Pre-Order Processing Systems Capacity Management Evaluation

Document	File Name	Location in Work Papers	Source
Telecommunications Access Gateway (TAG) Architecture/Detailed Design [Issue 1, September 1999, Release 3.1]	Design.doc	O&P-6-A-2	BLS
TAG Configurations	Tagconfig.doc	O&P-6-A-3	BLS
Tivoli Checklist, Tivoli for BLP, Tivoli for TAG, Tivoli Monitoring (15 November, 1999)	Tivcheck.doc, Tivmon.doc, Tivoli_blp.doc, Tivoli_tac.doc	O&P-6-A-4	BLS
Monthly Metric Data Summary (TAG)	No electronic copy	O&P-6-A-5	BLS
Interview Summary - TAG Administration	Interview_summary _110499.doc	O&P-6-A-6	KCI

Document	File Name	Location in Work Papers	Source
Interview Summary - Encore Management	Interview_summary _120999.doc	O&P-6-A-7	KCI
Capacity Planning & Management Playbook (What we do & How we do it) Working Draft - Not Approved	No Electronic Copy	O&P-6-C-1	BLS
BellSouth Telecommunications Information Technology - Capacity Planning Methodology, Practices and Requirements - July, 1999	Cap_methodology.doc	PRE-6-A-1	BLS
Mainframe Software Support Procedure Manual	ipsa5001.doc	BLG-3-A-3	BLS
BellSouth Mainframe CPU Configuration RAO's	hardware.txt RAO.ppt	BLG-3-A- 4	BLS
Framework and column descriptions for Mainframe Performance Reporting	PT.xls	BLG-3-A-9	BLS
Scratch Tape Statistics By Site, 10/01/99	SCRATCH TAPE STATISTICS BY SITE.doc	BLG-3-A-10	BLS
Active Tape Count By Site, 07/01/99-10/01/99	ACTT1099.doc	BLG-3-A-11	BLS
Strobe Performance Profile, 11/04/98	stbrtp.doc	BLG-3-A-12	BLS
StorageGUARD Pool Utilization	Stguard.doc	BLG-3-A-13	BLS
Concurrent Tape Drive Usage Report Card, September, 1999	CONC0999.XLS.xls	BLG-3-A-14	BLS
StorageGUARD Pool Summary History	History.doc	BLG-3-A-15	BLS
InTune Report	Snap.txt	BLG-3-A-16	BLS
CPU Measurement Reports	CPU.xls	BLG-3-A-17	BLS
Interview Summary - Mainframe Operations	Interview_summary 2_111699.doc	BLG-3-A-18	KCI
Interview Summary - Billing Test Team	Interview_summary 2_112999.doc	BLG-3-A-20	KCI
Interview Summary - Database Administration	Interview_summary 1_112999.doc	BLG-3-A-21	KCI
Interview Summary - Mainframe Performance & Tuning	Interview_summary 3_112999.doc	BLG-3-A-22	KCI
Mainframe Resource Utilization-- Top 10 (CPU, DASD, and Tape) Consumers	Top 10 Consumers Sept.xls	BLG-3-A-23	BLS
MIP Projections	MVS MIPS Projections.xls	BLG-3-A-27	BLS

Document	File Name	Location in Work Papers	Source
Projected DASD Retirements for 2000	2000-DASD-Retirements.xls	BLG-3-A-28	BLS
B2SY-S2ST-G2SY Application Hours	Trend CPU_Corp.xls	BLG-3-A-29	BLS
A6SY Application Hours	Trend CPU-RAO.xls	BLG-3-A-30	BLS
Letter on Mainframe Asset Planning Inputs	MF-capacity planning letter.doc	BLG-3-A-31	BLS
EDS Mainframe Requirements	EDS Mainframe reqs.doc	BLG-3-A-32	BLS
System Production Readiness Requirements	Readiness checklist.doc	BLG-3-A-33	BLS
Critical Application Availability (Andersen & EDS)	KCIdata.xls	BLG-3-A-34	BLS
Application Availability	GA2000SLAs.xls	BLG-3-A-35	BLS
Interview Summary – Wholesale Billing Manager	Interview_summary _04192000.doc	BLG-3-A-36	KCI
Interview Summary – BCS Transport	Interview_summary _121599.doc	PRE-6-A-2	BLS
BOSIP Network Diagrams	Atlntadc.ppt Bosipcor.ppt Brmghmdc.ppt Chrltdc.ppt Jcksondc.ppt Miamidc.ppt Nsvlledc.ppt	PRE-6-A-3	BLS
Birmingham BayNet Protocol Distribution	Bay1.gif	PRE-6-A-4	BLS
Monthly Average Utilization - Birmingham	FDDI1.gif	PRE-6-A-5	BLS
LAN Interface With In Utilization over 20%	LAN~1.htm	PRE-6-A-6	BLS
Average Latency Between RDC's Originating from Birmingham	Monthl~1.gif	PRE-6-A-7	BLS
Monthly Maximum IP Routes Known to Core	Monthl~2.gif	PRE-6-A-8	BLS
WAN Interface With In Utilization over 30%	SMDS1.gif	PRE-6-A-9	BLS
Daily Interface Performance Statistics for PNSCGS04 to JCVLBA19	Pnscgs04.gif	PRE-6-A-10	BLS
Total Traffic Across Core	WAN~1.htm	PRE-6-A-11	BLS
Server Utilization Report	Viewar~1.csv	PRE-6-A-12	BLS
Interview Summary – Transport Solutions	Interview_summary 1_121099.doc	PRE-6-A-13	KCI

Document	File Name	Location in Work Papers	Source
Interview Summary – Asset Planning	Interview_summary 1_ 01202000.doc	PRE-6-A-14	KCI
BSCN – DS3 Equivalent Capacity	Bscncap.ppt	PRE-6-A-15	BLS
BellSouth Official Communications Special Services Facility Forecast for 2000 – 2002 and Update to the 1999 Forecast (Cover Letter)	Ss99ltr.doc	PRE-6-A-16	BLS
BellSouth Telecommunications Official Communications Service Requirements And Special Service Forecast	Bscn1999.doc	PRE-6-A-17	BLS
Capacity Planning Metrics for BST Assets Managed by BCS	Capaci~1.doc	PRE-6-A-18	BLS
BellSouth Telecommunications Official Communications Service Requirements Mechanized Input Form	Bscnele.xls	PRE-6-A-19	BLS
Trunk Utilization Report	Rpdn_0110.doc	PRE-6-A-20	BLS
Unserviceable Request for Video Conferences 1999	Unservr.xls	PRE-6-A-21	BLS
BellSouth Integrated Broadband Network Diagram	Ibtcp911.ppt	PRE-6-A-22	BLS
Transport Asset Planning – Infrastructures	Infraex.ppt	PRE-6-A-23	BLS
Interview Summary – Network Asset Planner	Interview_summary 2_01202000.doc	PRE-6-A-24	KCI
Questionnaire designed to aid Capacity Planner and/or Technical Architect in characterizing an application workload	Config.xls	PRE-6-A-25	BLS
Interview Summary – Midrange Performance Monitoring	Interview_summary _01252000.doc	PRE-6-A-26	KCI
Printouts from Midrange Performance Data Warehouse	No Electronic Copy	PRE-6-A-27	BLS
BGSCOLL Problem Resolution Guide for Collection of Nodes	Probres.doc	PRE-6-A-28	BLS
Data Collected 11/19/99 – (Status Report, by project, of Midrange data collection tool installation)	Perforn1.doc	PRE-6-A-29	BLS
Interview Summary – Capacity Planner	Interview_summary _ 01272000.doc	PRE-6-A-30	KCI
TAG Usage Report	TAG Usage.xls	PRE-6-A-35	BLS
BOSIP Support Web Site Printouts – Homepage	No Electronic Copy	PRE-6-A-39	BLS
BOSIP Support Web Site Printouts – Shared BOSIP Network	No Electronic Copy	PRE-6-A-40	BLS

Document	File Name	Location in Work Papers	Source
BOSIP Support Web Site Printouts – BCS Support	No Electronic Copy	PRE-6-A-41	BLS
BOSIP LAN and WAN Network Topology Overview	No Electronic Copy	PRE-6-A-42	BLS
Datakit Support Homepage and affiliated web pages	No Electronic Copy	PRE-6-A-43	BLS
ENCORE Successful Logins vs. Failed Logins	No Electronic Copy	PRE-6-A-44	BLS
TRENDview HTML Reports	No Electronic Copy	PRE-6-A-45	BLS
TRENDview HTML Reports – Overutilized/Underutilized WAN Interfaces	No Electronic Copy	PRE-6-A-46	BLS
TRENDview HTML Reports – WAN interface utilization graphed over time	No Electronic Copy	PRE-6-A-47	BLS
Printouts from EDS Midrange Performance Data Warehouse Web Site	No Electronic Copy	PRE-6-A-48	BLS
Project List	No Electronic Copy	PRE-6-A-49	BLS
ENCORE-LESOG Performance Data	No Electronic Copy	PRE-6-A-51	BLS
TAG Performance Data	No Electronic Copy	PRE-6-A-60	BLS
Interview Summary – Capacity Planner	Interview_summary 3_03292000.doc	O&P-6-A-12	BLS
Interview Summary2 – Product Manager	Interview_summary _03292000.doc	O&P-6-A-13	BLS
Interview Summary3 – Second Capacity Planner	Interview_summary 2_ 03292000.doc	O&P-6-A-14	BLS
Interview Summary – Product Support Manager	Interview_summary 2_04132000.doc	O&P-6-A-15	BLS
Interview Summary2 – Forecast Manager	Interview_summary _04132000.doc	O&P-6-A-16	BLS
Interview Summary – Capacity Planning Project Manager	Interview_summary 2_04182000.doc	O&P-6-A-17	BLS
Interview Summary2 – Capacity Planning Manager	Interview_summary _04182000.doc	O&P-6-A-18	BLS
Interview Summary – Support Manager	Interview_summary _04192000	O&P-6-A-19	BLS
BST Product Forecasts	No Electronic Copy	PRE-6-A-61	BLS
N&CS Forecasting Process	Foreca~1.ppt	PRE-6--A-62	BLS
Network & Carrier Service Forecasting	No Electronic Copy	PRE-6-A-63	BLS

Document	File Name	Location in Work Papers	Source
The Forecast Process	No Electronic Copy	PRE-6-A-64	BLS
Capacity Management Notification Process	Capnot1.doc	PRE-6-A-65	BLS
Capacity Forecasts Contacts for Encore & LNP Applications	Capconts.doc	PRE-6-A-66	BLS
LSR Actuals & Forecast Report (1998 - 2004)	No Electronic Copy	PRE-6-A-67	BLS
Monthly Capacity Report - Network Summary - March 2000	Network summary.xls	PRE-6-A-68	BLS
LSR Volume Report by data source for 3/2000	Totals.gif	PRE-6-A-69	BLS
LCSC Center Activity Report (3/2000)	Resale.doc	PRE-6-A-70	BLS
Analysis of Recently Received Documentation and Proposed Changes to Capacity Management Final Reports	Analysis of recent docs for cap mgmt.doc	PRE-6-A-71	BLS
Application Specific Forecast Processes	Capmgt.MP.doc	PRE-6-A-72	BLS
Capacity Planning & Management Standard Operating Procedures	F-1-5 Capacity Plan.doc	PRE-6-A-74	BLS
12/07/2000 Interview Summary	Interview_summary _1207200.doc	PRE-6-A-75	KCI
LSR Volume Tracking	Mainframe_forecast2 .xls	PRE-6-A-76	BLS
LSR Tracking Actuals -vs- Forecasted	Actuals.xls	PRE-6-A-77	BLS
Pre-Order Volumes Per Interfaces	Capacity3.xls	PRE-6-A-78	BLS
LCSC Center Activity Report (4/2000)	April car.doc	PRE-6-C-1	BLS
LCSC Center Activity Report (NON Reqtyp E + NON Reqtyp J)	Non-E-J.doc	PRE-6-C-2	BLS
LCSC Center Activity Report (Reqtyp M Only)	TypeM.doc	PRE-6-C-3	BLS
LCSC Center Activity Report (Reqtyp J Only)	TypeJ.doc	PRE-6-C-4	BLS
Daily LCSC Order Flow Summaries	Lesog.doc	PRE-6-C-5	BLS
Third Party Testing Forecast of Volumes - EOY 2001	No Electronic Copy	PRE-6-C-6	BLS
Numbers Ported per Day (Week of 3/1/99 - 9/20/99)	No Electronic Copy	PRE-6-C-7	BLS

Document	File Name	Location in Work Papers	Source
Maximum Number of Ports Per Day Per Week and Projection through 2001	No Electronic Copy	PRE-6-C-8	BLS
Number of LSRs Process Per Day (Week of 3/1/99 - 9/20/99)	No Electronic Copy	PRE-6-C-9	BLS
Maximum Number of LSRs Per Day Per Week and Projections through 2001	No Electronic Copy	PRE-6-C-10	BLS
Transaction to System Activity Map	No Electronic Copy	PRE-6-C-11	BLS
Business Drivers Form	No Electronic Copy	PRE-6-C-12	BLS
Email with LCSC Service Rep Headcount Forecast	No Electronic Copy	PRE-6-C-13	BLS
Electronic Interface Trends	Nov99T~1.ppt Trends.ppt Trends1.ppt FEBLSR.ppt MARLSR.ppt	PRE-6-C-14	BLS
Server Usage Report (LSOG)	LSOGUsage.xls	PRE-6-C-15	BLS
Encore Forecasts	Encore Forecasts.xls	PRE-6-C-16	BLS
Encore Capacity Analysis Assumptions	Encore capacity analysis assumptions.doc	PRE-6-C-17	BLS
Capacity Analysis Report Encore Systems	Encore.doc	PRE-6-C-18	BLS
Selective Carrier Routing, Full Deployment, Decision Package for Interconnection	No Electronic Copy	PRE-6-C-19	BLS
Memorandum to EDS Centralized System Administrators re: BTSI Capacity Planning	CSA Performance Letter.doc	PRE-6-C-20	BLS
BTSI Capacity Upgrade Request / EDS Performance Analysis Workflow	BTSI Performance Process.doc	PRE-6-C-21	BLS
Project Charter: Encore SLA Performance	ProjCharter063000.doc	PRE-6-C-22	BLS
Memo to Capacity Planners re: CLEC SQM Performance information availability via the PMAP Web site	CapPlanmemo0700.doc	PRE-6-C-23	BLS

2.4.1 Data Generation/Volumes

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

2.5 Evaluation Methods

The Pre-Order Processing Systems Capacity Management Evaluation began with a review of systems documentation and process flows for pre-order processing. Interviews were conducted with system administration personnel responsible for the operation of the TAG, CRIS, RSAG, ATLAS, P/SIMS, COFFI, and DSAP pre-order processing systems. These interviews were supplemented with an analysis of BellSouth's documented capacity management procedures as well as collection of evidence of related activities such as: periodic capacity management reviews; system reconfiguration/load balancing; load increase induced upgrades; and resource utilization and performance management reporting.

2.6 Analysis Methods

The Pre-Order Processing Systems Capacity Management Evaluation 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 Pre-Order Processing Systems Capacity Management Evaluation.

The data collected from inspections and interviews 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 below. Definitions of evaluation criteria, possible results, and exceptions are provided in Section II.

Table IV-6.3: PRE-6 Evaluation Criteria and Results

Test Cross-Reference	Evaluation Criteria	Result	Comments
PRE-6-1-1	There is an established process for capturing business and transaction volumes	Satisfied	Pre-order midrange transaction volume data is available from the TAG database logs, is extracted monthly by the Application Support Group, and is provided monthly to the Capacity Planner. The number of Mainframe Legacy System (RSAG, ATLAS, COFFI, DSAP, Hands-off Assignment

Test Cross-Reference	Evaluation Criteria	Result	Comments
			Logic [HAL], and P/SIMS) requests is collected and used in the calculation of Service Quality Measure (SQM) OSS-1 Average Response Time and Response Interval (Pre-Ordering). BLS developed an appendix to the *Capacity Planning & Management Playbook* specifying that BTSI will track actual pre-order volumes and will maintain a tracking spreadsheet for actual vs. forecast volumes. Copies of the September 2000 monthly TAG transaction volume report and of the pre-order tracking worksheet were provided to KCI.
PRE-6-1-2	There is an established process for capturing resource utilization	Satisfied	The shared pre-order processing systems operate in a mainframe environment, therefore, resource utilization and performance monitoring are covered under the efforts of the mainframe operations groups. Mainframe resource utilization data are collected and reported monthly. Midrange and network resource utilization data are tracked and reported on the Midrange Performance Monitoring Web site and the BellSouth Open System Interconnect Protocol (BOSIP) home page respectively. These Web sites are available to and accessed by the resources responsible for monitoring the performance of systems and networks. The processes for capturing resource utilization were described during interviews with members of the groups responsible for these activities. In addition, KCI reviewed the BOSIP home page and the Midrange Performance Monitoring Web site. Sample resource utilization reports were collected and reviewed.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PRE-6-1-3	Resource utilization is monitored for system components and elements	Satisfied	The Performance and Tuning group monitors Multiple Virtual Storage (MVS) mainframe components such as storage utilization (central storage), memory paging rates, batch jobs, Time Share Operations (TSO) sessions, Direct Access Storage Device (DASD) response times, tape drives allocated, Central Processing Unit (CPU) percentage busy, etc. Sample mainframe resource utilization reports were collected during the test. For midrange systems, Disk input/output (I/O), Network I/O, as well as resource utilization for CPUs, Memory, and file systems is tracked and reported. BLS also collects resource utilization data on CPU, buffer and memory utilization for the routers, circuits utilization of the routers, LAN interfaces on routers, hubs, and the Fiber Distributed Data Interface (FDDI) rings. For the circuits and LAN interfaces, reports are generated for the devices with the highest utilization. The midrange and network resource utilization data collection processes were described during interviews and verified through a review of the BOSIP home page, review of the Midrange Performance Monitoring Web site, and through the collection of sample reports.
PRE-6-1-4	Instrumentation and other tools are used to collect resource utilization data	Satisfied	InTune and Strobe are (mainframe) MVS tools used to provide information on where applications are spending CPU cycles, wait times, DASD volumes and tracks accessed, etc. These application-profiling tools operate on IMS and DB2 databases. Storage Guard is an on-line system that takes a snapshot of DASD storage (each Volume Table of Contents (VTOC) every 30 minutes. Through the on-line facility it is possible to view the capacity and utilization of each storage pool. Data Facility Storage

Test Cross-Reference	Evaluation Criteria	Result	Comments
			Management Subsystem (DFSMS) is a hierarchical storage manager that checks for previous messages. Targets are set for storage utilization. If a device is over the utilization target, then the utility searches for old data (past period set for retention for all data types) that can be moved to a lower priority stage. These tools were identified through interviews with the mainframe operation group and sample reports were provided to KCI. The data used to produce midrange system resource utilization reports are gathered through a variety of tools and utilities including Best/1, BGSCOLL, GlancePlus, SAR, Unicenter TNG, and Tivoli. The Best/1 modeling and simulation capacity planning tool is used for monitoring of midrange system resources. The BGSCOLL tool collects data in 15-minute intervals daily. The data are compiled into daily and monthly averages. Three months of data are stored for trending. The tools used to collect midrange resource utilization data were described during interviews and sample reports were collected and reviewed. Tools running to collect network resource utilization data include TRENDsnmp (from DeskTalk), Spectrum Enterprise Manager, OpenView, Nerve Center for BOSIP (the router network), and Starkeeper (for the Datakit networks). These tools were described during interviews with the BOSIP Support manager and sample reports were provided to KCI.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PRE-6-1-5	Performance is monitored at all applicable levels (e.g., network, database server, application server, client, etc.)	Satisfied	The Performance and Tuning Group monitors system resources for mainframe computers [i.e., MVS mainframe components such as storage utilization (central storage), memory paging rates, batch jobs, TSO sessions, DASD response times, tape drives allocated, CPU percentage busy, etc.]. The site manager ensures that DFSMS is running, checks for previous messages, and checks tape drive status. The performance of the (midrange) application servers is monitored daily by the midrange operations groups. The BLS Transport Team is responsible for day-to-day operations of the networks (comprised of components such as routers, ATM switches, and hubs). The team is comprised of three groups: PACS, which provides tier three support; Proactive Performance Analysis, which monitors the networks to prevent problems; and the Tools group. This team collects the data on network performance. BLS has also written scripts to collect data such as latency and packet loss across the BOSIP core. These activities were described during interviews with the Application Support Teams, Midrange Operations Group, and Network Support Team. In addition, sample performance reports were collected.
PRE-6-1-6	Instrumentation and other tools are used to monitor performance	Satisfied	The CMF tool looks at system logs to collect mainframe performance data. MainView (a graphical user interface for CMF) presents the performance data collected by CMF in a graphical format so that trending can be performed. The Midrange Performance Monitoring and the BOSIP Web sites are available to and accessed by the resources responsible for monitoring the performance of (midrange) systems and network elements.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			Best/1, GlancePlus, SAR, Unicenter TNG, and Tivoli are tools used to monitor midrange performance. TRENDsnmp (from DeskTalk), Spectrum Enterprise Manager, OpenView, Nerve Center for BOSIP (the router network), and Starkeeper (for the Datakit networks) are tools used to monitor network performance. Performance monitoring activities were described during interviews and sample reports were provided to KCI. The Midrange Performance Monitoring Web site and the BOSIP home page were reviewed.
PRE-6-1-7	There is an established process for forecasting business volumes and transactions	Satisfied	During initial testing, no established, ongoing process for forecasting business volumes and transactions was observed for BLS's pre-order processing systems. See Exception 25 for additional information on this issue. During retest activities, KCI learned that pre-order transaction volume is not directly forecast. Instead, the current Local Service Request (LSR) to pre-order transaction ratio is extracted from system performance data. This ratio is applied to the LSR forecast and used in the mid-range system capacity model to simulate the growth in pre-order transaction volume for the TAG interface. The business volume and transaction forecasting process for the mainframe pre-order systems is described in the Standard Operating Procedure (SOP) section of the *Capacity Planning & Management Playbook*. The SOP documents the process of using the LSR forecast to develop projections for mainframe impact. Applications targeted are RSAG, ATLAS, P/SIMS DSAP, and COFFI. The SOP outlines the process steps that the Capacity Planner is to complete in order to develop the mainframe forecast that is delivered to mainframe operations for

Test Cross-Reference	Evaluation Criteria	Result	Comments
			use in the quarterly capacity planning meetings. In addition, an appendix to the Playbook describes the transaction forecasting process for mainframe pre-order systems. The new process has been completed once and a forecast was provided to the mainframe planners in November 2000. Exception 25 is closed.
PRE-6-1-8	The business volume tracking and forecasting data is at an appropriate level of detail to use for capacity management	Satisfied	During initial testing, no process was observed for the collection of mainframe (CRIS, RSAG, ATLAS, P/SIMS, COFFI and DSAP) or mid-range (TAG) pre-order business and transaction volumes. See Exception 25 for additional information on this issue. During the retest, KCI learned that the current Local Service Request (LSR) to pre-order transaction ratio is extracted from system performance data. These ratios are incorporated into the mid-range capacity-planning model and are assumed to hold as the volume of LSRs (order workload) is increased according to the LSR forecast. Business volume tracking and forecasting data will be utilized in the mainframe capacity management process. The mainframe forecast worksheet tracks actual LSRs and forecast data through 12/2001 and transforms the LSR forecast into calculated CRIS region Millions of Information per Second (MIPS) requirements. The calculated MIPS requirements are compared to MIPS installed and a percentage of Installed MIPS to LSR Impact is reported. The dedicated CRIS control region contains the RSAG, ATLAS, COFFI, and DSAP applications. In addition, resource utilization data is trended based upon historical system performance. These trended data, along with any application changes, are used to project system needs.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			For BLS's network, capacity planning is done annually as part of the budgeting process and also for each application release. Application development, system administration, and production support resources participate in the capacity planning process. The planning process takes as input the Network Carrier Services (NCS) Marketing Group forecast, current volumes, trend data, and anticipated volume changes that may result from new system functionality. This information is used to project future hardware and software needs. If additional capacity is needed, the request is brought to BLS (Delivery and Customer Service Managers) for approval, equipment purchase, and installation. Exception 25 is closed.
PRE-6-1-9	There is an established process for reviewing the performance of the business and transaction volume forecasting process	Satisfied	During initial testing, no established, ongoing process for reviewing the performance of the mainframe, mid-range, or network pre-order business and transaction volume forecasting process was observed. See Exception 25 for additional information on this issue. BLS developed an appendix to the *Capacity Planning & Management Playbook* specifying that BellSouth Technology Service, Inc. (BTSI) will track and compare actual LSR flow-through against forecast volumes. In addition, a copy of a recent comparison of actual to forecast LSRs was provided. Exception 25 is closed.
PRE-6-1-10	There is an established process for verification and validation of performance data	Satisfied	Mainframe hardware performance is monitored daily. Any anomalies detected are reported, investigated, and resolved. The performance monitoring, database administration, and application support groups participate in this process of verification and validation of performance data.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			Data from the system hardware resources are downloaded for personal computer access. This information is formatted into PC reports and is analyzed and/or reviewed periodically by the team members responsible for mainframe performance and tuning analysis. The data are retained for a minimum of one year. In the midrange and network environments, performance data are verified and validated by System Administrators and the Transport Group. Performance reports are reviewed regularly on the Midrange Performance Monitoring Web site, on the BOSIP home page, and through on-line tools. The reports and tools define thresholds for utilization of system and network resources. Any values exceeding the established threshold are highlighted in the reports, investigated, and resolved. Performance monitoring activities were described during interviews. KCI reviewed and collected sample performance and resource utilization reports.
PRE-6-1-11	Performance monitoring results are compared to service level agreements and other metrics	Satisfied	BLS and the third party managing the systems operations have contracts in place governing system performance. These contracts define targets for system availability for TAG, CRIS, RSAG, ATLAS, P/SIMS and DSAP. KCI was provided with the targets for system availability and copies of reports on vendor performance, by system. Service Quality Measurements (SQMs) are defined for availability of the TAG interface [OSS-2. Interface Availability (Pre-Ordering)]. SQMs are also defined for average OSS Response Time and Response Interval for the CRIS, RSAG, ATLAS, and DSAP systems from TAG [OSS-1 Average Response Time and Response Interval (Pre-Ordering)]. (See *BellSouth Service Quality*

Test Cross-Reference	Evaluation Criteria	Result	Comments
			Measurements Plan document dated 07/2000.) Performance results for these metrics are reported through the Performance Monitoring and Analysis Platform (PMAP). BLS's capacity planning process identifies PMAP data as an input for the mid-range capacity planning process. BLS monitors its own network performance results. Network availability (i.e., trunk and node availability) results are tracked against established performance targets/objectives. The Transport Group works with the BLS Architecture & Standards (A&S) Group to address network performance issues. Network performance activities were described during interviews with the BOSIP Support Manager.
PRE-6-1-12	The Capacity Management process is defined and documented	Satisfied	The processes that are executed for performance monitoring and capacity planning activities are defined and documented. The document, *BLS Telecommunications Information Technology Capacity Planning Methodology, Practices, and Requirements July 1999,* outlines a capacity planning process for the mainframe, midrange, and network environments. BLS's capacity planning process is part of the IT Engagement Process (ITEP). Process flows for the capacity planning process have been developed and are posted on the BLS IT Web site. These flows are also contained in a document entitled *Capacity Planning & Management Playbook.* The capacity planning process has been communicated within the Engineering & Design Group. The links within the Asset Management Group and the interfaces to other organizations are defined in the process documentation. BLS is refining the definition of process links between the remaining functional

Test Cross-Reference	Evaluation Criteria	Result	Comments
			groups. Documentation depicting the current mainframe performance monitoring process was provided to KCI. Midrange and network performance monitoring is addressed in the capacity planning and management documentation.
PRE-6-1-13	Resource usage and capacity is considered in the planning process for capacity management	Satisfied	On a monthly basis, the Mainframe Operations Management Group uses data collected for each mainframe box to 1) fit a trend line through the monthly utilization data points; 2) estimate, based on trends and rates of growth, when upgrades or new purchases must occur; and 3) purchase additional capacity, as needed. If anomalies in CPU utilization, DASD, etc. occur, the Operations Group will contact the appropriate Application Support Group to determine the root cause of the anomaly. In addition, TRIAD meetings are held every three months. TRIAD meetings include representatives from hardware procurement, mainframe performance monitoring, and customer representatives for the applications running in the mainframe environment with the largest DASD usage. Customer representatives provide input on changes to applications and how they may impact various components of system capacity. Resource utilization reports are examined on an ongoing basis and as part of the quarterly capacity planning process. Server usage reports, LAN/WAN interface and FDDI utilization reports are examined on an ongoing basis as part of the mid-range and network capacity planning processes. These capacity planning activities were described during interviews.
PRE-6-1-14	Performance monitoring results are considered in the	Satisfied	Mainframe and mid-range performance monitoring reports are examined on an ongoing basis and as

Test Cross-Reference	Evaluation Criteria	Result	Comments
	planning process for capacity management		part of the quarterly capacity planning process. The BLS Architecture & Standards (A&S) Group is responsible for network capacity planning. The BLS Transport Team analyzes network performance data and resolves capacity issues. If unable to resolve capacity issues, the Transport Team alerts the A&S Group, which purchases equipment or makes architecture changes. These capacity planning activities were described during interviews.
PRE-6-1-15	Capacity Management procedures define performance metrics that trigger the addition of capacity, load re-balancing or system tuning	Satisfied	Mainframe application hours are tracked monthly. Historical growth trends of these hours is tracked against known thresholds and used to estimate future growth and determine when upgrades or new purchases must occur. Scratch tape counts and scratch tape thresholds are tracked monthly by site. These counts and thresholds are used to assist in determining when additional tapes should be ordered. Active tape counts (and corresponding Average Growth per Month) are also tracked monthly. Thresholds have been set for resource utilization and performance measures in both mainframe and mid-range environments. Values that exceed the established thresholds are flagged and investigated. In the network environment, WAN interface utilization is tracked to identify opportunities for load balancing. Procedures for performance management were described during interviews. In addition, KCI viewed and collected sample reports.

V. Ordering and Provisioning (O&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 Ordering. The Ordering and Provisioning (O&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 ordering portion of the test assessed the adequacy of BellSouth's ordering systems and support procedures to efficiently process Local Service Request (LSRs) for Unbundled Network Element (UNE) services. The provisioning verification portion of the test performed a comprehensive review of BellSouth's ability to accurately and expeditiously complete the provisioning of CLEC orders.

2.0 Methodology

The scope of the O&P tests in Georgia encompassed the review and analysis of BellSouth's processes, procedures, interfaces and systems for ordering and provisioning CLEC UNE accounts. This was accomplished by reviewing and assessing relevant documentation, testing the functionality of BellSouth's ordering and provisioning systems, testing the capability to increase system capacity, reviewing metrics reports, and evaluating provisioning performance for BellSouth's CLEC customers.

2.1 Business Process Description

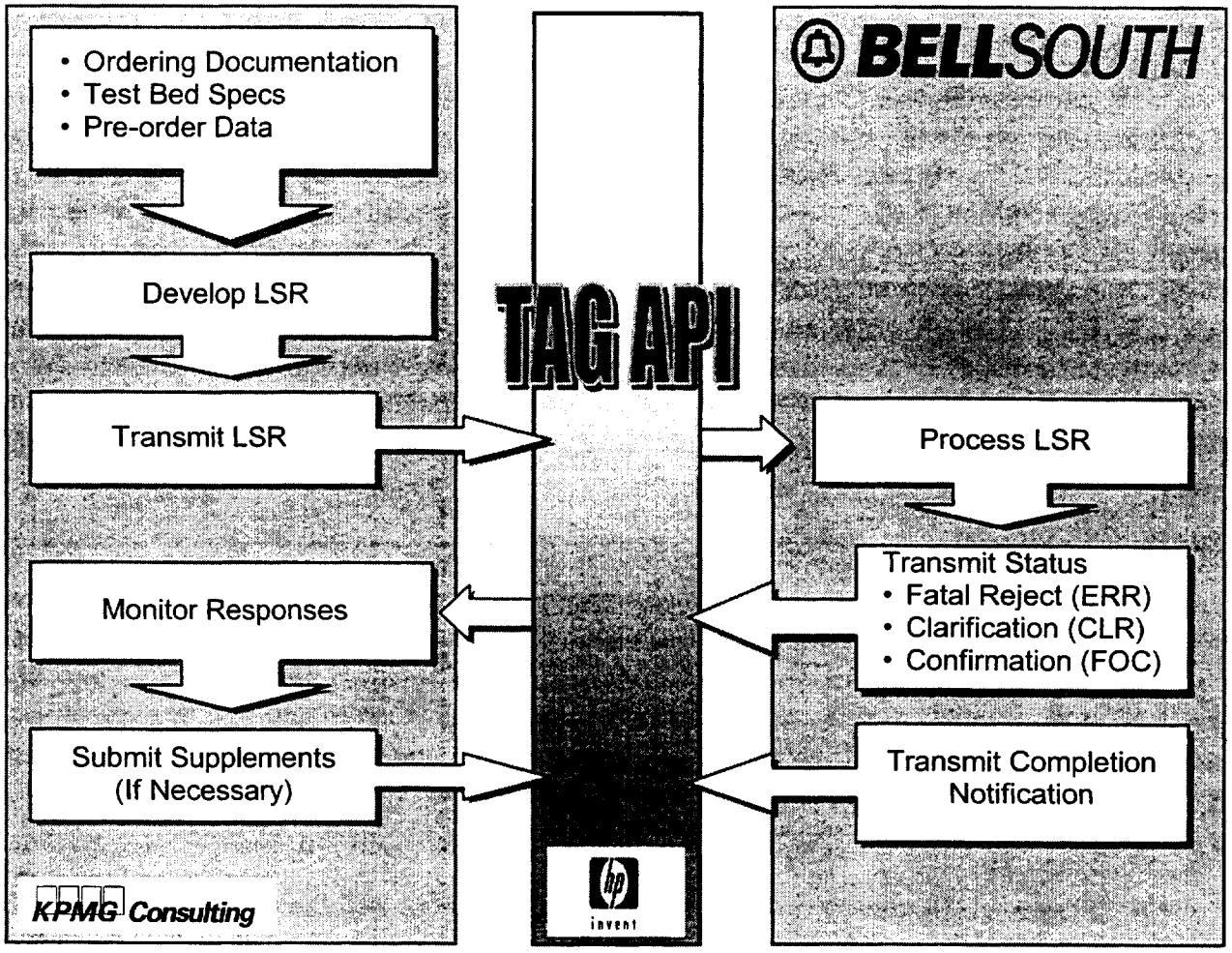
Two BellSouth electronic ordering interfaces, Telecommunications Access Gateway (TAG) and Electronic Data Interchange (EDI) were tested.

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

TAG

Orders can be submitted electronically to BellSouth through the Telecommunications Access Gateway (TAG), a CORBA-based 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 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. TAG provides a standard Application Program Interface (API) to BellSouth's pre-ordering and ordering OSS.

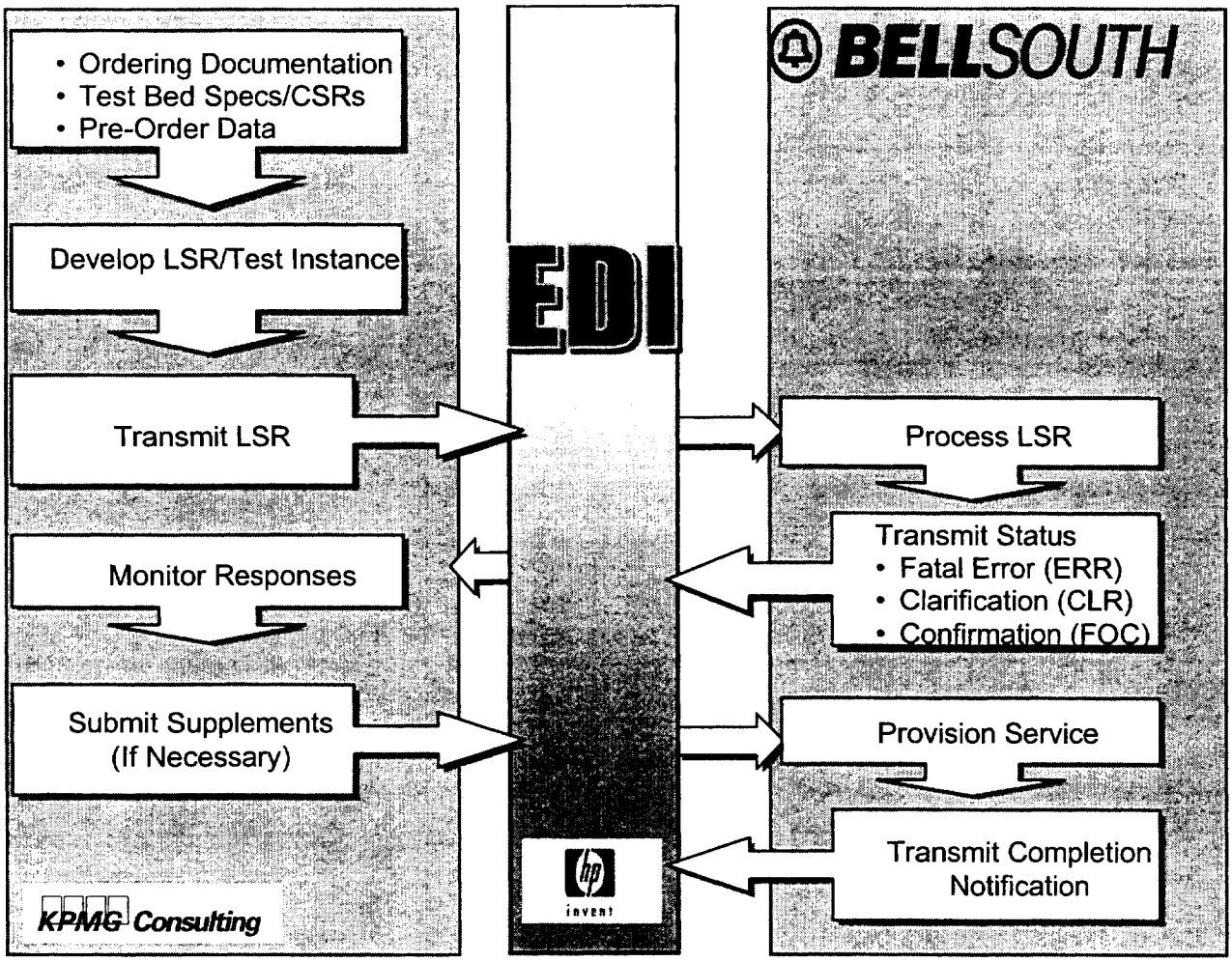
Table V -A: TAG Order Process Flow



EDI

Electronic Data Interchange (EDI) is designed to allow BellSouth's computer applications to exchange business files with CLEC computer applications in a standard format. 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 requires the use of industry standards that define the format and the data content of each business transaction. BellSouth determines how and when each data element is transferred (or mapped) into a BellSouth Service Order.

Table V -B: EDI Order Process Flow



Transaction Types

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

- Submit Local Service Requests (LSRs)
- Retrieve Functional Acknowledgements (FA)
- Retrieve Firm Order Confirmations (FOCs)
- Retrieve Completion Notices (CNs)
- Retrieve Rejects, Clarifications and Service Jeopardies

Interface Testing

CLECs wishing to perform electronic ordering operations with BellSouth via TAG/EDI must first complete a series of tests designed to certify the CLEC and BellSouth's interfaces can appropriately communicate during the ordering process. This interface testing period is designed to verify TAG/EDI connectivity between BellSouth and the CLEC; to verify the CLEC's ability to send and receive file transfer acknowledgements; to verify BellSouth's ability to translate, process, and respond to CLEC service requests and supplements; and to verify CLEC compliance with BellSouth usage requirements as defined in the LEO Implementation Guide.

Ordering Process Flow

KCI utilized three primary inputs to create order test instances:

Test Bed Information

The test bed was comprised of specific customer accounts and facility information provided by BellSouth. KCI received test bed accounts (built according to KCI specifications) in the form of Customer Service Records (CSRs) that identified the end-user's initial state, including information on their address, billing accounts, and existing services and equipment. BellSouth delivered test bed CSRs to KCI via a direct database extract process. KCI evaluated BellSouth's pre-order functionality with respect to CSR queries by executing CSR pre-order queries for a defined set of customers during the TAG Pre-Ordering Functional Test (PRE-1)

Pre-Order Data

For a defined number of order 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

BellSouth ordering documentation contains two main components. The technical specifications include programming instructions for creating TAG or EDI transaction sets. The ordering business rules provide the ordering forms and data elements comprising a 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 test manager tracking purposes. The LSR was transmitted in a text file to Hewlett Packard (HP), who utilized the BellSouth technical specifications to map the

text file into TAG or EDI data[1] 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 contains accurate data. In response to an erred LSR, BellSouth transmits one of the following error responses[2]:

Fatal Reject (ERR)

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

Auto Clarification (CLR)

BellSouth returns an auto CLR when an electronically-submitted LSR does not pass the second round of 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. A representative from BellSouth's Local Carrier Service Center (LCSC) reviews the LSR, determines that the request fell out due to a CLEC error, and 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, correcting any errors. Following the receipt of a CLR (system- or representative-generated), the CLEC must submit a supplemental service request (Sup) that modifies the original order.

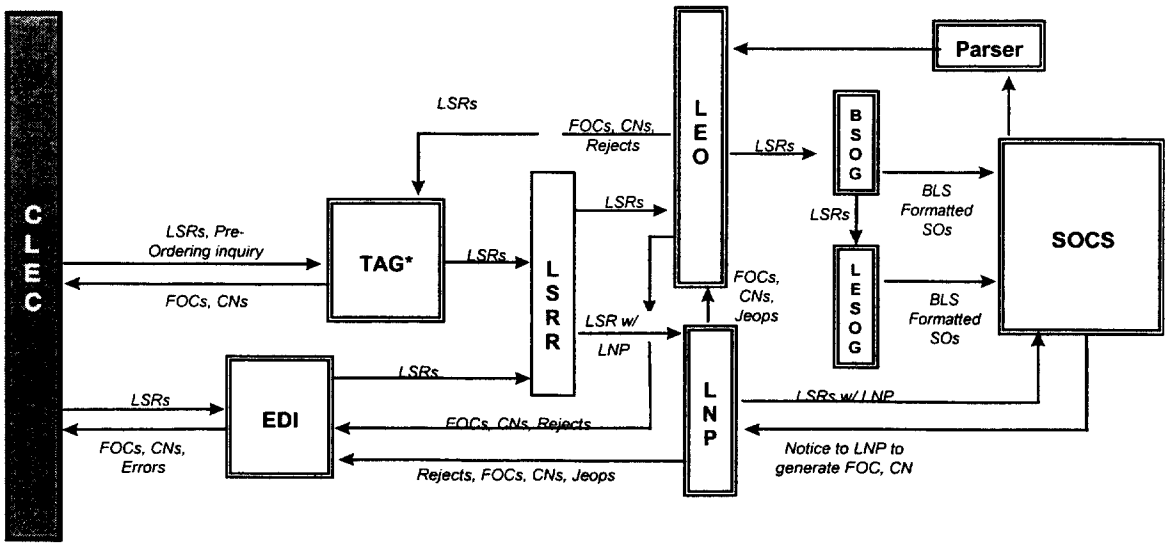
Once an LSR passes through the ordering validation process, it is logged in the BellSouth Service Order Communication System (SOCS), which coordinates downstream provisioning activity and monitors the status of the order. SOCS generates a Firm Order Confirmation (FOC) response that is delivered to the 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.

The following is a diagram of BellSouth's Ordering System:

[1] HP delivered errors encountered during the text file-to-TAG/EDI mapping to KCI. The associated LSRs were never transmitted to the BellSouth EDI or TAG Gateway. KCI investigated these errors, made appropriate modifications to the LSR, and resubmitted the service request.

[2] 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).

Table V-C: BellSouth's Production Order System



Provisioning

The provisioning process begins once a complete and accurate service order is produced by the Service Order Control System (SOCS). The provisioning process is determined by the type of service order (designed or non-designed). 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 are required to complete order provisioning based on information contained in the service order.

An LSR may pass 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 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[3]. Upon completion of provisioning activities, BellSouth transmits a Completion Notification (CN) to the CLEC indicating successful activation of the order.

The BellSouth UNE Center (UNE-C) is the focal point for UNE conversions, including UNE analog loops and UNE ports. Specifically, the coordination center is responsible for all provisioning activity involving plain old telephone service (POTS), as well as special service circuits for UNE products, Interim Number Portability (INP), and Local

[3] http://www.interconnection.bellsouth.com/markets/lec/oss_info.html

Number Portability (LNP). For coordinated analog loop conversions and port orders, a coordinator at the UNE-C verifies the order and places a call to the CLEC to obtain concurrence. During actual provisioning of a coordinated order, the UNE-C directs the relevant BellSouth provisioning organizations, including the Central Office technician and Recent Change Management Administration Group (RCMAG) switch translation personnel, through the process. Following provisioning, the UNE-C places another call to the CLEC to confirm completion and obtain acceptance of the ordered service installation.

2.2 *Scenarios*

Various O&P related scenarios were used to evaluate the O&P process and systems. The *BellSouth - Georgia OSS Evaluation Master Test Plan* (MTP) defined the TAG and EDI order scenarios to be tested in O&P-1&2. 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), migration activity (partial and full migration[4]), and flow through[5] designations. Using these test scenario descriptions, KCI developed test cases for each scenario. The test cases contain a more-detailed description of the order to be run. Each test case was then used to generate one or more distinct service requests, or test instances, for specific end users.

KCI developed test cases and instances to cover the range of UNE services defined in the Georgia Public Service Commission's (GPSC's) *Order*[6]. Electronically orderable UNE products, and the specific ordering activities that can be performed for each product, are defined by BellSouth Requisition (REQ TYPE) and Activity (ACT TYPE) codes. KCI developed and executed TAG and EDI transactions to order the REQ/ACT types based on these combinations.

Table V-D: UNE Scenario Categories

Order Type	Scenario Category	Requisition Type
UNE Loop	Loop	A
UNE Loop with Interim Number Portability (INP)	Loop INP	B
UNE Loop with Local Number Portability (LNP)	Loop LNP	B
UNE Standalone INP	INP	C
UNE Standalone LNP	LNP	C

[4] 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 wishing to retain at least one line with BellSouth.

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

[6] *Order for Petition of Third Party Testing*, May 20, 1999.

Order Type	Scenario Category	Requisition Type
UNE Port	Port	F
UNE Loop-Port Combination	Combo	M
UNE Standalone Directory Listing (DL)	DL	J

Table V-E: UNE Scenarios

Scenario Number	Scenario Category	Scenario Description
301	Loop	A CLEC orders two new SL1[7] unbundled analog loops from BLS in support of a customer's service request.
302	Loop	A CLEC orders 26 new SL1 unbundled analog loops from BLS in support of a new customer's service request.
303	Loop	A CLEC orders two new SL2[8] unbundled analog loops from BLS in support of a new customer's service request.
305	Loop	A CLEC orders two SL1 unbundled analog loops in support of a full migration service request from an existing BLS customer. The customer lines are migrated "as-specified" to the CLEC business.
307	Loop	A CLEC orders two SL2 unbundled analog loops in support of a full migration service request from an existing BLS customer. The customer lines are migrated "as-specified" to the CLEC.
308	Loop	A CLEC orders 26 SL2 unbundled analog loops in support of a full migration service request from an existing BLS customer. The customer lines are migrated "as-specified" to the CLEC.
309	Loop	A CLEC orders two SL1 unbundled analog loops from BLS for one of its resale customers.
311	Loop	A CLEC orders two SL2 unbundled analog loops from BLS for one of its resale customers.
312	Loop	A CLEC orders 26 SL2 unbundled analog loops from BLS for one of its resale customers.
315	Loop	A CLEC orders a change (e.g., add a loop to an existing account) on two SL2 unbundled analog loops in response to a CLEC customer complaint.
317	Loop	An existing CLEC customer moves from the third to the fifth floor. The CLEC orders an inside move on both of its customer's SL1 unbundled analog loops from BLS.
318	Loop	An existing CLEC customer moves from the third to the fifth floor. The CLEC orders an inside move on both of its customer's SL2 unbundled analog loops from BLS.
319	Loop	An existing CLEC customer moves across town. The CLEC orders an outside move on both of its customer's SL1 unbundled analog loops from BLS.

[7] SL1 is a non-designed loop.
[8] SL2 is a designed loop

Scenario Number	Scenario Category	Scenario Description
320	Loop	An existing CLEC customer moves across town. The CLEC orders an outside move on both of its customer's SL2 unbundled analog loops from BLS.
323	Loop	An existing CLEC customer is moving to another state. The CLEC orders BLS to disconnect both of its customer's SL1 unbundled analog loops.
324	Loop	An existing CLEC customer is moving to another state. The CLEC orders BLS to disconnect both of its customer's SL2 unbundled analog loops.
620	Loop	An existing CLEC customer disconnects one of its existing three SL1 unbundled analog loops.
630	Loop	A CLEC migrates an existing UNE loop-port combination two-line customer to UNE analog SL2 loops.
700	Loop	Migrate an existing CLEC single line resale customer to another CLEC UNE SL1 analog loop.
701	Loop	Migrate an existing CLEC one line SL1 loop customer to another CLEC UNE SL1 analog loop.
600	Loop	Migrate two auxiliary lines of a BLS retail four-line customer to CLEC UNE SL2 analog loop.
325	Loop INP	A CLEC orders two SL1 unbundled analog loops with INP in support of a partial migration service request from an existing BLS customer. The customer currently has six lines, four of which stay with BLS and two are migrated "as-specified" to the CLEC.
326	Loop INP	A CLEC orders two SL1 unbundled analog loops with INP in support of a full migration service request from an existing BLS customer. The customer lines are migrated "as-specified" to the CLEC.
328	Loop INP	A CLEC orders 26 SL1 unbundled analog loops with INP in support of a full migration service request from an existing BLS customer. The customer lines are migrated "as-specified" to the CLEC.
329	Loop INP	A CLEC orders two SL2 unbundled analog loops with INP in support of a partial migration service request from an existing BLS customer. The customer currently has six lines, four of which stay with BLS and two are migrated "as-specified" to the CLEC.
330	Loop INP	A CLEC orders two SL2 unbundled analog loops with INP in support of a full migration service request from an existing BLS customer. The customer lines are migrated "as-specified" to the CLEC.
333	Loop INP	A CLEC orders two SL1 unbundled analog loops with INP from BLS for one of its resale customers.
334	Loop INP	A CLEC orders 26 SL1 unbundled analog loops with INP from BLS for one of its resale customers.
335	Loop INP	A CLEC orders two SL2 unbundled analog loops with INP from BLS for one of its resale customers.
349	Loop LNP	A CLEC orders two SL1 unbundled analog loops with LNP in support of a partial migration service request from an existing BLS customer. The customer currently has six lines, four of which stay with BLS and two are migrated "as-specified" to the CLEC.

Scenario Number	Scenario Category	Scenario Description
350	Loop LNP	A CLEC orders two SL1 unbundled analog loops with LNP in support of a full migration service request from an existing BLS customer. The customer lines are migrated "as-specified" to the CLEC.
351	Loop LNP	A CLEC orders 26 SL1 unbundled analog loops with LNP in support of a partial migration service request from an existing BLS customer. The customer currently has 31 lines, five of which stay with BLS and 26 are migrated "as-specified" to the CLEC.
353	Loop LNP	A CLEC orders two SL2 unbundled analog loops with LNP in support of a partial migration service request from an existing BLS customer. The customer currently has six lines, four of which stay with BLS and two are migrated "as-specified" to the CLEC.
354	Loop LNP	A CLEC orders two SL2 unbundled analog loops with LNP in support of a full migration service request from an existing BLS customer. The customer lines are migrated "as-specified" to the CLEC.
355	Loop LNP	A CLEC orders 26 SL2 unbundled analog loops with LNP in support of a partial migration service request from an existing BLS customer. The customer currently has 31 lines, five of which stay with BLS and 26 are migrated "as-specified" to the CLEC.
357	Loop LNP	A CLEC orders two SL1 unbundled analog loops with LNP from BLS for one of its resale customers.
358	Loop LNP	A CLEC orders 26 SL1 unbundled analog loops with LNP from BLS for one of its resale customers.
359	Loop LNP	A CLEC orders two SL2 unbundled analog loops with LNP from BLS for one of its resale customers.
800	Loop LNP	Migrate 'as-is' a two-line BLS residence customer to two UNE analog SL1 loops with LNP. Directory Listings remain the same.
373	INP	A CLEC ports two of its existing six numbers to CLEC using INP.
374	INP	A CLEC orders INP for both of its fully migrated lines from BLS.
375	INP	A CLEC ports 26 of its existing 31 numbers to CLEC via INP.
377	INP	A CLEC orders INP for two lines in support of an existing resale customer being migrated to CLEC facilities.
382	INP	An existing CLEC customer is moving to another state. The CLEC orders BLS to disconnect INP for all six of its customer's lines.
383	LNP	A CLEC ports two of its existing six numbers to CLEC via LNP.
384	LNP	A CLEC orders LNP for both of its fully migrated lines from BLS.
385	LNP	A CLEC ports 26 of its existing 31 numbers to CLEC via LNP.
386	LNP	A CLEC orders LNP for all 26 fully migrated lines from BLS.
387	LNP	A CLEC orders LNP for two lines in support of an existing resale customer being migrated to CLEC facilities.
388	LNP	A CLEC orders LNP for 26 lines in support of an existing resale customer being migrated to CLEC facilities.
801	LNP	A CLEC orders LNP for two retail business lines. Directory listings remain the same.
393	LNP	A CLEC orders a change from INP to LNP for two lines.

Scenario Number	Scenario Category	Scenario Description
395	Port	A CLEC orders two new business unbundled analog ports from BLS in support of a new business customer's service request.
396	Port	A CLEC orders 26 new business unbundled analog ports from BLS in support of a new business customer's service request.
397	Port	A CLEC orders two new residential unbundled analog ports from BLS in support of a new business customer's service request.
398	Port	A CLEC orders two business unbundled analog ports in support of a partial migration service request from an existing BLS business customer. The business customer currently has six lines, four of which stay with BLS and two are migrated "as-specified" to the CLEC.
399	Port	A CLEC orders two business unbundled analog ports in support of a full migration service request from an existing BLS business customer. The business customer lines are migrated "as-specified" to the CLEC.
400	Port	A CLEC orders 26 business unbundled analog ports in support of a partial migration service request from an existing BLS business customer. The business customer currently has 31 lines, five of which stay with BLS and 26 are migrated "as-specified" to the CLEC.
401	Port	A CLEC orders 26 business unbundled analog ports in support of a full migration service request from an existing BLS business customer. The business customer lines are migrated "as-specified" to the CLEC.
402	Port	A CLEC orders two residential unbundled analog ports in support of a partial migration service request from an existing BLS residential customer. The residential customer currently has three lines, one of which stay with BLS and two are migrated "as-specified" to the CLEC.
403	Port	A CLEC orders two residential unbundled analog ports in support of a full migration service request from an existing BLS residential customer. The residential customer lines are migrated "as-specified" to the CLEC.
404	Port	A CLEC orders two business unbundled analog ports from BLS for one of its resale business customers.
405	Port	A CLEC orders 26 business unbundled analog ports from BLS for one of its resale business customers.
406	Port	A CLEC orders three residential unbundled analog ports from BLS for one of its resale residential customers.
407	Port	A CLEC orders a change (e.g., add call waiting) on two business unbundled analog ports in response to a CLEC customer complaint.
408	Port	A CLEC orders a change on 26 business unbundled analog ports in response to a CLEC customer complaint.
409	Port	A CLEC orders a change (e.g., add call waiting) on two residential unbundled analog ports in response to a CLEC customer complaint.
412	Port	A CLEC orders a suspend on two business unbundled analog ports.
414	Port	A CLEC orders a suspend on two residential unbundled analog ports.
415	Port	A CLEC orders a restore on two business unbundled analog ports.
417	Port	A CLEC orders a restore on two residential unbundled analog ports.
418	Port	An existing CLEC business customer is going out of business. The CLEC orders BLS to disconnect both of its customer's unbundled analog ports.

Scenario Number	Scenario Category	Scenario Description
419	Port	An existing CLEC residential customer is moving to another state. The CLEC orders BLS to disconnect both of its customer's unbundled analog ports from BLS.
420	Combo	A CLEC orders two new business unbundled analog loop – port combinations from BLS in support of a new business customer's service request.
422	Combo	A CLEC orders two new residential unbundled analog loop – port combinations from BLS in support of a new residential customer's service request.
423	Combo	A CLEC orders two business unbundled analog loop - port combinations in support of a full migration service request from an existing BLS business customer. The business customer lines are migrated "as-specified" to the CLEC.
424	Combo	A CLEC orders 26 business unbundled analog loop - port combinations in support of a full migration service request from an existing BLS business customer. The business customer lines are migrated "as-specified" to the CLEC.
425	Combo	A CLEC orders two residential unbundled analog loop - port combinations in support of a full migration service request from an existing BLS residential customer. The residential customer lines are migrated "as-specified" to the CLEC.
427	Combo	A CLEC orders 26 business unbundled analog loop - port combinations from BLS for one of its resale business customers.
428	Combo	A CLEC orders two residential unbundled analog loop - port combinations from BLS for one of its resale residential customers.
429	Combo	A CLEC orders a change on two business unbundled analog loop - port combinations in response to a CLEC customer complaint.
432	Combo	An existing CLEC business customer moves from the third to the fifth floor in an office complex. The CLEC orders an inside move on both of its customer's unbundled analog loop - port combinations from BLS.
433	Combo	An existing CLEC residential customer moves from the second to the third floor in an apartment building. The CLEC orders an inside move on its customer's unbundled analog loop - port combination from BLS.
435	Combo	An existing CLEC residential customer moves across town. The CLEC orders an outside move on its customer's unbundled analog loop - port combination from BLS.
438	Combo	A CLEC orders a suspend on two business unbundled analog loop - port combinations.
440	Combo	A CLEC orders a suspend on two residential unbundled analog loop - port combinations.
441	Combo	A CLEC orders a restore on two business unbundled analog loop - port combinations.
443	Combo	A CLEC orders a restore on two residential unbundled analog loop - port combinations.
444	Combo	An existing CLEC customer is moving to another state. The CLEC orders BLS to disconnect both of its unbundled loop-port combinations.

Scenario Number	Scenario Category	Scenario Description
445	Combo	An existing CLEC customer is moving to another state. The CLEC orders BLS to disconnect both of its unbundled loop-port combinations.
604	Combo	CLEC orders one unbundled analog loop/port combination in support of partial migration. BLS customer currently has three lines, two of which stay with BLS, while one migrates "as specified" to CLEC.
602	Combo	An existing CLEC customer orders BLS to disconnect two of four CLEC analog loop-port combinations.
702	Combo	Migrate an existing CLEC single line UNE Loop-Port combination customer to another CLEC UNE Loop-Port combination.
452	DL	A CLEC orders an additional directory listing in support of a service request from an existing business loop port combination customer.
453	DL	A CLEC orders an additional directory listing in support of a service request from an existing residential loop port combination customer.
454	DL	An existing CLEC residential loop port combination customer requests a directory listing change.
455	DL	An existing CLEC business loop port combination customer requests a directory listing change.
456	DL	An existing CLEC multi-line business loop port combination customer requests an additional directory listing.
457	DL	A CLEC customer with LNP orders a directory listing.
458	DL	A CLEC customer with LNP deletes its directory listing.

Integration Testing

KCI conducted a defined set of integrated pre-order/order transactions. For these transactions, the information returned in a pre-order response was manually copied, without modifications, into an LSR for which pre-order information was required. This test was conducted to evaluate the degree to which a CLEC could develop automated integrated transactions and to highlight any inconsistencies in field name(s) and format between pre-order and order forms. The following table outlines the pre-order/order integration test flow. Results of the integration test are presented in Section 3.1: Results and Analysis.

Table V-F: Integration Scenarios

Scenario	Description	Pre-Order (s) Transaction Type
I01	Migrate a four-line Retail business customer to four UNE analog Ports. Add Call Waiting and Call Forward Deluxe to all lines. Add Call Return on two lines.	Service Availability Query
I02	Migrate a four-line Retail customer to four UNE Loop-Port combos.	Service Availability Query

I03	Migrate a two-line Retail business customer to CLEC Resale. Change customer's PIC and LPIC.	Service Availability Query
I04	Migrate a three-line retail business customer to three UNE analog SL1 loops.	Address Validation Query
I05	Disconnect a single line resale residential customer.	Appointment Availability Query Calculate Due Date
I06	Migrate a single line residential Retail customer to one UNE analog SL1 loop.	Address Validation Query (using Telephone Number as input)
I07	A two-line Resale business customer performs an inside move.	Address Validation Query Telephone Number Assignment Query Telephone Number Selection Query
I08	A two-line Resale residential customer performs an outside move.	Address Validation Query
I09	A residential two-line UNE loop-port combination customer requests a TN change for both lines.	Telephone Number Assignment Query Telephone Number Selection Query
I10	A new residential customer adds two UNE analog Ports. Add call waiting on both lines.	Telephone Number Assignment Query Telephone Number Selection Query
I11	A new business customer adds two UNE analog Loop Port combos.	Telephone Number Assignment Query Telephone Number Selection Query

2.3 *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, CLEC UNE); 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 when populating specific service requests.

KCI, in collaboration with the GPSC, solicited the participation of actual CLECs currently doing business with BellSouth Georgia to execute Local Number Portability (LNP) service requests.

As a pseudo-CLEC, KCI lacked access to the requisite registrations and certifications needed to perform LNP orders. As a result, KCI obtained LNP test bed information

from four CLECs possessing LNP-ordering capability. These CLECs provided KCI with the company and facility specific information required on LNP orders. The CLECs were asked to perform the necessary provisioning activities to complete the orders. Utilizing the information provided by the CLECs, KCI created and submitted the LNP service requests via its TAG and EDI interfaces. KCI also monitored BLS provisioning activities in association with these LNP orders[9].

[9] Results of provisioning activities associated with LNP service requests are presented in the Results Section of the Provisioning Verification Test (O&P-5).

A. Test Results: EDI Functional Test (O&P-1)

1.0 Description

The objective of the Electronic Data Interchange (EDI) Functional Test (O&P-1) was to evaluate the functionality of BellSouth's ordering systems in processing Local Service Requests (LSRs) for Unbundled Network Element (UNE) services submitted via EDI.

2.0 Methodology

This section summarizes the test methodology.

2.1 Business Process Description

See Section V, "Ordering & Provisioning Overview" for a description of the BellSouth ordering process via EDI.

2.2 Scenarios

KCI generated and transmitted LSRs based on the 100 UNE scenarios outlined in the *Master Test Plan (MTP)*. The *MTP* defined the EDI order scenarios to be tested in O&P-1, and outlined the specific products and services to be ordered as well as the applicable activity types. The scenarios also defined requirements for the testing of different customer types (business and residential), migration activity (partial and full migration[1]) and flow through[2] designations.

Please refer to Section V, Tables V-2.2 and V-2.3 for a list of the UNE scenarios used for this test.

2.3 Test Targets & Measures

The test target was BellSouth's UNE ordering process for LSRs submitted via the EDI interface. 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."

[1] A CLEC requests a full migration to convert all of a customer's lines to a new service provider. A CLEC requests a partial migration for a multi-line customer retaining at least one line with BellSouth.

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

Table V-1.1: Test Target Cross-Reference

Sub-Process	Function	Evaluation Criteria	Test Cross-Reference
Submit an Order	Send order in LSR format	Presence of Functionality	O&P-1-1-1; O&P-1-2-1; O&P-1-2-2
	Receive acknowledgment	Timeliness of Response	O&P-1-3-1
	Receive FOC/error/reject notification	Accuracy of Response	O&P-1-4-1: O&P-1-4-2: O&P-1-4-3
		Clarity of Information	O&P-1-4-1; O&P-1-4-2
		Timeliness of Response	O&P-1-3-2a; O&P-1-3-2b; O&P-1-3-3a; O&P-1-3-3b
	Send expedited order transaction	Presence of Functionality	O&P-1-1-1; O&P-1-2-1; O&P-1-2-2
Submit an Error	Send error in LSR format	Presence of Functionality	O&P-1-1-1; O&P-1-2-1; O&P-1-2-2
	Receive acknowledgement	Timeliness of Response	O&P-1-3-1
	Receive planned error/reject notification	Accuracy of Response	O&P-1-4-2
		Clarity of Information	O&P-1-4-2
		Timeliness of Response	O&P-1-3-2a; O&P-1-3-2b
	Correct error(s)	Clarity of Information	O&P-1-4-2
	Re-send order	Presence of Functionality	O&P-1-1-1; O&P-1-2-1; O&P-1-2-2
	Receive FOC	Accuracy of Response	O&P-1-4-1; O&P-1-4-3
		Clarity of Information	O&P-1-4-1
		Timeliness of Response	O&P-1-3-3a; O&P-1-3-3b
Supplement an Order	Send supplement	Presence of Functionality	O&P-1-1-1; O&P-1-2-1; O&P-1-2-2
	Receive acknowledgment	Timeliness of Response	O&P-1-3-1
	Receive FOC/error/reject notification	Accuracy of Response	O&P-1-4-1; O&P-1-4-2; O&P-1-4-3
		Clarity of Information	O&P-1-4-1; O&P-1-4-2
		Timeliness of Response	O&P-1-3-2a; O&P-1-3-2b; O&P-1-3-3a; O&P-1-3-3b
	Correct error(s)	Clarity of Information	O&P-1-4-2
	Re-send supplement	Presence of Functionality	O&P-1-1-1; O&P-1-2-1; O&P-1-2-2
	Receive FOC	Accuracy of Response	O&P-1-4-1; O&P-1-4-3
		Clarity of Information	O&P-1-4-1
		Timeliness of Response	O&P-1-3-3a; O&P-1-3-3b

Sub-Process	Function	Evaluation Criteria	Test Cross-Reference
Pre-Order/Order Integration	Populate integration orders with information returned from designated pre-order response	Clarity of Information	O&P-2-5-1; O&P-2-5-2; O&P-2-5-3; O&P-2-5-4; O&P-2-5-5; O&P-2-5-6; O&P-2-5-7
	Submit integration orders	Presence of Functionality	O&P-1-1-1; O&P-1-2-1; O&P-1-2-2
	Receive acknowledgment	Timeliness of Response	O&P-1-3-1
	Receive error/reject notification	Accuracy of Response	O&P-1-4-2
		Clarity of Information	O&P-1-4-2
		Timeliness of Response	O&P-1-3-2a; O&P-1-3-2b
	Correct error(s)	Clarity of Information	O&P-1-4-2
	Re-send integration order	Presence of Functionality	O&P-1-1-1; O&P-1-2-1; O&P-1-2-2
	Receive FOC	Accuracy of Response	O&P-1-4-1; O&P-1-4-3
		Clarity of Information	O&P-1-4-1
		Timeliness of Response	O&P-1-3-3a; O&P-1-3-3b
Receive Completion Notice (CN)	Receive CN transaction	Accuracy of Response	O&P-1-4-4
		Clarity of Information	O&P-1-4-4
		Timeliness of Response	O&P-1-3-4
Receive Jeopardy Notification	Receive jeopardy notification/ missed appointment transaction	Accuracy of Response	O&P-1-4-5; O&P-1-4-6
		Clarity of Information	O&P-1-4-5; O&P-1-4-6
		Timeliness of Response	O&P-1-3-5; O&P-1-3-6
Check Service Order Status	Check service order status	Accuracy of Response	O&P-1-4-7
		Clarity of Information	O&P-1-4-7

2.4 *Data Sources*

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

Table V-1.2: Data Sources for EDI Functional Test

Document	File Name	Location in Work Papers	Source
Local Exchange Ordering (LEO) Implementation Guide, Volume 1, Issues 7J, 7K, 7L, 7M, 7N, 7O, and 7P	No Electronic Copy	O&P-1-B-1	BLS
LEO Implementation Guide, Volume 2, Issue 6B, July 99	No Electronic Copy	O&P-1-B-2	BLS

Document	File Name	Location in Work Papers	Source
LEO Implementation Guide, Volume 3, Issue 3A, August 98	No Electronic Copy	O&P-1-B-3	BLS
LEO Implementation Guide, Volume 4, Issue 7F, October 99	No Electronic Copy	O&P-1-B-4	BLS
Product and Services Interval Guide	No Electronic Copy	O&P-1-B-5	BLS
Local Service Request Error Messages (Version TCIF 7)	O&P_errors.pdf	O&P-1-A-4	BLS
CLEC Service Order Tracking System (CSOTS) *Users Guide*	O&P_csots.pdf	O&P-1-A-1	BLS
Local Number Portability (LNP) Ordering Guide (Issue 1b-October 1999)	O&P_LNPgd.pdf	O&P-1-A-3	BLS
Facility-Based Activation Requirements	No Electronic Copy	O&P-1-B-6	BLS
Miscellaneous Account Numbers provided by BLS	O&P_MANs.doc	O&P-1-A-5	BLS
KCI Company Codes and Billing Account Numbers	O&P_OCN.xls	O&P-1-A-6	BLS
EDI Interface Testing Agreement - LNP	O&P_EDIvalid.doc	O&P-1-A-8	BLS
Cable Pair Assignments	O&P_cablepair.xls	O&P-1-A-9	BLS
Initial State Customer Service Records (CSRs)	O&P_PreCSR.mdb	O&P-1-A-10	BLS
Post-Order Activity CSRs	O&P_PostCSR.mdb	O&P-1-A-11	BLS
CLEC information for LNP orders (Proprietary)	O&P_CLECLNP.xls	O&P-1-A-12	CLECs
Pending Order Status Job Aid	O&P_Pendingstat.pdf	O&P-1-A-13	BLS
Additional Test Bed Addresses	O&P_newad.doc	O&P-1-A-14	BLS
O&P Test Bed Specifications	O&P_Testbed_specs.xls	O&P-1-A-15	KCI
LNP Test Bed Specifications	O&P_LNPTestbed_specs .xls	O&P-1-A-16	KCI
Test Case Master	O&P_Testcasemaster.xls	O&P-1-A-17	KCI
Order Transaction Submission Schedule	O&P_editagsced.xls	O&P-1-A-18	KCI
KCI Help Desk Log	O&P_HelpDesklog.xls	O&P-1-A-19	KCI
KCI Issues Log	O&P_TestIssues.xls	O&P-1-A-20	KCI
Pre-Order/Order Integration Log	O&P_integration.xls	O&P-1-A-21	KCI
EDI System Availability Logs	O&P_EDIsystem.mdb	O&P-1-A-22	HP
Expected Results Analysis - EDI	O&P_EDIExpected	O&P-1-A-25	KCI

2.4.1 Data Generation/Volumes

Data for this test were generated through order transaction submission via EDI. 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 interface.

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[3] that were provisioned according to KCI's specifications. Test cases and instances, correlating 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) Guide, Volume 1.*

Transactions (LSRs) were submitted and the results were logged and compared to expected results, based on our knowledge of the ordering and provisioning system functionality and business processes. These processes are outlined in Section V, "Ordering and Provisioning Overview."

EDI orders were submitted as both stand-alone transactions and as integrated pre-order/order transactions[4].

2.6 *Analysis Methods*

The EDI Functional Test included a checklist of evaluation criteria developed by KCI during the initial phase of the BellSouth - Georgia OSS Evaluation. The evaluation criteria provided the framework of norms, standards, and guidelines for the EDI Functional Test.
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[5]. In many cases, results in this section were calculated based on KCI/HP timestamps, which may differ significantly from the BellSouth time measurement points reported in the SQMs.[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.

---

[3] See Section V, "Ordering & Provisioning Overview" for a detailed description of the Ordering and Provisioning test bed.

[4] See Section V, "Ordering & Provisioning Overview" for a description of the Pre-Order/Order Integration Sub-Test.

[5] 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.

[6] For one evaluation criterion, O&P-1-3-2a, KCI conducted a comparison of response timeliness based on BellSouth-provided timestamps versus response timeliness based on KCI/HP timestamps. While KCI's evaluation result for this and all other ordering criteria is determined using KCI/HP timestamps and data measurement points, data pertaining to this BLS/KCI data comparison is provided for information purposes. See O&P-1-3-2a for additional information.

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.

Table V-1.3: Evaluation Criteria and Results

Test Cross-Reference	Evaluation Criteria	Result	Comments
Interface Availability			
O&P-1-1-1	EDI order transaction capability is consistently available during scheduled hours of operation.	No Result Determination Made [7]	The GPSC approved standard is 99.5% system availability during scheduled hours of operation[8]. During the course of this test, Hewlett Packard attempted to maintain a constant connection to BLS's EDI interface by implementing regular system 'pinging.' Based on an analysis of HP's EDI system availability logs between 2/7/00 and 7/27/00[9], KCI observed that the EDI interface was available during 98.6% of scheduled hours of availability.

[7] KCI could not conclusively determine the root source (BellSouth or CLEC) for all recorded downtime. As a portion or all of the noted downtime could have resulted from CLEC system downtime, KCI cannot state with confidence that the CLEC recorded result provides evidence of sub-standard performance.

[8] Regular scheduled hours of availability for the TAG interface are published on the BellSouth 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.

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

Test Cross-Reference	Evaluation Criteria	Result	Comments
System Functionality			
O&P-1-2-1	The EDI interface provides expected system responses.	Not Satisfied	The KCI standard is 99% of expected system and representative responses received. Of the 863[10] order transactions submitted during the initial Functional Evaluation, nearly 100% received responses (functional acknowledgements, subsequent errors or confirmations, and expected completion notifications) from BLS. During initial testing, some electronically submitted LSRs received responses via facsimile[11]. According to BLS, these faxes were generated as a result of BLS ordering representative error in failing to populate one of several particular data elements within the BLS service order[12]. The missing internal field(s) precluded an electronic response from being generated. On January 15, 2000, BLS implemented a system enhancement to ensure that FOCs and CNs are electronically generated even when an ordering representative fails to enter one of these data elements. Following this system enhancement, KCI did not observe any additional occurrences of missing electronic FOC or CN responses that were attributable to BLS representatives during initial functional testing. See Exception 9 for additional information on this issue. KCI has recommended closure of Exception 9

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

[11] Less than one percent of total transactions received responses via Fax.

[12] Particular fields include: AECN (on UNE orders); sales code beginning with "YAXQ"; PON; MAN (UNE orders); RESH (Resale orders); and RMKR.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			to the GPSC. KCI initiated a functional re-test on 8/25/00.[13] During this re-test, KCI failed to receive Completion Notices (CNs) on approximately 14% of transactions for which a CN was expected. For a portion of these orders, BLS indicated that they were mistakenly canceled by BLS service representatives[14]. See Exception 118 for additional information on this issue. As no subsequent re-testing activities are planned, KCI has recommended closure of Exception 118 to the GPSC.
O&P-1-2-2	BLS systems and representatives provide required order functionality[15].	Satisfied	BLS systems and representatives provided the required order functionality for most transaction types evaluated (see Section V, Tables V-2.2 and V-2.3). However, the following deficiencies in UNE ordering functionality were observed[16]: – Loop service with directory listing requests require two separate LSRs. BLS has indicated that system modifications to

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

[14] According to BLS, some of these orders fell into error status following confirmation (for billing- and directory listing-related errors). A BLS Error Resolution Group, charged with working orders in this error status, mistakenly viewed the KCI Company Codes as belonging to internal BLS test orders and cancelled them out of the system. Additional orders were affected by other service rep errors or cancellations.

[15] A number of ordering scenarios outlined in the *Master Test Plan* are not electronically orderable via BellSouth TCIF 7 interfaces. BellSouth does not allow stand-alone UNE Loop partial migrations or various types of "UNE-to-UNE migrations", converting a CLEC customer from one service delivery platform (e.g., UNE Loop-Port Combination) to another delivery method (e.g., UNE Loop). KCI issued Exception 39 (UNE Loop partial migration) and Exception 54 (UNE-to-UNE migration) to address these issues. BellSouth submitted requests via the Change Control Process to introduce this ordering functionality into its OSS '99 (TCIF 9) interface release. KCI recommended closure of these exceptions due to the fact that they are not electronically orderable in TCIF 7. Pursuant to the Georgia Public Service Commission's Order, KCI evaluated the electronically-orderable services in TCIF 7. KCI did not test Issue 9 electronic ordering interfaces in Georgia.

[16] All deficiencies referenced in this criterion were addressed and successfully re-tested. The related exceptions are closed.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			allow loop and directory changes on a single service order are not operationally feasible. To relate the due dates of the two orders, BLS advised CLECs to submit the DL request after the related Loop request has received confirmation, using the Due Date provided on the Loop confirmation as the Desired Due Date for the DL request. KCI submitted a set of Loop Service orders with DL orders to re-test this process. KCI received Firm Order Confirmations on all separate service requests for Loop Service and DL, indicating that BLS ordering systems successfully processed the requests. In addition, KCI experienced no significant problem with obtaining the same confirmed Due Date for DL service as the Due Date received on corresponding Loop Service requests. See Exception 31 for additional information on this issue. Exception 31 is closed[17]. – On three UNE Loop migration service requests, BLS ordering representatives incorrectly processed the service order, resulting in the disconnection of the customers' retail service without reconnection of the UNE component. BLS instituted a system edit to prohibit service representatives from improperly coordinating BLS internal service order activity. Following

[17] KCI recommended closure of Exception 31 based on the presence of adequate LS and DL ordering functionality. While BellSouth electronic ordering systems do not have the ability to handle Loop Service with DL orders on a *single* LSR, the basic functionality to process these orders does exist. KCI believes that the additional effort required of CLECs to develop two distinct service requests and to coordinate their Due Dates is not a significant impediment to timely execution of these order types.

[18] WPQTY = White Pages Quantity; YPQTY = Yellow Pages Quantity.

[19] KCI successfully processed LNP orders following implementation of this feature enhancement.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			implementation of this system edit, no further instances of inappropriate disconnection activity were noted during initial testing. In addition, KCI executed re-test transactions designed to evaluate this BLS edit. KCI monitored subsequent responses to Loop migration service requests in error status and observed no instances of improper service disconnection. See Exception 22 for additional information on this issue. Exception 22 is closed. – A BLS defect preventing the electronic processing of Loop Port Combination partial migration service requests was identified. BLS implemented a system fix on 01/17/00 to correct this deficiency. Subsequent re-testing of this order type indicated that partial migrations are successfully supported. See Exception 4 for additional information on this issue. Exception 4 is closed. – A BLS systems defect preventing the migration of a customer's Billing Telephone Number (BTN) during a partial migration to UNE Loop-Port Combinations was identified. BLS implemented a system fix to address this issue on 4/29/00 and provided CLEC notification of this fix on 5/25/00. See Exception 51 for additional information on this issue. KCI successfully re-tested BTN migrations on 5/30/00. Exception 51 is closed. – A BLS system limitation in processing Local Number Portability (LNP) requests (with and without loops) as a result of the WPQTY and YPQTY data elements[18] was identified. BLS provided notification of an LNP

Test Cross-Reference	Evaluation Criteria	Result	Comments
			Gateway feature enhancement, implemented on 5/7/00, as well as an interim workaround[19] via the Change Control distribution process.
Timeliness of Response [20]			
O&P-1-3-1	BLS's EDI Interface provides timely Functional Acknowledgements (FAs)	Satisfied[21]	The KCI standard is 95% of FAs received within 30 minutes.[22] LSRs submitted for functional testing received FAs within the following timeframes: – 62% of 861 FAs were received in less than 30 minutes. – 23% of FAs were received within 30-60 minutes. – 6% of FAs were received within 60-90 minutes. – The remaining 9% were received after more than 90 minutes. KCI initiated a re-test of FA Timeliness on August 25, 2000. LSRs submitted during re-testing received FAs within the following timeframes[23]: – 93% of 340 FAs were received in less than 30 minutes. – 6% were received within 30-60 minutes. – The remaining 2% were received within 60-90 minutes.

[20] During the course of this evaluation, KCI conducted 2 re-tests to address BellSouth performance relative to select 'response timeliness' criteria. The first re-test, initiated on August 25, 2000, was designed to evaluate BellSouth performance following: a) process improvements implemented in the BellSouth ordering centers; and b) the effects of a BellSouth process change within its EDI translator to segregate incoming CLEC transactions from those of other trading partners (completed on June 30, 2000). The second 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 second 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.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			See Exception 60 for additional information on this issue. KCI has recommended closure of Exception 60 to the GPSC.
O&P-1-3-2a	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[24]. LSRs submitted during the entire period of initial functional testing received FM errors within the following timeframes [25] (See Table V-1.5): – 18% of FM errors were received in less than one hour. An additional 63% were received within 1-2 hours. KCI initiated a re-test of error response timeliness on August 25, 2000. LSRs submitted during this re-test received FM errors within the following timeframes (See Table V-1.6): – 64% of FM errors were received in less than one hour. An

[21] 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 0.0584 , above the .0500 cutoff for a statistical conclusion of failure.

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

[23] Totals due not equal 100% due to rounding.

[24] Results are based on the actual flow-through status of LSRs submitted by KCI. KCI determined that a clarification 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. During initial testing, KCI was unable to obtain actual FM/PM classifications on a number of Local Number Portability service requests. Responses to 7% of these non-categorized service requests were received within one hour, and 70% were received within 24 hours. During initial re-testing, KCI was unable to obtain actual FM/PM classifications on a number of LNP and non-LNP orders. Of the 30 non-classified orders, 70% were received within 24 hours.

[25] On 2/7/00, BellSouth completed a systems and process fix to address timeliness of response issues. For the testing period beginning after the fix implementation, 15% of FM errors were received in less than one hour and 69% of PM errors were received in less than 24 hours.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			additional 33% were received within 2 hours.[26] KCI initiated a second re-test of error response timeliness on January 19, 2001. LSRs submitted during this re-test received FM errors within the following timeframes (See Table V-1.7): – 84% of FM errors were received in less than one hour. An additional 5% were received within 2 hours.[27] 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.
O&P-1-3-2b	BLS's EDI interface provides timely Partially Mechanized (PM) order clarifications (CLRs).	Satisfied	The GPSC-approved standard for partially mechanized (PM) CLRs is 85% received within 24 hours[24]. LSRs submitted during the entire period of initial functional testing received PM CLRs within the following timeframes[25] (See Table V-1.5): – 65% of PM errors were received in less than 24 hours. An additional 30% were received within 24-48 hours. KCI initiated a re-test of error response timeliness on August 25, 2000. LSRs submitted during re-testing received PM CLRs within the following timeframes (See Table V-1.6): – 89% of PM errors were received

[26] KCI conducted an additional review of FM Error Timeliness results for the initial UNE re-test, comparing response timeliness using BellSouth timestamps to response timeliness using KCI/HP timestamps. For all responses classified as "late" using KCI timestamp analysis, BellSouth provided its EDI translator timestamps for the inbound and outbound transactions. Using BellSouth-provided timestamps, 96% of FM ERR/CLR responses received during the first UNE re-test were received one time (i.e., within one hour). See Table V-1.6 for additional information.

[27] BellSouth implemented a modification to its EDI systems on 2/2/01(see Footnote 13 for additional information). 78% of FM errors received via EDI following this fix were delivered within one hour.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			in less than 24 hours. An additional 10% were received within 24-48 hours. See Exception 98 for additional information on this issue. KCI has recommended closure of Exception 98 to the GPSC.
O&P-1-3-3a	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[28]. LSRs submitted during the entire period of initial functional testing received FT FOCs within the following timeframes [29] [30] (See Table V-1.8): – 78% of FOCs were received in less than three hours for FT LSRs. KCI initiated a re-test of FOC response timeliness on August 25, 2000. LSRs submitted during this re-test received FT FOCs within the following timeframes (See Table V-

[28] 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. During initial testing, KCI was unable to obtain actual FT/NFT classifications on a number of Local Number Portability (LNP) service requests. Responses to 17% of these non-categorized service requests were received within three hours, and 92% were received within 36 hours. During initial re-testing, KCI was unable to obtain actual FT/NFT classifications on a number of LNP and non-LNP service requests. Of the 40 FOC responses not classified, 35% were received within three hours and 100% were received within 36 hours.

[29] Beginning with the February Flow-Through Report, BellSouth no longer categorized as Flow- Through those service requests that proceeded through BellSouth electronic ordering systems to the Service Order Communication System (SOCS) and fell out for manual handling after failing a SOCS edit. Previously categorized as FT, these service request types are now defined by BellSouth to be NFT due to the required manual intervention. As a result of BellSouth Flow-Through calculation modifications, some FT FOCs previously categorized as "late" would be considered *NFT* if submitted in the future. FOC response timeliness re-testing activity (initiated on August 25, 2000) occurred after this FT definition change was implemented. As a result, evaluation of re-test FOC timeliness was performed based on consistent classification of FT or NFT categories.

[30] On 2/7/00, BellSouth completed a systems and process fix to address timeliness of response issues. This set of results is provided beginning after the implementation. For the testing period beginning after the fix implementation, 83% of FOCs were received in less than three hours for FT LSRs and 83% of FOCs were received in less than 36 hours for NFT LSRs.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			1.9): – 82% of FOCs were received in less than three hours for FT LSRs. An additional 13% were received within 24 hours. KCI initiated a second re-test of FOC response timeliness on January 19, 2001. LSRs submitted during the second re-test received FT FOCs within the following timeframes (See Table V-1.10): – 100% of FOCs were received in less than 3 hours for FT FOCs.[31] See Exception 78 for additional information on this issue. The issues in Exception 78 that relate to this criterion are resolved.
O&P-1-3-3b	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[28]. LSRs submitted during the entire period of initial functional testing received NFT FOCs within the following timeframes [29, 30] (See Table V-1.8): – 85% of FOCs were received in less than 36 hours for NFT LSRs. KCI initiated a re-test of FOC response timeliness on August 25, 2000. LSRs submitted during re-testing received NFT FOCs within the following timeframes (See Table V-1.9): – 100% of FOCs were received within 36 hours for NFT LSRs. See Exception 97 for additional information on this issue. Exception 97 is closed.

[31] BellSouth implemented a modification to its EDI systems on 2/2/01 (see Footnote 13 for additional information). 100% of FT FOCs received via EDI following this fix were delivered within three hours.

Test Cross-Reference	Evaluation Criteria	Result	Comments
O&P-1-3-4	BLS's EDI interface provides timely Completion Notifications (CNs) within agreed upon standard intervals.	No Result Determination Made[32]	BLS delivers CNs upon the conclusion of "field provisioning"[33] activities as well as all subsequent downstream (listing and billing) provisioning activities[34]. 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 initial functional testing received CNs within the following timeframes (See Table V-1.11): – 86% of CNs were received within one business day after the field provisioning completion date. – 7% received within two business days after field provisioning completion. – 5% received within three-to-five business days after field provisioning completion. – The remaining 2% of CNs were received six or more business days following field provisioning completion.

[32] KCI is unable to assign an evaluation result for this criterion and provides the test results as diagnostic information only. 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 transaction results to this SQM within a reasonable degree of accuracy. BLS calculates this metric using the following data points: 1) Completion date and time (as entered by a BLS 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, BLS provides the work completion date (but not the time); BLS 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.

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

[34] For Local Number Portability (LNP) orders, BellSouth returns CNs following all provisioning activities and after the CLEC completes the porting of associated Telephone Numbers with the Number Portability Administration Center (NPAC).

Test Cross-Reference	Evaluation Criteria	Result	Comments
			KCI initiated a re-test of CN response timeliness on August 25, 2000. LSRs submitted during re-testing received CNs within the following timeframes (See Table V-1.12): – 87% of CNs were received within one business day after the field provisioning completion date. – 3% received within two business days after field provisioning completion. – 4% received within three-to-five business days after field provisioning completion. – The remaining 6% of CNs were received six or more business days following field provisioning completion. See Exception 26 for additional information on this issue. KCI has recommended closure of Exception 26 to the GPSC.
O&P-1-3-5	BLS's EDI interface provides timely Jeopardy Notifications.	Satisfied	The GPSC-approved standard is 95% of Jeopardy Notifications received at least 48 hours before the confirmed Due Date (DD). Of the nine Jeopardy Notifications received via EDI, BLS has returned 100% at least 48 hours before the DD. See Table V-1.15 for additional details.

Test Cross-Reference	Evaluation Criteria	Result	Comments
O&P-1-3-6	BLS's EDI interface provides timely Missed Appointment (MA) notifications.	Satisfied[35]	The KCI standard is 95% of MA notifications received within one business day after the latest confirmed Due Date (DD). Of the 15 MAs received via EDI, BLS has returned: – 93% (14/15) within 1 business day after the DD. – 7% (1/15) later than one business -day after the DD[36]. See Exception 67 for additional information on this issue.[37] Exception 67 is closed.
Accuracy of Response			
O&P-1-4-1	BLS systems and representatives provide clear, accurate, and complete Firm Order Confirmations (FOCs).	Satisfied	A sample of FOCs was examined for clarity, accuracy, and completeness relative to the BLS Business Rules (*LEO Guide, Volume 1*)[38]. A number of FOCs were received in response to invalid service requests. For these orders, KCI expected to receive error messages. KCI initated a re-test on 9/25/00 to monitor the accuracy of FOC responses. KCI determined that 99% of FOCs received during re-test activities were

[35] 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. 5367 , above the .0500 cutoff for a statistical conclusion of failure.

[36] The late MA response was received 13 days after the FOC DD.

[37] KCI drafted Exception 67 to address late MA notifications received. Upon further investigation, the majority of responses initially categorized as 'late' were determined to be 'on-time'. For a number of PONs, due date modifications were initiated by CLEC representatives during conversations with BellSouth UNE-Center personnel. New FOCs (containing the new Due Dates) are not transmitted in these cases. As a result, KCI initially compared the *original* FOC DD with the MA receipt time. The MA receipt times were subsequently compared to the modified Due Dates. In the majority of cases, the MAs were delivered in a timely manner relative to the new DD.

[38] KCI defined an accurate FOC as a correct response type relative to the LSR submitted (i.e., the FOC was received in response to a valid LSR) that contains: a) all expected data elements (fields); b) no unexpected data elements (fields); c) all required data values in the expected format; d) no prohibited values. Expected and prohibited values were developed based on the *LEO Guide, Volume 1.*

Test Cross-Reference	Evaluation Criteria	Result	Comments
			accurate response types (i.e., received in response to valid LSRs). See Exception 95 for additional information on this issue. The issues in Exception 95 that relate to this criterion are resolved. During KCI's initial review of FOC completeness, KCI observed a number of discrepancies between BLS-documented data requirements and actual data returned on FOC responses. For example, Frame Due Time (FDT) and Circuit ID (ECCKT) were listed as required fields but were not populated on all responses. In addition, CHAN/PAIR was populated when it was not an applicable field according to BLS Business Rules. Exception 68 was opened to address these response completeness issues. To address these issues, BLS published an updated version of *LEO Guide, Volume I* on August 28, 2000 to more accurately reflect FOC data requirements. This version (7S) did not adequately define usage requirements, by specific order types, for some response fields[39]. 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.

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

Test Cross-Reference	Evaluation Criteria	Result	Comments
O&P-1-4-2	BLS systems and representatives provide clear, accurate and complete order errors/clarifications (CLRs).	Not Satisfied	A sample of error responses was examined for clarity, accuracy, and completeness relative to the BLS Business Rules (*LEO Guide, Volume 1*)[40]. A number of CLRs were received in response to valid service requests. BLS performed additional training of its ordering representatives to correct this problem. CLRs received following the implementation of rep training were found to be accurate[41]. However, KCI noted additional occurrences of inaccurate CLRs during re-test activities initiated on 9/25/00. Of the sample reviewed, approximately 18% of partially-mechanized CLRs (i.e., issued by BLS representatives) received during re-testing were found to be inaccurate. See Exception 47 for additional information on this issue. As no subsequent re-testing activities are planned, KCI has recommended closure of Exception 47 to the GPSC. In addition, several error messages received in response to Local Number Portability (LNP) service requests did not contain clear and comprehensive error descriptions. These responses were populated with an error message stating "Other LNP Error." KCI contacted its BLS Customer Service Manager to obtain the detailed error message. BLS has opened a feature change to prevent this message from being delivered on LNP responses. A target date for the implementation of this feature has not yet been established. This deficiency did not prevent KCI from continuing

[40] KCI defined an accurate error as a correct response type relative to the LSR submitted (i.e., the ERR/CLR was received in response to an erred LSR) that contains: a) all expected data elements (fields); b) no unexpected data elements (fields); c) all required data values in the expected format; d) no prohibited values. Expected and prohibited values were developed based on the *LEO Guide, Volume 1.*

[41] Three additional inaccuracies were observed, representing less than 5% of total partially-mechanized CLR responses reviewed following BellSouth rep training.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			its ordering activity and was not significant enough to affect the overall evaluation. For some initial functional test transactions, a BLS representative generated a CLR in response to a Line Class of Service (LNE CLS SVC) entry on an LSR that had previously returned a system-generated FOC. BLS has proposed a feature enhancement within its internal Change Control Process to ensure system-representative consistency in service request validation. BLS plans to implement this feature in its OSS'99 version of EDI. KCI is not testing OSS '99. See Exception 18 for additional information on this issue. Exception 18 is closed [42]. During KCI's initial review of error completeness, the BLS Business Rules (Issue 7S) did not adequately define usage requirements, by specific order types, for some response fields[43]. 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.

[42] KCI closed this exception based on the fact that BellSouth has updated its documentation to more clearly reflect the valid data entries in the LNE CLS SVC field, and because the BellSouth feature will not be implemented in TCIF 7. KCI is not testing the ordering functionality of the TCIF 9 release in Georgia.

[43] 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
O&P-1-4-3	Service order provisioning due dates (FOC DDs[44]) identified within BLS's order confirmation delivered through EDI are consistent with the CLEC's valid due date (LSR DDD[45]) 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).	No Result Determination Made[46]	KCI obtained valid DDD information for population on an LSR from one of two sources: 1) BLS *Product and Services Interval Guide.* 2) A combination of pre-order queries. KCI performed a Calculate Due Date (CDD) query to determine the earliest 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. For LSRs submitted during initial testing and populated with a DDD obtained from BLS documentation[47]: – 88% of DDs were equal to the LSR DDD. – 5% of DDs were earlier than the LSR DDD. – 7% of DDs were later than the LSR DDD. For LSRs submitted during initial testing and populated with a DDD obtained from electronic pre-order queries[48]: – 90% of DDs were equal to the LSR DDD.

[44] 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.

[45] LSR Desired Due Date (LSR DDD) is defined as the due date requested in a customer's LSR.

[46] 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.

[47] Results are based on 224 LSRs submitted using BellSouth documentation to obtain input for the DDD field.

[48] Results are based on ten LSRs submitted using electronic pre-order queried to obtain input for the DDD field.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			– 10% of DDs were earlier than the LSR DDD. BLS implemented training for Local Carrier Service Center (LCSC) representatives on 3/9/00 to prevent earlier DDs from being issued on manually handled service requests. Based on a review of FOCs received after 3/9/00: – 9% of DDs were earlier than the requested DDD. KCI initiated a subsequent re-test of Due Date accuracy on August 25, 2000. For LSRs submitted during re-testing and populated with a DDD obtained from BLS documentation[49]: – 95% of DDs were equal to the LSR DDD. – 1% of DDs were earlier than the LSR DDD. – 4% of DDs were later than the LSR DDD. For LSRs submitted during re-testing and populated with a DDD obtained from electronic pre-order queries[50]: – 88% of DDs were equal to the LSR DDD. – 13% of DDs were later than the LSR DDD. See Exception 38 and Tables V-1.13 and V-1.14 for additional information on this issue. KCI has recommended closure of Exception 38 to the GPSC.

[49] 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.

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

Test Cross-Reference	Evaluation Criteria	Result	Comments
O&P-1-4-4	BLS systems and representatives provide clear, accurate, and complete Completion Notifications (CNs).	Satisfied	A sample of CNs was examined for clarity, accuracy, and completeness relative to the BLS Business Rules (*LEO Guide, Volume 1*) [51]. The majority of CNs were received in reponse to completed service requests[52]. During KCI's initial review of CN completeness, KCI observed a number of discrepancies between BLS-documented data requirements and actual data returned on CN responses. For example, Frame Due Time (FDT) and Circuit ID (ECCKT) were listed as required fields but were not populated on all responses. In addition, CHAN/PAIR was populated when it was not an applicable field according to BLS Business Rules. Exception 68 was opened to address these response completeness issues. To address these issues, BLS published an updated version of *LEO Guide, Volume I* on August 28, 2000 to more accurately reflect CN data requirements. This version (7S) did not adequately define usage requirements, by specific order types, for some response fields[53]. 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.

[51] KCI defined an accurate CN as a correct response type relative to the LSR submitted (i.e., the CN was received in response to a completed LSR) that contains: a) all expected data elements (fields); b) no unexpected data elements (field); c) all required data values in the expected format; d) no prohibited data values. Expected and prohibited values were developed based on the *LEO Guide, Volume 1.*

Test Cross-Reference	Evaluation Criteria	Result	Comments
O&P-1-4-5	BLS systems and representatives return clear and complete Jeopardy Notifications[54].	Satisfied	BLS documentation available during initial testing did not adequately define the process for categorizing and delivering Jeopardy Notifications[55]. BLS updated its *Pending Order Status Job Aid* in a 6/12/00 release to clarify the Jeopardy Notification process. See Exception 72 for additional information on this issue. Exception 72 is closed. KCI reviewed a sample of Jeopardy responses for completeness relative to the BLS Business Rules (*LEO Guide, Volume 1*). During KCI's initial review of Jeopardy response completeness, the *BellSouth Business Rules* (Issue 7S) did not adequately define usage requirements, by specific order types, for some response fields[56]. 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 Jeopardy responses. See Exception 68 for additional information on this issue. KCI has recommended closure of Exception 68 to the GPSC.

[52] One CN was received in response to a cancelled service request.

[53] 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.

[54] Please see O&P-5 results for additional information on Jeopardy Notification accuracy and completeness.

[55] For example, a response containing an indicator code of "Jeopardy" is not necessarily counted as a Jeopardy Notification in BellSouth Service Quality Measurement (SQM) calculations.

[56] 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
O&P-1-4-6	BLS systems provide clear, accurate, and complete Missed Appointment notifications.	Satisfied	BLS documentation available during initial testing did not adequately define the process for categorizing and delivering Missed Appointment Notifications[57]. BLS updated its *Pending Order Status Job Aid* in a 6/12/00 release to clarify the Missed Appointment notification process. See Exception 72 for additional information on this issue. Exception 72 is closed. KCI reviewed a sample of Missed Appointment responses for completeness relative to the BLS Business Rules (*LEO Guide Volume 1*). During KCI's initial review of Missed Appointment response completeness, the *BellSouth Business Rules* (Issue 7S) did not adequately define usage requirements, by specific order types, for some response fields[58]. 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 Missed Appointment responses. See Exception 68 for additional information on this issue. KCI has recommended closure of Exception 68 to the GPSC.
O&P-1-4-7	BLS service order tracking systems (CSOTS) provide accurate LSR status.	Satisfied	KCI compared a sample of order status queries in CSOTS[59] to the order status reflected in KCI's Order Management Tool (i.e., the most recent response file message received by KCI).

[57] For example, a response containing an indicator code of "Jeopardy" could be considered a Missed Appointment Notification.

[58] 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.

[59] CSOTS provides the status of service requests once BellSouth has received Firm Order Confirmations (FOCs). The status of service requests in a pre-FOC state is not available via CSOTS.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			Based on this sampling, CSOTS queries (Confirmed, Pending, or Completed) matched the responses received by KCI in most cases. During a functional re-test initiated on 8/25/00, KCI reviewed BLS's service order status accuracy. Based on re-test results, KCI noted four instances of Local Number Portability (LNP) service requests for which the Completion Date provided on the CN response was later than the Completion Date identified within CSOTS. In response to this issue, BLS has opened a defect change request to populate LNP CNs with the date of actual completion. A target date for implementation of this release has not yet been established. See Exception 125 for additional information on this issue. KCI has recommended closure of Exception 125 to the GPSC. The deficiencies noted are not significant enough to affect the overall evaluation.

Table V-1.4: Integration Test Evaluation Criteria and Results

Test Cross-Reference	Evaluation Criteria	Result	Comments
Pre-order/Order Integration			
O&P-1-5-1	Information returned in response to pre-order System Availability Queries is compatible with requirements on corresponding orders.	Satisfied	Information transferred between fields received in response to Service Availability Queries and the three corresponding fields in the Order forms was inconsistent with respect to field name and format. To provide information on the relationship between pre-order responses and order fields, BellSouth plans to publish a "*Pre-Order to Firm Order Mapping Matrix*" on 3/30/01 (see Carrier Notification SN91082241 for additional information). While the names and formats of the pre-order and order fields did not agree, data content returned on the pre-order responses adequately fulfills order form input requirements. (See Table V-1.16)
O&P-1-5-2	Information returned in response to pre-order Appointment Availability Queries is compatible with requirements on corresponding orders.	Satisfied	Information transferred between fields received in response to Appointment Availability Queries and the two corresponding fields in the Order forms was inconsistent with respect to field name and format. To provide information on the relationship between pre-order responses and order fields, BellSouth plans to publish a "*Pre-Order to Firm Order Mapping Matrix*" on 3/30/01 (see Carrier Notification SN91082241 for additional information). While the names and formats of the pre-order and order fields did not agree, data content returned on the pre-order responses adequately fulfills order form input requirements. (See Table V-1.16)

Test Cross-Reference	Evaluation Criteria	Result	Comments
O&P-1-5-3	Information returned in response to pre-order Calculate Due Date Queries is compatible with requirements on corresponding orders.	Satisfied	Information transferred between one field received in responses to Calculate Due Date queries and the two corresponding fields in the Order forms was inconsistent with respect to field name and format. To provide information on the relationship between pre-order responses and order fields, BellSouth plans to publish a *"Pre-Order to Firm Order Mapping Matrix"* on 3/30/01 (see Carrier Notification SN91082241 for additional information). While the names and length of the pre-order and order fields did not agree, data content returned on the pre-order response adequately fulfills order form input requirements. (See Table V-1.16)
O&P-1-5-4	Information returned in response to pre-order Address Validation with Telephone Number Queries is compatible with requirements on corresponding orders.	Satisfied	Information transferred between the nine fields received in response to Address Query Validation with Telephone Number and six corresponding fields in the Order forms was inconsistent with respect to field name, format and length. To provide information on the relationship between pre-order responses and order fields, BellSouth plans to publish a *"Pre-Order to Firm Order Mapping Matrix"* on 3/30/01 (see Carrier Notification SN91082241 for additional information). In addition to the field name and length inconsistences, the data content returned on the pre-order response was inadequate to fulfill order form input requirements. For example, the length of the combined responses provided by the AVQ-TN (which must be concatenated prior to entry on the order form) may be greater then the length of the subsequent order field. While the documentation implies that potential address field length discrepancies could exist, KCI did not experience any actual instances of pre-order response field lengths exceeding subsequent order

Test Cross-Reference	Evaluation Criteria	Result	Comments
			field length requirements. BLS has opened a feature request to close the gap in the field size/length differences between pre-order and firm order requirements. An implementation date is currently being negotiated. (See Table V-1.16)
O&P-1-5-5	Information returned in response to pre-order Address Validation Queries is compatible with requirements on corresponding orders.	Satisfied	Information transferred between the nine fields received in response to Address Validation Queries and six corresponding fields in the Order forms was inconsistent with respect to field name, format and length. To provide information on the relationship between pre-order responses and order fields, BellSouth plans to publish a "*Pre-Order to Firm Order Mapping Matrix*" on 3/30/01 (see Carrier Notification SN91082241 for additional information). In addition to the field name and length inconsistences, the data content returned on the pre-order response was inadequate to fulfill order form input requirements. For example, the length of the combined responses provided by the AVQ-TN (which must be concatenated prior to entry on the order form) may be greater then the length of the subsequent order field. While the documentation implies that potential address field length discrepancies could exist, KCI did not experience any actual instances of pre-order response field lengths exceeding susequent order field length requirements. BLS has opened a feature request to close the gap in the field size/length differences between pre-order and firm order requirements. An implementation date is currently being negotiated. (See Table V-1.16)

Test Cross-Reference	Evaluation Criteria	Result	Comments
O&P-1-5-6	Information returned in response to pre-order Telephone Number Availability Queries is compatible with requirements on corresponding orders.	Satisfied	Information transferred between one field received in response to Telephone Number Availability Queries and one corresponding field in the Order forms was consistent with respect to field name, format and length. (See Table V-1.16)
O&P-1-5-7	Information returned in response to pre-order Telephone Number Selection Queries is compatible with requirements on corresponding orders.	Satisfied	Information transferred between the one field received in response to Telephone Number Selection Queries and one corresponding field in the Order forms was consistent with respect to field name, format and length. (See Table V-1.16)

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

Clarification Timeliness Detail – 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	16	57	5	6	2	0	0	4
% FM	18%	63%	6%	7%	2%	0%	0%	4%
Partially Mechanized								
					<24hrs	24-48 hrs	48-72 hrs	>72 hrs
PM					130	60	6	4
% PM					65%	30%	3%	2%

Table V-1.5, Part 2: Error/Clarification Timeliness, On/After 2/8/00 – Initial Test Data

Clarification Timeliness Detail – On/After 2/8/2000								
Fully Mechanized								
	<1 hr	1-2 hrs	2-4 hrs	4-12 hrs	12-24 hrs	24-48 hrs	>48 hrs	>72 hrs
FM	10	39	5	6	2	0	0	3
% FM	15%	60%	8%	9%	3%	0%	0%	5%
Partially Mechanized								
					<24hrs	24-48 hrs	48-72 hrs	>72 hrs
PM					116	50	3	0
% PM					69%	30%	2%	0%

Table V-1.5, Part 3: Error/Clarification Timeliness, Disaggregated View – Initial 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 hrs**	**>72 hrs**
2-wire Loop-Design	5	19	1	2	1	0	0	1
% 2-wire Loop-Design	17%	66%	3%	7%	3%	0%	0%	3%
2-wire Loop-Non Design	0	15	1	1	1	0	0	0
% 2-wire Loop-Non Design	0%	83%	6%	6%	6%	0%	0%	0%
2-wire Loop w/ INP – Design	0	0	0	0	0	0	0	0
% 2-wire Loop w/ INP – Design	0%	0%	0%	0%	0%	0%	0%	0%
2-wire Loop w/ INP – Non-Design	0	3	0	0	0	0	0	0
% 2-wire Loop w/ INP – Non Des.	0%	100%	0%	0%	0%	0%	0%	0%
2-wire Loop w/ LNP – Design	0	0	0	0	0	0	0	0
% 2-wire Loop w/ LNP – Design	0%	0%	0%	0%	0%	0%	0%	0%
2-wire Loop w/ LNP – Non-Design	0	0	0	0	0	0	0	0
% 2-wire Loop w/ LNP – Non-Des.	0%	0%	0%	0%	0%	0%	0%	0%
INP (Standalone)	0	0	1	0	0	0	0	0
% INP (Standalone)	0%	0%	100%	0%	0%	0%	0%	0%
LNP (Standalone)	0	0	0	0	0	0	0	0
% LNP (Standalone)	0%	0%	0%	0%	0%	0%	0%	0%
Switch Ports	2	2	0	1	0	0	0	0
% Switch Ports	40%	40%	0%	20%	0%	0%	0%	0%
Loop-Port Combination	6	14	2	0	0	0	0	3
% Loop-Port Combination	24%	56%	8%	0%	0%	0%	0%	12%
TOTALS	**13**	**53**	**5**	**4**	**2**	**0**	**0**	**4**
	16%	**65%**	**6%**	**5%**	**2%**	**0%**	**0%**	**5%**
Partially Mechanized								
Service Type					**< 24 hrs**	**24-48 hrs**	**48-72 hrs**	**>72 hrs**
2-wire Loop-Design					31	10	0	0
% 2-wire Loop-Design					76%	24%	0%	0%
2-wire Loop-Non Design					23	16	1	1
% 2-wire Loop-Non Design					56%	39%	2%	2%
2-wire Loop w/ INP – Design					2	2	0	0
% 2-wire Loop w/ INP – Design					50%	50%	0%	0%
2-wire Loop w/ INP – Non-Design					7	5	0	0
% 2-wire Loop w/ INP – Non Des.					58%	42%	0%	0%
2-wire Loop w/ LNP – Design					0	0	0	0

Clarification Timeliness Detail - Disaggregated View								
% 2-wire Loop w/ LNP - Design					0%	0%	0%	0%
2-wire Loop w/ LNP - Non-Design					0	0	0	0
% 2-wire Loop w/ LNP - Non-Des.					0%	0%	0%	0%
INP (Standalone)					2	0	0	1
% INP (Standalone)					67%	0%	0%	33%
LNP (Standalone)					0	0	0	0
% LNP (Standalone)					0%	0%	0%	0%
Switch Ports					11	5	2	2
% Switch Ports					55%	25%	10%	10%
Loop-Port Combination					25	12	2	0
% Loop-Port Combination					64%	31%	5%	0%
TOTALS					101	50	5	4
					63%	31%	3%	3%

Notes:
(Notes apply to Table V-1.5, Part 1, 2, and 3)

1. Initial test results include data from November 9, 1999 through May 31, 2000.
2. 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.
3. 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.
4. 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
5. On 2/7/00 BellSouth completed a systems and process fix to address timeliness of response issues. In addition to aggregate results for the entire test period, results for the period beginning after the implementation fix are also presented.
6. Timeliness information pertaining to the LNP service requests for which BellSouth was unable to provide actual FM/PM data is not included in the above table.
7. Calculations are based on business days (i.e., weekends and BellSouth holidays are not counted).
8. The disaggregated breakdown of Clarification timeliness reflects the GPSC's disaggregation levels outlined in the June 6, 2000 - test-specific Service Quality Measurements.
9. Totals may not equal 100% due to rounding.

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

Clarification Timeliness Detail - 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	76	39	2	0	1	0	0	0
% FM	64%	33%	2%	0%	1%	0%	0%	0%
Partially Mechanized								
					<24hrs	**24-48 hrs**	**48-72 hrs**	**>72 hrs**
PM					62	7	0	1
% PM					89%	10%	0%	1%

Table V-1.6, Part2: Error/Clarification Timeliness: Disaggregated View – First 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
2-wire Loop Design	15	10	0	0	0	0	0	0
% 2-wire Loop-Design	60%	40%	0%	0%	0%	0%	0%	0%
2-wire Loop-Non Design	13	7	0	0	0	0	0	0
% 2-wire Loop-Non Design	65%	35%	0%	0%	0%	0%	0%	0%
2-wire Loop w/ INP - Design	0	0	0	0	0	0	0	0
% 2-wire Loop w/ INP - Design	0%	0%	0%	0%	0%	0%	0%	0%
2-wire Loop w/ INP - Non Design	0	0	0	0	0	0	0	0
% 2-wire Loop w/ INP - Non Design	0%	0%	0%	0%	0%	0%	0%	0%
2-wire Loop w/ LNP - Design	8	3	2	0	0	0	0	0
% 2-wire Loop w/ LNP - Design	62%	23%	15%	0%	0%	0%	0%	0%
2-wire Loop w/ LNP - Non Design	5	2	0	0	0	0	0	0
% 2-wire Loop w/ LNP - Non Design	71%	29%	0%	0%	0%	0%	0%	0%
INP (Standalone)	0	0	0	0	0	0	0	0
% INP (Standalone)	0%	0%	0%	0%	0%	0%	0%	0%
LNP (Standalone)	0	0	0	0	0	0	0	0
% LNP (Standalone)	0%	0%	0%	0%	0%	0%	0%	0%
Switch Ports	0	2	0	0	1	0	0	0
% Switch Ports	0%	67%	0%	0%	33%	0%	0%	0%
Loop Port Combination	8	3	0	0	0	0	0	0
% Loop Port Combination	73%	27%	0%	0%	0%	0%	0%	0%
DL	27	12	0	0	0	0	0	0
% DL	69%	31%	0%	0%	0%	0%	0%	0%
TOTALS	76	39	2	0	1	0	0	0
	64%	33%	2%	0%	1%	0%	0%	0%
Partially Mechanized								
Service Type					<24 hrs	24-48 hrs	48-72 hrs	>72 hrs
2-wire Loop Design					23	0	0	0
% 2-wire Loop-Design					100%	0%	0%	0%
2-wire Loop-Non Design					6	0	0	0
% 2-wire Loop-Non Design					100%	0%	0%	0%
2-wire Loop w/ INP - Design					0	0	0	0
% 2-wire Loop w/ INP - Design					0%	0%	0%	0%

2-wire Loop w/ INP - Non Design					0	0	0	0
% 2-wire Loop w/ INP - Non Design					0%	0%	0%	0%
2-wire Loop w/ LNP - Design					5	4	0	0
% 2-wire Loop w/ LNP - Design					56%	44%	0%	0%
2-wire Loop w/ LNP - Non Design					3	2	0	0
% 2-wire Loop w/ LNP - Non Design					60%	40%	0%	0%
INP (Standalone)					0	0	0	0
% INP (Standalone)					0%	0%	0%	0%
LNP (Standalone)					1	0	0	0
% LNP (Standalone)					100%	0%	0%	0%
Switch Ports					5	0	0	0
% Switch Ports					100%	0%	0%	0%
Loop Port Combination					7	0	0	0
% Loop Port Combination					100%	0%	0%	0%
DL					12	1	0	1
% DL					86%	7%	0%	7%
TOTALS					62	7	0	1
					89%	10%	0%	1%

Notes:
(Notes apply to Table V-1.6, Part 1 and 2)

1. Re-test results reflect data from August 25 through November 15, 2000.
2. Directory Listing disaggregation is provided as supplemental information, to maintain consistency in total counts between Part 1 and Part 2. This category is not required by the GPSC's requested levels of disaggregation.
3. Results are based on actual Fully Mechanized (FM) and partially Mechanized (PM) performance of LSRs submitted by KCI. KCI determined that a ERR/CLR was FM or 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.
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 V-1.6, Part 3: BellSouth - KCI Timestamp Analysis for Error/Clarification Timeliness: First Re-test Data

Description	Average Interval	Range
Difference between KCI timestamp for "LSR Sent" and BellSouth timestamp for "LSR Received"	17 minutes	5 to 48 minutes
Difference between KCI timestamp for "Error Received" and BellSouth timestamp for "Error Sent"	7 minutes	0 to 144 minutes

FM Error Timeliness Results Using BellSouth Timestamps			FM Error Timeliness Results Using KCI Timestamps		
Total Responses	Responses On Time	% On Time (< 1 hr)	Total Responses	Responses On Time	% On Time (<1 hr)
114	109	96%	118	76	64%

Notes:

1. KCI "LSR Sent" and "Error Received" timestamps reflect the point at which the transaction was sent from, or received by, the KCI/HP EDI Interface Gateway.
2. BellSouth "LSR Received" and "Error Sent" timestamps reflect the time at which the inbound LSR or outbound ERR/CLR transaction was processed by the BellSouth EDI translator.
3. Interval calculations were performed on those transactions categorized as "late" based on KCI timestamp analysis.
4. Total responses reviewed using KCI timestamps exceeds total responses reviewed using BellSouth timestamps due to the inclusion of several additional responses that were not classified as Fully Mechanized at the time of the initial BellSouth review.

Table V-1.7, Part 1: Error/Clarification Timeliness, Summary View – Second Re-test Data

Clarification Timeliness Detail – 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	62	4	1	0	4	3	0	0
% FM	84%	5%	1%	0%	5%	4%	0%	0%

Table V-1.7, Part 2: Error/Clarification Timeliness: Disaggregated View – Second 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
2-wire Loop Design	4	0	0	0	0	0	0	0
% 2-wire Loop-Design	100%	0%	0%	0%	0%	0%	0%	0%
2-wire Loop-Non Design	10	0	0	0	0	0	0	0
% 2-wire Loop-Non Design	100%	0%	0%	0%	0%	0%	0%	0%
2-wire Loop w/ LNP - Design	7	1	1	0	1	0	0	0
% 2-wire Loop w/ LNP - Design	70%	10%	10%	0%	10%	0%	0%	0%
2-wire Loop w/ LNP - Non Design	10	0	0	0	3	3	0	0
% 2-wire Loop w/ LNP - Non Design	63%	0%	0%	0%	19%	19%	0%	0%
Loop Port Combination	31	3	0	0	0	0	0	0
% Loop Port Combination	91%	9%	0%	0%	0%	0%	0%	0%
TOTALS	62	4	1	0	4	3	0	0
	84%	5%	1%	0%	5%	4%	0%	0%

Notes:
(Notes apply to Table V-1.7, 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 V-1.8, Part 1: Firm Order Confirmation Timeliness, Summary View – Initial Test Data

Firm Order Confirmation Timeliness Detail - Aggregate						
Flow-Through						
	<3 hrs	3-24 hrs	24-36 hrs	36-48 hrs	48-72 hrs	>72 hrs
FT	45	8	2	1	1	1
% FT	78%	14%	3%	2%	2%	2%
Non-Flow-Through						
	<3 hrs	3-24 hrs	24-36 hrs	36-48 hrs	48-72 hrs	>72 hrs
NFT	27	90	34	16	3	8
% NFT	15%	51%	19%	9%	2%	5%

Table V-1.8, Part 2: Firm Order Confirmation Timeliness, On/After 2/8/00- Initial Test Data

Firm Order Confirmation Timeliness Detail - On/After 2/8/00						
Flow-Through						
	<3 hrs	3-24 hrs	24-36 hrs	36-48 hrs	48-72 hrs	>72 hrs
FT	35	6	0	1	0	0
% FT	83%	14%	0%	2%	0%	0%
Non-Flow-Through						
	<3 hrs	3-24 hrs	24-36 hrs	36-48 hrs	48-72 hrs	>72 hrs
NFT	24	83	28	14	1	6
% NFT	15%	53%	18%	9%	0%	4%

Table V-1.8, Part 3: Firm Order Confirmation Timeliness, Disaggregated View- Initial 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
2-wire Loop-Design	0	0	0	0	0	0
% 2-wire Loop-Design	0%	0%	0%	0%	0%	0%
2-wire Loop-Non Design	3	1	0	0	0	0
% 2-wire Loop-Non Design	75%	25%	0%	0%	0%	0%
2-wire Loop w/ INP – Design	0	0	0	0	0	0
% 2-wire Loop w/ INP – Design	0%	0%	0%	0%	0%	0%
2-wire Loop w/ INP – Non-Design	1	0	0	0	1	0
% 2-wire Loop w/ INP – Non Des.	50%	0%	0%	0%	50%	0%
2-wire Loop w/ LNP – Design	0	1	0	1	0	0
% 2-wire Loop w/ LNP – Design	0%	50%	0%	50%	0%	0%
2-wire Loop w/ LNP – Non-Design	0	0	0	0	0	0
% 2-wire Loop w/ LNP – Non-Des.	0%	0%	0%	0%	0%	0%
INP (Standalone)	2	0	0	0	0	0
% INP (Standalone)	100%	0%	0%	0%	0%	0%
LNP (Standalone)	0	0	0	0	0	0
% LNP (Standalone)	0%	0%	0%	0%	0%	0%
Switch Ports	5	2	2	0	0	1
% Switch Ports	50%	20%	20%	0%	0%	10%
Loop-Port Combination	28	3	0	0	0	0
% Loop-Port Combination	90.3%	9.7%	0%	0%	0%	0%
TOTALS	39	7	2	1	1	1
	77%	14%	4%	2%	2%	2%
Non-Flow Through						
Service Type	<3 hrs	3-24 hrs	24-36 hrs	36-48 hrs	48-72 hrs	>72 hrs
2-wire Loop-Design	2	22	6	1	0	1
% 2-wire Loop-Design	63%	69%	19%	3%	0%	3%
2-wire Loop-Non Design	2	15	5	1	0	1
% 2-wire Loop-Non Design	8%	63%	21%	4%	0%	4%
2-wire Loop w/ INP – Design	0	1	0	1	0	0
% 2-wire Loop w/ INP – Design	0%	50%	0%	50%	0%	0%
2-wire Loop w/ INP – Non-Design	1	5	4	1	0	1
% 2-wire Loop w/ INP – Non Des.	8%	42%	33%	8%	0%	8%

Firm Order Confirmation Timeliness Detail - Disaggregated View						
2-wire Loop w/ LNP - Design	0	3	0	0	0	0
% 2-wire Loop w/ LNP - Design	0%	100%	0%	0%	0%	0%
2-wire Loop w/ LNP - Non-Design	1	6	1	0	2	0
% 2-wire Loop w/ LNP - Non-Design	10%	60%	10%	0%	20%	0%
INP (Standalone)	0	3	1	1	0	0
% INP (Standalone)	0%	60%	20%	20%	0%	0%
LNP (Standalone)	1	0	1	0	0	1
% LNP (Standalone)	33%	0%	33%	0%	0%	33%
Switch Ports	5	6	6	3	1	2
% Switch Ports	22%	26%	26%	13%	4%	9%
Loop-Port Combination	10	15	8	6	2	1
% Loop-Port Combination	24%	36%	19%	14%	5%	2%
TOTALS	22	76	32	14	5	7
	14%	49%	21%	9%	3%	5%

Notes:
(Notes apply to Table V-1.8, Part 1, 2, and 3)

1. Initial test results reflect data from November 9, 1999 through May 31, 2000.
2. 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.
3. On 2/7/00 BellSouth completed a systems and process fix to address timeliness of response issues. In addition to aggregate results for the entire test period, results for the period beginning after the implementation fix are also presented.
4. Timeliness information pertaining to the LNP service requests for which BellSouth was unable to provide actual FT/NFT data is not included in the above table.
5. Calculations are based on business days (i.e., weekends and BellSouth holidays are not counted).
6. The disaggregated breakdown of FOC timeliness reflects the GPSC's disaggregation levels outlined in the June 6, 2000 - test-specific Service Quality Measurements.
7. Totals may not equal 100% due to rounding.

Table V-1.9, Part 1: Firm Order Confirmation Timeliness, Summary View - First Re-Test Data

Firm Order Confirmation Timeliness Detail						
Flow-Through						
	<3 hrs	3-24 hrs	24-36 hrs	36-48 hrs	48-72 hrs	>72 hrs
FT	31	5	1	0	0	1
% FT	82%	13%	3%	0%	0%	3%
Non-Flow-Through						
	<3 hrs	3-24 hrs	24-36 hrs	36-48 hrs	48-72 hrs	>72 hrs
NFT	13	55	5	0	1	1
% NFT	17%	73%	7%	0%	1%	1%
Discrepancy						
	<3 hrs	3-24 hrs	24-36 hrs	36-48 hrs	48-72 hrs	>72 hrs
Discrepancy	14	21	5	0	0	0
Discrepancy %	35%	53%	13%	0%	0%	0%

Table V-1.9, Part 2: Firm Order Confirmation Timeliness, Disaggregated View – First 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
2-wire Loop-Design	3	1	0	0	0	0
% 2-wire Loop-Design	75%	25%	0%	0%	0%	0%
2-wire Loop-Non Design	5	1	1	0	0	0
% 2-wire Loop-Non Design	71%	14%	14%	0%	0%	0%
2-wire Loop w/ INP – Design	0	0	0	0	0	0
% 2-wire Loop w/ INP – Design	0%	0%	0%	0%	0%	0%
2-wire Loop w/ INP – Non-Design	0	0	0	0	0	0
% 2-wire Loop w/ INP – Non Des.	0%	0%	0%	0%	0%	0%
2-wire Loop w/ LNP – Design	2	1	0	0	0	0
% 2-wire Loop w/ LNP – Design	67%	33%	0%	0%	0%	0%
2-wire Loop w/ LNP – Non-Design	1	1	0	0	0	0
% 2-wire Loop w/ LNP – Non-Des.	50%	50%	0%	0%	0%	0%
INP (Standalone)	0	0	0	0	0	0
% INP (Standalone)	0%	0%	0%	0%	0%	0%
LNP (Standalone)	0	0	0	0	0	0
% LNP (Standalone)	0%	0%	0%	0%	0%	0%
Switch Ports	1	0	0	0	0	0
% Switch Ports	100%	0%	0%	0%	0%	0%
Loop-Port Combination	8	1	0	0	0	0
% Loop-Port Combination	89%	11%	0%	0%	0%	0%
Directory Listing	12	0	0	0	0	1
% Directory Listing	92%	0%	0%	0%	0%	8%
TOTALS	**31**	**5**	**1**	**0**	**0**	**1**
	82%	**13%**	**3%**	**0%**	**0%**	**3%**
Non-Flow-Through						
Service Type	<3 hrs	3-24 hrs	24-36 hrs	36-48 hrs	48-72 hrs	>72 hrs
2-wire Loop-Design	3	19	1	0	0	0
% 2-wire Loop-Design	13%	83%	4%	0%	0%	0%
2-wire Loop-Non Design	3	5	0	0	1	0
% 2-wire Loop-Non Design	33%	56%	0%	0%	11%	0%
2-wire Loop w/ INP – Design	0	0	0	0	0	0
% 2-wire Loop w/ INP – Design	0%	0%	0%	0%	0%	0%

Firm Order Confirmation Timeliness Detail - Disaggregated View						
2-wire Loop w/ INP - Non-Design	0	0	0	0	0	0
% 2-wire Loop w/ INP - Non Des.	0%	0%	0%	0%	0%	0%
2-wire Loop w/ LNP - Design	0	0	0	0	0	0
% 2-wire Loop w/ LNP - Design	0%	0%	0%	0%	0%	0%
2-wire Loop w/ LNP - Non-Design	0	0	0	0	0	0
% 2-wire Loop w/ LNP - Non-Design	0%	0%	0%	0%	0%	0%
INP (Standalone)	0	0	0	0	0	0
% INP (Standalone)	0%	0%	0%	0%	0%	0%
LNP (Standalone)	0	0	0	0	0	0
% LNP (Standalone)	0%	0%	0%	0%	0%	0%
Switch Ports	2	12	2	0	0	0
% Switch Ports	13%	75%	13%	0%	0%	0%
Loop-Port Combination	0	11	1	0	0	0
% Loop-Port Combination	0%	92%	8%	0%	0%	0%
Directory Listing	5	8	1	0	0	0
% Directory Listing	36%	57%	7%	0%	0%	0%
TOTALS	13	55	5	0	1	1
	17%	73%	7%	0%	1%	1%

Discrepancy						
Service Type	<3 hrs	3-24 hrs	24-36 hrs	36-48 hrs	48-72 hrs	>72 hrs
2-wire Loop-Design	0	0	0	0	0	0
% 2-wire Loop-Design	0%	0%	0%	0%	0%	0%
2-wire Loop-Non Design	2	0	0	0	0	0
% 2-wire Loop-Non Design	100%	0%	0%	0%	0%	0%
2-wire Loop w/ INP - Design	0	0	0	0	0	0
% 2-wire Loop w/ INP - Design	0%	0%	0%	0%	0%	0%
2-wire Loop w/ INP - Non-Design	0	0	0	0	0	0
% 2-wire Loop w/ INP - Non Des.	0%	0%	0%	0%	0%	0%
2-wire Loop w/ LNP - Design	3	5	1	0	0	0
% 2-wire Loop w/ LNP - Design	33%	56%	11%	0%	0%	0%
2-wire Loop w/ LNP - Non-Design	2	8	2	0	0	0
% 2-wire Loop w/ LNP - Non-Des.	17%	67%	17%	0%	0%	0%
INP (Standalone)	0	0	0	0	0	0
% INP (Standalone)	0%	0%	0%	0%	0%	0%
LNP (Standalone)	4	8	2	0	0	0
% LNP (Standalone)	29%	57%	14%	0%	0%	0%
Switch Ports	1	0	0	0	0	0

Firm Order Confirmation Timeliness Detail – Disaggregated View						
% Switch Ports	100%	0%	0%	0%	0%	0%
Loop-Port Combination	0	0	0	0	0	0
% Loop-Port Combination	0%	0%	0%	0%	0%	0%
Directory Listing	3	0	0	0	0	0
% Directory Listing	100%	0%	0%	0%	0%	0%
TOTALS	14	21	5	0	0	0
	35%	53%	13%	0%	0%	0%

Notes:
(Notes apply to Table V-1.9, Part 1 and 2)

1. First re-test results reflect data from August 25 through November 15, 2000.
2. Directory Listing disaggregation is provided as supplemental information, to maintain consistency in total counts between Part 1 and Part 2. This category is not required by the GPSC's requested levels of disaggregation.
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. 'Discrepancies' refer to those orders for which KCI was unable to obtain actual FT/NFT classifications from BellSouth.
5. Calculations are based on business days (i.e., weekends and BellSouth holidays are not counted).
6. The disaggregated breakdown of FOC timeliness reflects the GPSC's disaggregation levels outlined in the June 6, 2000 - test-specific Service Quality Measurements.
7. Totals may not equal 100% due to rounding.

Table V-1.10, Part 1: Firm Order Confirmation Timeliness, Summary View - Second Re-Test Data

Firm Order Confirmation Timeliness Detail - Summary						
Flow-Through						
	<3 hrs	3-24 hrs	24-36 hrs	36-48 hrs	48-72 hrs	>72 hrs
FT	50	0	0	0	0	0
% FT	100%	0%	0%	0%	0%	0%

Table V-1.10, Part 2: Firm Order Confirmation Timeliness, Disaggregated View - Second 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
2-wire Loop Design	4	0	0	0	0	0
% 2-wire Loop-Design	100%	0%	0%	0%	0%	0%
2-wire Loop-Non Design	0	0	0	0	0	0
% 2-wire Loop-Non Design	0%	0%	0%	0%	0%	0%
2-wire Loop w/ LNP - Design	1	0	0	0	0	0
% 2-wire Loop w/ LNP - Design	100%	0%	0%	0%	0%	0%
2-wire Loop w/ LNP - Non Design	9	0	0	0	0	0
% 2-wire Loop w/ LNP - Non Design	100%	0%	0%	0%	0%	0%
Loop Port Combination	36	0	0	0	0	0
% Loop Port Combination	100%	0%	0%	0%	0%	0%
TOTALS	50	0	0	0	0	0
	100%	0%	0%	0%	0%	0%

Notes:
(Notes apply to Table V-1.10, Parts 1 and 2)

1. Second 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 V-1.11, Part 1: Completion Notice Due Date (CN DD) vs. Completion Notification Delivery Date - Initial Test Data

	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	126	76%	28	22%	85%	84	67%	70%
CN Date Received = CN DD + 1 day	16	10%	2	13%	6%	14	88%	12%
CN Date Received = CN DD + 2 days	11	7%	2	18%	6%	9	82%	8%
CN Date Received = CN DD + 3-5 days	9	5%	1	11%	3%	8	89%	7%
CN Date Received = CN DD + >=6 days	4	2%	0	0%	0%	4	100%	3%
TOTAL	**166**	**100%**	**33**		**100%**	**119**		**100%**

Notes:

1. Initial test results reflect data from November 9, 2000 through May 31, 2000.
2. Flow-Through = The number of CNs received within the specified timeframe that were Flow -Through LSRs.
3. % Flow-Through = The percentage of CNs received within the specified timeframe that were Flow-Through LSRs.
4. % of Total Flow Through = The percentage of total Flow-Through LSRs that received CNs within the specified timeframe.
5. Non-Flow-Through = The number of CNs received within the specified timeframe that were Non-Flow-Through LSRs.
6. % Non-Flow-Through = The percentage of CNs received within the specified timeframe that were Non-Flow-Through LSRs.
7. % of Total Non-Flow Through = The percentage of total Non-Flow-Through LSRs that received CNs within the specified timeframe.
8. 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.
9. CN Timeliness information pertaining to the LNP service requests for which BellSouth was unable to provide actual FT/NFT data *is* included in the above table. However, the FT-specific detail is not

included. As a result, the Total CNs Received will not equal the sum of FT Received and NFT Received columns.

10. Totals may not equal 100% due to rounding.
11. Calculations are based on business days (i.e., weekends and BellSouth holidays are not counted).

Table V-1.11, Part 2: Completion Notice Due Date (CN DD) vs. Completion Notification Delivery Date - Initial Test Data

	TOTAL		Product Delivery Analysis														
	CNs Received	% of Total CNs	No. of Loops[1]	Loops as a % of CNs Received[2]	% of Total Loops3	No. of Ports[1]	Ports as a % of CNs Received[2]	% of Total Ports[3]	No. Of Combos[1]	Combos as a % of CNs Received[2]	% of Total Combos[3]	No. NP[1]	NP as a % of CNs Received[2]	% of Total NP[3]	No. DL[1]	NP as a % of CNs Received[2]	% of Total DL[3]
CN Date Received = CN DD	126	76%	32	25%	80%	18	14%	67%	36	29%	78%	17	13%	59%	23	18%	96%
CN Date Received = CN DD + 1 day	16	10%	6	38%	15%	1	6%	4%	5	31%	11%	4	25%	14%	0	0%	0%
CN Date Received = CN DD + 2 days	11	7%	0	0%	0%	3	27%	11%	1	9%	2%	6	55%	21%	1	9%	4%
CN Date Received = CN DD + 3-5 days	9	5%	1	11%	3%	5	56%	19%	2	22%	4%	1	11%	3%	0	0%	0%
CN Date Received = CN DD + >=6 days	4	2%	1	25%	3%	0	0%	0%	2	50%	4%	1	25%	3%	0	0%	0%
TOTAL	166	100%	40		100 %	27		100%	46		100 %	29		100 %	24		100%

Notes:

1. The number of CNs by product type (Loop, Port, Port-Loop Combo, Number Portability, Directory Listing) that received LSRs within the specified timeframe.
2. The percentage of CNs by product type (Loop, Port, Port-Loop Combo, Number Portability, Directory Listing) that received LSRs within the specified timeframe.
3. The percentage of Total LSRs by product type (Loop, Port, Port-Loop Combo, Number Portability, Directory Listing) that were received within the specified timeframe.
4. Calculations are based on business days (i.e. weekends and BellSouth holidays are not counted).
5. Loop with Number Portability LSRs are included in the NP column.
6. Totals may not equal 100% due to rounding.

Table V-1.12, Part 1: Completion Notice Due Date (CN DD) vs. Completion Notification Delivery Date - Re-test Data

	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	48	71%	14	29%	78%	34	71%	68%
CN Date Received = CN DD + 1 day	11	16%	2	18%	11%	9	82%	18%
CN Date Received = CN DD + 2 days	2	3%	1	50%	6%	1	50%	2%
CN Date Received = CN DD + 3-5 days	3	4%	1	33%	6%	2	67%	4%
CN Date Received = CN DD + >=6 days	4	6%	0	0%	0%	4	100%	8%
TOTAL	68	100%	18		100%	50		100%

Notes:

1. Re-test results reflect data from August 25 through November 15, 2000.
2. Flow-Through = The number of CNs received on within the specified timeframe that were Flow-Through LSRs.
3. % Flow-Through = The percentage of CNs received within the specified timeframe that were Flow-Through LSRs.
4. % of Total Flow-Through = The percentage of total Flow-Through LSRs that received CNs within the specified timeframe.
5. Non-Flow-Through = The number of CNs received within the specified timeframe that were Non-Flow-Through LSRs. Note: 2 CNs had no actual Non-Flow-Through indicator. Since these orders were EXPECTED to be Non-Flow Through, they were included in the Non-Flow-Through counts.
6. % Non-Flow-Through = The percentage of CNs received within the specified timeframe that were Non Flow Through LSRs.
7. % of Total Non-Flow-Through = The percentage of total Non-Flow-Through LSRs that received CNs within the specified timeframe.
8. 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 BLS 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.
9. CN Timeliness information pertaining to the LNP service requests for which BellSouth was unable to provide actual FT/NFT data *is* included in the above table. However, the FT-specific detail is not included. As a result, the Total CNs Received will not equal the sum of FT Received and NFT Received columns.
10. Calculations are based on business days (i.e., weekends and BellSouth holidays are not counted).
11. Totals may not equal 100% due to rounding.

Table V-1.12, Part 2: Completion Notice Due Date (CN DD) vs. Completion Notification Delivery Date

	TOTAL		Product Delivery Analysis														
	CNs Received	% of Total CNs	No. of Loops[1]	Loops as a % of CNs Received[2]	% of Total Loops[3]	No. of Ports[1]	Ports as a % of CNs Received[2]	% of Total Ports[3]	No. Of Combos[1]	Combos as a % of CNs Received[2]	% of Total Combos[3]	No. NPs[1]	NPs as a % of CNs Received[2]	% of Total NPs[3]	No. DLs[1]	DLs as a % of CNs Received[2]	% of Total DLs[3]
CN Date Received = CN DD	48	71%	8	17%	40%	9	19%	69%	12	25%	75%	10	21%	100%	9	19%	100%
CN Date Received = CN DD + 1 day	11	16%	8	73%	40%	2	18%	15%	1	9%	6%	0	0%	0%	0	0%	0%
CN Date Received = CN DD + 2 days	2	3%	2	100%	10%	0	0%	0%	0	0%	0%	0	0%	0%	0	0%	0%
CN Date Received = CN DD + 3-5 days	3	4%	1	33%	5%	1	33%	8%	1	33%	6%	0	0%	0%	0	0%	0%
CN Date Received = CN DD + >=6 days	4	6%	1	25%	5%	1	25%	8%	2	50%	13%	0	0%	0%	0	0%	0%
TOTAL	68	100%	20		100%	13		100%	16		100%	10		100%	9		100%

Notes:

1. The number of CNs by product type (Loop, Port, Port-Loop Combo, Number Portability, Directory Listing) that received LSRs within the specified timeframe.
2. The percentage of CNs by product type (Loop, Port, Port-Loop Combo, Number Portability, Directory Listing) that received LSRs within the specified timeframe.
3. The percentage of Total LSRs by product type (Loop, Port, Port-Loop Combo, Number Portability, Directory Listing) that were received within the specified timeframe.
4. Calculations are based on business days (i.e. weekends and BellSouth holidays are not counted).
5. Loop with Number Portability LSRs are included in the NP column.
6. Totals may not equal 100% due to rounding.

Table V-1.13: Desired Due Date from KCI's Local Service Request (LSR DDD) vs. Committed Due Date from BLS's Firm Order Confirmation (FOC DD) - Initial Test Data

	Total		Flow-Through Analysis				Delivery Method Analysis									
	Number	Percent	FT	% FT	NFT	%NFT	Loops	% Loops	Ports	% Ports	Port-Loop Combo	% Port-Loop Combo	NP	%NP	DL	% DL
LSR DDD = FOC DD	205	88%	34	81%	151	87%	48	92%	29	91%	51	79%	51	90%	26	90%
LSR DDD not = FOC DD	29	12%	8	19%	22	13%	4	8%	3	9%	14	22%	6	11%	3	10%
Total	**234**	**100%**	**42**	**100%**	**173**	**100%**	**52**	**100%**	**32**	**100%**	**65**	**100%**	**57**	**100%**	**29**	**100%**
Distribution of Earlier Due Dates																
DD = DDD - 1 day	2	17%	0	0%	2	17%	1	33%	0	0%	0	0%	1	50%	0	0%
DD = DDD - 2 days	3	25%	0	0%	3	25%	0	0%	1	50%	1	50%	0	0%	1	33%
DD = DDD - 3-5 days	5	42%	0	0%	5	42%	1	33%	1	50%	1	50%	0	0%	2	67%
DD = DDD - >=6 days	2	17%	0	0%	2	17%	1	33%	0	0%	0	0%	1	50%	0	0%
Total Earlier (DD before DDD)	**12**	**5%**	**0**	**0%**	**12**	**7%**	**3**	**6%**	**2**	**6%**	**2**	**3%**	**2**	**4%**	**3**	**10%**
Distribution of Later Due Dates																
DD = DDD + 1 day	7	41%	1	13%	6	60%	1	100%	1	100%	3	25%	2	4%	0	0%
DD = DDD + 2 days	6	35%	4	50%	3	30%	0	0%	0	0%	5	42%	1	2%	0	0%
DD = DDD + 3-5 days	3	18%	2	25%	1	10%	0	0%	0	0%	3	25%	0	0%	0	0%
DD = DDD + >=6 days	1	6%	1	13%	0	0%	0	0%	0	0%	1	8%	0	0%	0	0%
Total Later (DD after DDD)	**17**	**7%**	**8**	**19%**	**10**	**6%**	**1**	**2%**	**1**	**3%**	**12**	**19%**	**3**	**5%**	**0**	**0%**

Notes:

1. Initial test results reflect data from November 9, 1999 through May 31, 2000.
2. 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.
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. Totals may not equal 100% due to rounding.

Table V-1.14: Desired Due Date from KCI's Local Service Request (LSR DDD) vs. Committed Due Date from BLS's Firm Order Confirmation (FOC DD) – Re-test Data

	Total		Flow-Through Analysis				Delivery Method Analysis									
	Number	Percent	FT	% FT	NFT	% NFT	Loops	% Loops	Ports	% Ports	Port - Loop Combo	% Port - Loop Combo	NP	% NP	DL	% DL
LSR DDD = FOC DD	128	93%	35	97%	93	91%	38	95%	9	60%	17	89%	38	100%	26	100%
LSR DDD not = FOC DD	10	7%	1	3%	9	9%	2	5%	6	40%	2	11%	0	0%	0	0%
Total	**138**	**100%**	**36**	**100%**	**102**	**100%**	**40**	**100%**	**15**	**100%**	**19**	**100%**	**38**	**100%**	**26**	**100%**
Distribution of Earlier Due Dates																
DD = DDD - 1 day	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
DD = DDD - 2 days	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
DD = DDD - 3-5 days	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
DD = DDD - >=6 days	1	100%	0	0%	1	100%	1	100%	0	0%	0	0%	0	0%	0	0%
Total Earlier (DD before DDD)	1	1%	0	0%	1	1%	1	3%	0	0%	0	0%	0	0%	0	0%
Distribution of Later Due Dates																
DD = DDD + 1 day	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
DD = DDD + 2 days	3	38%	0	0%	3	38%	0	0%	3	50%	0	0%	0	0%	0	0%
DD = DDD + 3-5 days	5	63%	0	0%	5	63%	1	100%	3	50%	1	100%	0	0%	0	0%
DD = DDD + >=6 days	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Total Later (DD after DDD)	8	6%	0	0%	8	8%	1	3%	6	40%	1	5%	0	0%	0	0%

Notes:

1. Re-test results reflect data from August 25 through November 14, 2000.

2. 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.
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. For those cases where KCI was unable to obtain Actual Flow-Through Indicators from BellSouth, KCI placed the orders in a FT/NFT category based on their *expected* FT status.
5. Totals may not equal 100% due to rounding.

Table V-1.15: Jeopardy Notification Timeliness Detail

Jeopardy Notification Detail - Disaggregated View[60] Jeopardy Date Received versus FOC DD						
Service Type	>48 hrs before DD	24-48 hrs before DD	Same day as DD	24 hrs after DD	24-48 hrs after DD	TOTAL
UNE Loop-Port Combination	5	0	0	0	0	2
% Loop-Port Combination	56%	0%	0%	0%	0%	100%
UNE 2-wire Loop with Number Portability	0	0	0	0	0	0
% 2-wire Loop with NP	0%	0%	0%	0%	0%	0%
UNE 2-wire Loop without Number portability	4	0	0	0	0	0
% 2-wire Loop without NP	44%	0%	0%	0%	0%	100%
UNE Other	0	0	0	0	0	0
% UNE Other	0%	0%	0%	0%	0%	0%
TOTAL	9	0	0	0	0	0
	100%	0%	0%	0%	0%	0%

Notes:

1. Calculations are based on business days (i.e., weekends and BellSouth holidays are not counted).
2. KCI has included the following service order types in the "UNE Other" category: UNE Port; UNE Stand Alone Directory Listing; and UNE Stand Alone Number Portability.

[60] Disaggregation levels in the above table reflect the GPSC-approved 6/6/00 Service Quality Measurements (SQMs) for use in this test.

Table V-1.16: Pre-Order - Order Integration Test Results

Pre-Order Response			Order Form		Comments
Form Name	**Field Name**	**Format**	**Field Name**	**Format**	
SAQ					
1.	USOC	5 A/N Characters	FEATURE	3-6 A/N Characters	The pre-order response returns the USOC data in the correct format to populate an order form. However, the corresponding field name in the PS order form is FEATURE.
2.	CLLI	11 A/N Characters	LST	11 A/N Characters	The pre-order response returns the CLLI data in the correct format to populate an order form. However, the corresponding field name in the LSR order form is LST.
3.	CIC	4 Numeric Characters	PIC/LPIC	4 A/N Characters	The pre-order response returns the PIC/LPIC data in the correct format to populate an order form. However, the RS order form has two fields, PIC and LPIC. There is no notation on the pre-order form indicating whether the number returned is the PIC or LPIC.
AVQ					
1.	HOUSE-NUM THOROUGHFARE STREET-NAME 1 STREET-SUFFIX	13 A/N Characters 35 A/N Characters 44 A/N Characters 4 A/N Characters	EU-STREET 1	35 A/N Characters	The order field EU-STREET 1 is constructed by concatenating the four fields from the pre-order query. The combined length of the four pre-order fields could exceed the maximum length of the order field.
2.	CITY	32 A/N Characters	EU-CITY	25 A/N Characters	The pre-order response returns the data in the correct format. However, the field name is different on the order form. The pre-order response could exceed the size limitation of the EU-CITY field on the order form.

Pre-Order Response			Order Form		Comments
Form Name	Field Name	Format	Field Name	Format	
3.	STATE	2 Alpha Characters	EU-STATE	2 Alpha Characters	The pre-order response returns the data in the correct format. However, the field name is different on the order form.
4.	ZIPCODE	5 Numeric Characters	EU-ZIPCODE	5 Numeric Characters	The pre-order response does not return any data that can be used for the EU-ZIPCODE field on the order form. Therefore, an error was returned when submitting an order with this field left blank.
5.	FLR	14 A/N Characters	EU-FLOOR	12 A/N Characters	The pre-order returns the data in an incorrect format. The response added the FLR abbreviation to the data. The field name is also different on the order form. The pre-order response could exceed the size limitation of the EU-FLOOR field on the order form.
AAQ					
1.	COAVAIL DAYS	Mon-Sun (Y or N) XXXXXXX	DDD	YYMMDD	The pre-order response returned the data in Y or N form, specifying the days of the week available to perform service. The response is incompatible with the field DDD on the order form which requires Year, Month, and Date numerals.
2.	COAVAIL DAYS	Mon-Sun (Y or N) XXXXXXX	DDDO-CC	CC	The pre-order response returned the data in Y or N form, specifying the days of the week available to perform service. The response is incompatible with the field DDDO-CC order form, which requires two Century numerals.
CDD					
1.	CDD	CCYYMMDD	DDD DDDO-C	YYMMDD	The pre-order response returned the data in the form Century, Century, Year, Year, Month, Month, and Day, Day. The response is inconsistent with the order form requirement, which splits the date into two fields.

Pre-Order Response			Order Form		Comments
Form Name	Field Name	Format	Field Name	Format	
AVQ-TN					
1.	HOUSE-NUM THOROUGHFARE STREET-NAME 1 STREET SUFFIX	13 A/N Characters 10 A/N Characters 44 A/N Characters 4 A/N Characters	EU-STREET 1	35 A/N Characters	The order field EU-STREET 1 is constructed by concatenating the four fields from the pre-order query. The combined length of the four pre-order fields could exceed the maximum length of the order field.
2.	CITY	32 A/N Characters	EU-CITY	25 A/N Characters	The pre-order response returns the data in the correct format. However, the field name is different on the order form. The pre-order response could exceed the size limitation of the EU-CITY field on the order form.
3.	STATE	2 Alpha Characters	EU-STATE	2 Alpha Characters	The pre-order response returns the data in the correct format. However, the field name is different on the order form.
4.	UNIT-ROOM	RM 14 A/N Characters	EU-ROOM	9 A/N Characters	The pre-order response returns the data in an incorrect format. The response added the RM abbreviation to the data. The field name is also different on the order form. The pre-order response could exceed the size limitation of the EU-ROOM field on the order form field.
5.	ELEV-FLOOR	FLR 14 A/N Characters	EU-FLOOR	12 A/N Characters	The pre-order returns the data in an incorrect format. The response added the FLR abbreviation to the data. The field name is also different on the order form. The pre-order response could exceed the size limitation of the EU-FLOOR field on the order form.

Pre-Order Response			Order Form		Comments
Form Name	**Field Name**	**Format**	**Field Name**	**Format**	
TNAQ					
1.	TN	10 A/N Characters	TN	10 A/N Characters	The Telephone Numbers were returned in the correct format. The numbers were entered into the TNSQ pre-order.
TNSQ					
1.	TN	10 A/N Characters	TN	10 A/N Characters	The Telephone Numbers were confirmed in the correct format

B. Test Results: TAG Functional Test (O&P-2)

1.0 Description

The objective of the Telecommunications Access Gateway (TAG) Functional Test (O&P-2) was to evaluate the functionality of BellSouth's ordering systems in processing Local Service Requests (LSRs) for Unbundled Network Element (UNE) services submitted via the TAG Client Application Program Interface (API).

2.0 Methodology

This section summarizes the test methodology.

2.1 Business Process Description

See Section V, "Ordering & Provisioning Overview" for a description of the BellSouth ordering process via TAG.

2.2 Scenarios

KCI generated and transmitted LSRs based on the 100 UNE scenarios outlined in the *Master Test Plan (MTP).* The *MTP* defined the TAG order scenarios to be tested in O&P-2, and outlined the specific products and services to be ordered as well as the applicable activity types. The scenarios defined requirements for the testing of different customer types (business and residential), migration activity (partial and full migration)[1], and Flow-Through[2] designations.

Please refer to Section V, Tables V-2.2 and V-2.3 for a list of the UNE scenarios developed for this test.

2.3 Test Targets & Measures

The test target was BellSouth's UNE ordering process for LSRs submitted via the TAG interface. Sub-processes, functions, and evaluation criteria are summarized in Table V-2.1: Test Target Cross-Reference. The last column "Test Cross-Reference" indicates where the particular measures are addressed in section 3.1 "Results & Analysis."

---

[1] A CLEC requests a partial migration for a multi-line customer retaining at least one line with BellSouth. A CLEC requests a full migration to convert all of a customer's lines to a new service provider.

[2] 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.

Table V-2.1: Test Target Cross-Reference

Sub-Process	Function	Evaluation Criteria	Test Cross-Reference
Submit an Order	Send order in LSR format	Presence of Functionality	O&P-2-1-1; O&P-2-2-1; O&P-2-2-2
	Receive acknowledgment	Timeliness of Response	O&P-2-3-1
	Receive FOC/error/reject notification	Accuracy of Response	O&P-2-4-1; O&P-2-4-2; O&P-2-4-3
		Clarity of Information	O&P-2-4-1; O&P-2-4-2
		Timeliness of Response	O&P-2-3-2a; O&P-2-3-2b; O&P-2-3-3a; O&P-2-3-3b
	Send expedited order transaction	Presence of Functionality	O&P-2-1-1; O&P-2-2-1; O&P-2-2-2
Submit an Error	Send error in LSR format	Presence of Functionality	O&P-2-1-1; O&P-2-2-1; O&P-2-2-2
	Receive acknowledgement	Timeliness of Response	O&P-2-3-1
	Receive planned error/reject notification	Accuracy of Response	O&P-2-4-2
		Clarity of Information	O&P-2-4-2
		Timeliness of Response	O&P-2-3-2a; O&P-2-3-2b
	Correct error(s)	Clarity of Information	O&P-2-4-2
	Re-send order	Presence of Functionality	O&P-2-1-1; O&P-2-2-1; O&P-2-2-2
	Receive FOC	Accuracy of Response	O&P-2-4-1; O&P-2-4-3
		Clarity of Information	O&P-2-4-1
		Timeliness of Response	O&P-2-3-3a; O&P-2-3-3b
Supplement an Order	Send supplement	Presence of Functionality	O&P-2-1-1; O&P-2-2-1; O&P-2-2-2
	Receive acknowledgment	Timeliness of Response	O&P-2-3-1
	Receive FOC/error/reject notification	Accuracy of Response	O&P-2-4-1; O&P-2-4-2; O&P-2-4-3
		Clarity of Information	O&P-2-4-1; O&P-2-4-2
		Timeliness of Response	O&P-2-3-2a; O&P-2-3-2b; O&P-2-3-3a; O&P-2-3-3b
	Correct error(s)	Clarity of Information	O&P-2-4-2
	Re-send supplement	Presence of Functionality	O&P-2-1-1; O&P-2-2-1; O&P-2-2-2
	Receive FOC	Accuracy of Response	O&P-2-4-1; O&P-2-4-3
		Clarity of Information	O&P-2-4-1

Sub-Process	Function	Evaluation Criteria	Test Cross-Reference
		Timeliness of Response	O&P-2-3-3a; O&P-2-3-3b
Pre-Order/Order Integration	Populate integration orders with information returned from designated pre-order response	Clarity of Information	O&P-2-5-1; O&P-2-5-2; O&P-2-5-3; O&P-2-5-4; O&P-2-5-5; O&P-2-5-6; O&P-2-5-7
	Submit integration orders	Presence of Functionality	O&P-2-1-1; O&P-2-2-1; O&P-2-2-2
	Receive acknowledgment	Timeliness of Response	O&P-2-3-1
	Receive error/reject notification	Accuracy of Response	O&P-2-4-2
		Clarity of Information	O&P-2-4-2
		Timeliness of Response	O&P-2-3-2a; O&P-2-3-2b
	Correct error(s)	Clarity of information	O&P-2-4-2
	Re-send integration order	Presence of functionality	O&P-2-1-1; O&P-2-2-1; O&P-2-2-2
	Receive FOC	Accuracy of Response	O&P-2-4-1; O&P-2-4-3
		Clarity of Information	O&P-2-4-1
		Timeliness of Response	O&P-2-3-3a; O&P-2-3-3b
Receive Completion Notice (CN)	Receive CN transaction	Accuracy of Response	O&P-2-4-4
		Clarity of Information	O&P-2-4-4
		Timeliness of Response	O&P-2-3-4
Receive Jeopardy Notification	Receive jeopardy notification and missed appointment notification transaction	Accuracy of Response	O&P-2-4-5; O&P-2-4-6
		Clarity of Information	O&P-2-4-5; O&P-2-4-6
		Timeliness of Response	O&P-2-3-5; O&P-2-3-6
Check Service Order Status	Check service order status	Accuracy of Response	O&P-2-4-7
		Clarity of Information	O&P-2-4-7

2.4 *Data Sources*

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

Table V-2.2: Data Sources for TAG Functional Test

Document	File Name	Location in Work Papers	Source
Local Exchange Ordering (LEO) Implementation Guide, Volume 1. Issues 7J, 7K, 7L, 7M, 7N, 7O, and 7P	No Electronic Copy	O&P-2-B-1	BLS
LEO Implementation Guide, Volume 2. Issue 6B, July 99	No Electronic Copy	O&P-2-B-2	BLS
LEO Implementation Guide, Volume 3. Issue 3A, August 98	No Electronic Copy	O&P-2-B-3	BLS
Product and Services Interval Guide	No Electronic Copy	O&P-2-B-4	BLS
Local Service Request Error Messages (Version TCIF 7)	O&P_errors.pdf	O&P-2-A-4	BLS
CLEC Service Order Tracking System (CSOTS) *Users Guide*	O&P_csots.pdf	O&P-2-A-1	BLS
Local Number Portability (LNP) Ordering Guide (Issue 1b-October 1999)	O&P_LNPgd.pdf	O&P-2-A-3	BLS
Facility-Based Activation Requirements	No Electronic Copy	O&P-2-B-5	BLS
Telecommunications Access Gateway (TAG) API Reference Guide (Versions 2.2.0.4, 2.2.0.5, and 2.2.0.7)	No Electronic Copy	O&P-2-B-6	BLS
TAG Programmers Job Aid (Version 5.1)	O&P_TAGjobaid.pdf	O&P-2-A-2	BLS
Miscellaneous Account Numbers provided by BLS	O&P_MANs.doc Hard Copies	O&P-2-A-5	BLS
KCI Company Codes and Billing Account Numbers	O&P_OCN.xls	O&P-2-A-6	BLS
TAG Interface Testing Agreement - LNP	O&P_TAGvlaid.doc	O&P-2-A-7	BLS
Cable Pair Assignments	O&P_cablepair.xls	O&P-2-A-9	BLS
Initial State Customer Service Records (CSRs)	O&P_PreCSR.mdb	O&P-2-A-10	BLS
Post-Order Activity CSRs	O&P_PostCSR.mdb	O&P-2-A-11	BLS
CLEC information for LNP orders (Proprietary)	O&P_CLECLNP.xls	O&P-2-A-12	CLECs
Pending Order Status Job Aid	O&P_Pendingstat.pdf	O&P-2-A-13	BLS
Additional Test Bed Addresses	O&P_newad.doc	O&P-2-A-14	BLS
O&P Test Bed Specifications	O&P_Testbed_specs.xls	O&P-2-A-15	KCI
LNP Test Bed Specifications	O&P_LNPTestbed_specs.xls	O&P-2-A-16	KCI

Document	File Name	Location in Work Papers	Source
Test Case Master	O&P_Testcasemaster.xls	O&P-2-A-17	KCI
Order Transaction Submission Schedule	O&P_editagsced.xls	O&P-2-A-18	KCI
KCI Help Desk Log	O&P_HelpDesklog.xls	O&P-2-A-19	KCI
KCI Issues Log	O&P_TestIssues.xls	O&P-2-A-20	KCI
Pre-Order/Order Integration Log	O&P_integration.xls	O&P-2-A-21	KCI
TAG System Availability Logs	O&P_TAGsystem.mdb	O&P-2-A-23	HP
Expected Results Analysis - TAG	O&P_TAGExpected	O&P-2-A-24	KCI

2.4.1 *Data Generation/Volumes*

Data for this test was generated through order transaction submission via 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 TAG interface.

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[3] that were provisioned according to KCI's specifications. Test cases and instances, correlating 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 Guide), Volume 1.*

Transactions (LSRs) were submitted and the results logged and compared to expected results, based on our knowledge of the ordering and provisioning system functionality and business processes. These processes are outlined in Section V, "Ordering & Provisioning Overview."

TAG orders were submitted as both stand-alone transactions and as integrated pre-order/order transactions[4].

[3] See Section V, "Ordering & Provisioning Overview" for a detailed description of the Ordering and Provisioning test bed.

[4] See Section V, "Ordering & Provisioning Overview" for a description of the Pre-Order/Order Integration Sub-Test.

2.6 *Analysis Methods*

The TAG 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 TAG Functional Test.

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[5]. In many cases, results in this section were calculated based on KCI/HP time stamps, which may differ significantly from the BellSouth time measurement points reported in the SQMs. 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.

[5] 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 V-2.3: Evaluation Criteria and Results

Test Cross-Reference	Evaluation Criteria	Result	Comments
Interface Availability			
O&P-2-1-1	TAG 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[6]. During the course of this test, Hewlett Packard attempted to maintain a constant connection to BLS's TAG interface by implementing regular system 'pinging.'[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			
O&P-2-2-1	The TAG interface provides expected system responses.	Not Satisfied	The KCI standard is 99% of expected system or representative responses received. Of the 756[9] order transactions submitted during the initial Functional Evaluation, 100% received responses (Functional Acknowledgements, subsequent errors or confirmations, and expected completion notifications) from BLS. During initial testing, some electronically submitted LSRs received responses via facsimile[10]. According to BLS, these faxes were generated as a result of BLS ordering representative error in failing to populate one of several particular

[6] Regular scheduled hours of availability for the TAG interface are published on the BellSouth 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.

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

[8] HP maintained detailed logs of 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] Less than one percent of total transactions were received via Fax.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			data elements within the BLS service order[11]. The missing internal field(s) precluded an electronic response from being generated. On January 15, 2000, BLS implemented a system enhancement to ensure that FOCs and CNs are electronically generated even when an ordering representative fails to enter one of these data elements. Following this system enhancement, KCI did not observe any additional occurrences of missing electronic FOC or CN responses that were attributable to BLS representatives during initial functional testing. See Exception 9 for additional information on this issue. KCI has recommended closure of Exception 9 to the GPSC. KCI initiated a functional re-test on 8/25/00[12]. During this re-test, KCI failed to receive Completion Notices (CNs) on 16% of transactions for which a CN was expected. For some of these orders, BLS indicated that they were mistakenly canceled by BLS service representatives[13]. See Exception 118 for additional information on this issue. As no subsequent re-testing activities are planned, KCI has recommended closure of Exception 118 to the GPSC.

[11] Particular fields include: AECN (on UNE orders); sales code beginning with "YAXQ"; PON; MAN (UNE orders); RESH (Resale orders); and RMKR.

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

[13] According to BellSouth, some of these orders fell into error status following confirmation (for billing- and directory listing-related errors). A BellSouth Error Resolution Group, charged with working orders in this error status, mistakenly viewed the KCI Company Codes as belonging to internal BellSouth test orders and cancelled them out of the system. Additional orders were affected by other service rep errors or cancellations.

Test Cross-Reference	Evaluation Criteria	Result	Comments
O&P-2-2-2	BLS systems and representatives provide required order functionality[14].	Satisfied	BLS systems and representatives provided the required order functionality for most transaction types evaluated (see Section V, Tables V-2.2 and V-2.3). However, the following deficiencies in UNE ordering functionality have been observed[15]: – Loop service with directory listing requests require two separate LSRs. BLS has indicated that system modifications to allow loop and directory changes on a single service order are not operationally feasible. To relate the due dates of the two orders, BLS advised CLECs to submit the DL request after the related Loop request has received confirmation, using the Due Date provided on the Loop confirmation as the Desired Due Date for the DL request. KCI submitted a set of Loop Service orders with DL orders to re-test this process. KCI received Firm Order Confirmations on all separate service requests for Loop Service and DL, indicating that BLS ordering systems successfully processed the requests. In addition, KCI experienced no significant problem with obtaining the same confirmed Due Date for DL service as the Due Date received

[14] A number of ordering scenarios outlined in the Master Test Plan are not electronically orderable via BellSouth TCIF 7 interfaces. BellSouth does not allow stand-alone UNE Loop partial migrations or various types of "UNE-to-UNE migrations", converting a CLEC customer from one service delivery platform (e.g., UNE Loop-Port Combination) to another delivery method (e.g., UNE Loop). KCI has issued Exception 39 (UNE Loop partial migration) and Exception 54 (UNE-to-UNE migration) to address these issues. BellSouth has submitted requests via the Change Control Process to introduce this ordering functionality into its OSS '99 (TCIF 9) interface release. KCI is closing these exceptions due to the fact that they are not electronically orderable in TCIF 7. Pursuant to the Georgia Public Service Commission's Order, KCI is evaluating the electronically-orderable services in TCIF 7. KCI will not be testing Issue 9 electronic ordering interfaces in Georgia.

[15] All deficiencies referenced in this criterion have been addressed and successfully re-tested. The related exceptions are closed.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			on corresponding Loop Service requests. See Exception 31 for additional information on this issue. Exception 31 is closed[16]. – On three UNE Loop migration service requests, BLS ordering representatives incorrectly processed the service order, resulting in the disconnection of the customer's retail service without reconnection of the UNE component. BLS instituted a system edit to prohibit service representatives from improperly coordinating BLS internal service order activity. Following implementation of this system edit, no further instances of inappropriate disconnection activity were noted during initial testing. In addition, KCI executed re-test transactions designed to evaluate this BLS edit. KCI monitored subsequent responses to Loop migration service requests in error status and observed no instances of improper service disconnection. See Exception 22 for additional information on this issue. Exception 22 is closed. – A BLS defect preventing coordinated hot cuts without specified frame due times was identified for non-designed (SL1) loops. BLS implemented a system fix with TAG Version 2.2.0.7 to resolve this issue. KCI successfully re-tested this service request type. See Exception 40 for additional information on this issue. Exception 40 is closed.

[16] KCI recommended closure of Exception 31 based on the presence of adequate LS and DL ordering functionality. While BellSouth electronic ordering systems do not have the ability to handle Loop Service with DL orders on a *single* LSR, the basic functionality to process these orders does exist. KCI believes that the additional effort required of CLECs to develop two distinct service requests and to coordinate their Due Dates is not a significant impediment to timely execution of these order types.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			– A BLS defect preventing the electronic processing of Loop-Port Combination partial migrations was identified. BLS implemented a system fix on 01/17/00 to correct this deficiency. Subsequent re-testing of this order type indicated partial migrations are successfully supported. See Exception 4 for additional information on this issue. Exception 4 is closed. – A BLS systems defect preventing the migration of a customer's Billing Telephone Number (BTN) during a partial migration to UNE Loop-Port Combinations was identified. BLS implemented a system fix to address this issue on 4/29/00. KCI successfully re-tested BTN migrations on 5/30/00. See Exception 51 for additional information on this issue. Exception 51 is closed. – TAG does not support a blank space in a data element. This defect prevents a two-word entry in the billing address fields. BLS indicates that this issue has been resolved with the release of the OSS '99 version of TAG. KCI did not test OSS '99.
Timeliness of Response			
O&P-2-3-1	BLS's TAG interface provides timely Functional Acknowledgements (FAs)[17].	Satisfied	The KCI standard is 95% of FAs received within 30 minutes. LSRs submitted for functional testing received FAs within the following timeframe: 100% of 753 FAs were received in less than 30 minutes.

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

Test Cross-Reference	Evaluation Criteria	Result	Comments
O&P-2-3-2a	BLS's TAG interface provides timely Fully Mechanized (FM)order errors (Fatal Rejects and Auto Clarifications).	Satisfied [18]	The GPSC-approved standard for fully mechanized (FM) errors is 97% received within one hour[19]. LSRs submitted during the entire period of initial functional testing received FM errors within the following timeframes [20] (See Table V-2.5): — 93% of FM errors were received in less than one hour. KCI initiated an initial re-test of error response timeliness on August 25, 2000. This re-test was designed to evaluate the effects of process improvements implemented in BLS ordering centers. LSRs submitted during the first re-test received FM errors within the following timeframes (See Table V-2.6): — 67% of FM errors were received in less than one hour. An additional 13% were received within 1-2 hours. KCI initiated a second re-test on January 19, 2001 to evaluate FM EDI error timeliness. LSRs submitted during this second re-test received FM errors within the following timeframes (See Table V-2.7): — 94% of FM errors were received in less than one hour. An additional 3% were received within 2 hours. See Exception 77 for additional information on this issue. The issues in Exception 77 that relate to this

[18] Although the test percentage is below the benchmark of 97%, 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 0.1297, above the 0.0500 cutoff for a statistical conclusion of failure.

[19] Results are based on the actual Flow-Through status of LSRs submitted by KCI. KCI determined that a clarification 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

Test Cross-Reference	Evaluation Criteria	Result	Comments
			criterion are resolved.
O&P-2-3-2b	BLS's TAG interface provides timely Partially Mechanized (PM) order clarifications (CLRs).	Satisfied[21]	The GPSC-approved standard for partially mechanized (PM) CLRs is 85% received within 24 hours[19]. LSRs submitted during initial functional testing received PM CLRs within the following timeframes [20] (See Table V-2.5): — 60% of PM errors were received in less than 24 hours. An additional 33% were received within 24-48 hours. KCI initiated a re-test of error response timeliness on August 25, 2000. This re-test was designed to evaluate the effects of process improvements implemented in BLS ordering centers. LSRs submitted during re-testing received PM CLRs within the following timeframes (See Table V-2.6): — 82% of PM errors were received in less than 24 hours. An additional 8% were received within 48 hours. See Exception 98 for additional information on this issue. KCI has recommended closure of Exception

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. During initial testing, KCI was unable to obtain actual FM/PM classifications on a number of Local Number Portability (LNP) service requests. Responses to 12% of these non-categorized service requests were received within one hour, and 75% were received within 24 hours. During re-testing, KCI was unable to obtain actual FM/PM classifications on a number of LNP and non-LNP orders. Of the 42 orders without a FM or PM classification, 71% were received within 24 hours.

[20] On 2/7/00, BellSouth completed a systems and process fix to address timeliness of response issues. This set of results is provided for the testing period beginning after the fix implementation. For the testing period beginning after the fix implementation, 93% of FM errors were received in less than one hour and 67% of PM errors were received in less than 24 hours.

[21] 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 0.2643, above the 0.0500 cutoff for a statistical conclusion of failure.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			98 to the GPSC.
O&P-2-3-3a	BLS's TAG interface provides timely Flow-Through (FT) Firm Order Confirmations (FOCs) .	Not Satisfied	The GPSC-approved standard for Flow-Through (FT) FOCs is 95% received within three hours[22]. LSRs submitted during the entire period of initial functional testing received FT FOCs within the following timeframes [23] [24] (See TableV-2.8): — 92% of FOCs were received in less than three hours for FT LSRs. KCI initiated a re-test of FOC response timeliness on August 25, 2000. LSRs submitted during the first re-test received FT FOCs within the following timeframes (See Table V-2.9): — 56% of FOCs were received in less than three hours for FT LSRs. An additional 37% were received within 24 hours. KCI initiated a second re-test of FT

[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 FM/PM classification. During initial testing, KCI was unable to obtain actual FT/NFT classifications on a number of Local Number Portability (LNP) service requests. Responses to 8% of these non-categorized service requests were received within three hours, and 87% were received within 36 hours. During re-testing, KCI was unable to obtain actual FT/NFT classifications on a number of LNP and non-LNP service requests. Of the 35 FOC responses not classified, 20% were received within three hours and 86% were received within 36 hours.

[23] Beginning with the February Flow-Through Report, BellSouth no longer categorized as Flow-Through those service requests which proceeded through BellSouth electronic ordering systems to the Service Order Communication System (SOCS) and fell out for manual handling after failing a SOCs edit. Previously categorized as FT, these service request types are now defined by BellSouth to be NFT due to the required manual intervals. As a result of BellSouth Flow-Through calculation modifications, some FT FOCs previously categorized as "late" would be considered NFT if submitted in the future. FOC response timeliness re-testing activity (initiated on August 25, 2000) occurred after this FT definition change was implemented. As a result, evaluation of re-test FOC timeliness is performed based on consistent classification of FT or NFT categories.

[24] On 2/7/00, BellSouth completed a systems and process fix to address timeliness of response issues. The results are from the period beginning after the fix implementation. For the testing period beginning after the fix implementation, 97.5% of FOCs were received in less than three hours for FT LSRs and 83% of FOCs were received in less than 36 hours for NFT LSRs.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			FOC response timeliness on January 19, 2001. LSRs submitted during the second re-test received FT FOCs within the following timeframes (See Table V-2.10): — 84% of FOCs were received in less than three hours for FT LSRs. An additional 11% were received within 24 hours. See Exception 78 for additional information on this issue. As no subsequent re-test activities are planned, KCI has recommended closure of Exception 78 to the GPSC.
O&P-2-3-3b	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. LSRs submitted during the entire period of initial functional testing received NFT FOCs within the following timeframes[22 23 24] (See TableV-2.8): — 79% of FOCs were received in less than 36 hours for NFT LSRs. An additional 14% were received within 36-48 hours. KCI initiated a re-test of FOC response timeliness on August 25, 2000. LSRs submitted during re-testing received NFT FOCs within the following timeframes (See Table V-2.9): — 92% of FOCs were received in less than 36 hours for NFT LSRs. An additional 3% were received within 48 hours. See Exception 97 for additional information on this issue. KCI has recommended closure of Exception 97 to the GPSC.

Test Cross-Reference	Evaluation Criteria	Result	Comments
O&P-2-3-4	BLS's TAG interface provides timely Completion Notifications (CNs) within agreed upon standard intervals.	No Result Determination Made[25]	BLS delivers CNs upon the conclusion of "field provisioning"[26] activities as well as all subsequent downstream (listing and billing) provisioning activities[27]. 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 initial functional testing received CNs within the following timeframes (See Table V-2.11): • 89% of CNs were received within one business day after the field provisioning completion date. • 2% were received within two business days after field provisioning completion. • 5% were received within three-to-five days after field provisioning completion. • The remaining 4% of CNs were received within six or more days following field provisioning completion. KCI initiated a re-test of CN response timeliness on August 25, 2000. LSRs

[25] KCI is unable to provide an evaluation result for this criterion and provides the test results as diagnostic information only. 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 transaction results to this SQM within a reasonable degree of accuracy. BLS calculates this metric using the following data points: 1)Completion date and time (as entered by a BLS 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, BLS provides the work completion date (but not the time); BLS 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.

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

[27] For Local Number Portability (LNP) orders, BellSouth returns CNs following all provisioning activities and after the CLEC completes the porting of associated Telephone Numbers with the Number Portability Administration Center (NPAC).

Test Cross-Reference	Evaluation Criteria	Result	Comments
			submitted during re-testing received CNs within the following timeframes (See Table V-2.12): • 89% of CNs were received within one business day after the field provisioning completion date. • 5% were received within two business days after field provisioning completion. • 5% were received within three-to-five business days after field provisioning completion. • The remaining 1% of CNs were received six or more days following field provisioning completion. See Exception 26 for additional information on this issue. KCI has recommended closure of Exception 26 to the GPSC.
O&P-2-3-5	BLS's TAG interface provides timely Jeopardy Notifications.	Satisfied	The BLS proposed standard is 95% of Jeopardy Notifications received at least 48 hours before the confirmed Due Date (DD). Of the 5 Jeopardy Notifications received via TAG, BLS has returned 100% at least 48 hours before the FOC DD. See Table V-2.15 for additional detail.
O&P-2-3-6	BLS's TAG interface provides timely Missed Appointment (MA) notifications.	Satisfied	The KCI standard is 95% of MA notifications received within one business day after the latest confirmed Due Date (DD). Of the 15 MAs received via TAG, BLS has returned 100% (15/15) within 1 business day after the DD. See Exception 67 for additional information on this issue[28]. Exception 67 is closed.

[28] KCI drafted Exception 67 to address late MA notifications received. Upon further investigation, the majority of responses initially categorized as 'late' were determined to be 'on-time.' For a number of PONs, due date modifications were initiated by CLEC representatives during conversations with BellSouth UNE-Center personnel. New FOCs (containing the new Due Dates) are not transmitted in these cases. As a result, KCI initially compared the original FOC DD with the MA receipt time. The MA receipt times were subsequently compared to the modified Due Dates. In all cases, the MAs were delivered in a timely manner relative to the new DD.

Test Cross-Reference	Evaluation Criteria	Result	Comments
Accuracy of Response			
O&P-2-4-1	BLS systems and representatives provide clear, accurate, and complete Firm Order Confirmations (FOCs)	Satisfied	A sample of FOCs was examined for clarity, accuracy, and completeness relative to the BLS Business Rules (*LEO Guide, Volume 1*)[29]. A number of FOCs were received in response to invalid service requests. For these orders, KCI expected to receive error messages. KCI initiated a re-test on 9/25/00 to monitor the accuracy of FOC responses. KCI determined that 99% of FOCs received during re-test activities were accurate response types (i.e., received in response to valid LSRs). See Exception 95 for additional information on this issue. The issues in Exception 95 that relate to this criterion are resolved. During KCI's initial review of FOC completeness, KCI observed a number of discrepancies between BLS-documented data requirements and actual data returned on FOC responses. For example, Frame Due Time (FDT) and Circuit ID (ECCKT) were listed as required fields but were not populated on all responses. In addition, CHAN/PAIR was populated when it was not an applicable field according to *BellSouth Business Rules*. KCI issued Exception 68 to address these response completeness issues. To address these issues, BLS published an updated version of *LEO Guide*, Volume I on August 28, 2000 to more accurately reflect FOC data requirements. This version (7S) did not adequately define usage

[29] KCI defined an accurate FOC as a correct response type relative to the LSR submitted (i.e., the FOC was received in response to a valid LSR) that contains: a) all expected data elements (fields); b) no unexpected data elements (fields); c) all required data values in the expected format; d) no prohibited values. Expected and prohibited values were developed based on the *LEO Guide, Volume 1.*

Test Cross-Reference	Evaluation Criteria	Result	Comments
			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.
O&P-2-4-2	BLS systems and representatives provide clear, accurate, and complete order rejects and clarifications (CLRs).	Not Satisfied	A sample of errors was examined for clarity, accuracy, and completeness relative to the *BellSouth Business Rules (LEO Guide, Volume 1)*[31]. A number of CLRs were received in response to valid service requests. BLS performed additional training of its ordering representatives to correct this problem. CLRs received following the implementation of rep training were found to be accurate[32]. However, KCI noted additional occurrences of inaccurate CLRs during re-test activities initiated on 9/25/00. Of the sample reviewed, approximately 7% of partially-mechanized CLRs (i.e., issued by BLS representatives) received during re-testing were found to be inaccurate. See Exception 47 for additional information on this issue. As no subsequent re-testing activities are planned, KCI has recommended closure of Exception 47 to the GPSC. In addition, several error messages

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

[31] KCI defined an accurate error as a correct response type relative to the LSR submitted (i.e., the ERR/CLR was received in response to an erred LSR) that contains: a) all expected data elements (fields); b) no unexpected data elements (fields); c) all required data values in the expected format; d) no prohibited data values.

[32] Three additional inaccuracies were observed, representing less than 5% of total partially-mechanized CLR responses reviewed following BellSouth rep training.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			received in response to Local Number Portability (LNP) service requests did not contain clear and comprehensive error descriptions. These responses were populated with an error message stating "Other LNP Error." KCI contacted its BLS Customer Service Manager to obtain the detailed error message. BLS has opened a feature change request to prevent this message from being delivered on LNP responses. A target date for the implementation of this feature has not yet been established. This deficiency did not prevent KCI from continuing its ordering activity and was not significant enough to effect the overall evaluation. For some initial functional test transactions, a BLS representative generated a CLR in response to a Line Class of Service (LNE CLS SVC) entry on an LSR that had previously returned a system-generated FOC. BLS has proposed a feature enhancement within its internal change control process to ensure system-representative consistency in service request validation. BLS plans to implement this feature in its OSS'99 version of TAG. KCI is not testing OSS '99. See Exception 18 for additional information on this issue. Exception 18 is closed[33]. During KCI's initial review of error completeness, the *Local Exchange Ordering (LEO)Implementation 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

[33] KCI closed this exception based on the fact that BellSouth has updated its documentation to more clearly reflect the valid data entries in the LNE CLS SVC field, and because the BellSouth feature will not be implemented in TCIF 7. KCI is not testing the ordering functionality of the TCIF 9 release in Georgia.

[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.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			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.
O&P-2-4-3	Service order provisioning due dates (FOC DDs[35]) identified within BLS's order confirmation delivered through TAG are consistent with the CLEC's valid due date (LSR DDD[36]) request (i.e., a due date selected in accordance with the product's standard interval or acquired from a Calculate Due Date (CDD) pre-order query).	No Result Determination Made[37]	KCI obtained valid DDD information for population on an LSR from one of two sources: 1) BLS *Product and Services Interval Guide.* 2) A combination of pre-order queries. KCI performed a Calculate Due Date (CDD) query to determine the earliest 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. For LSRs submitted during initial testing and populated with a DDD obtained from BLS documentation[38]: – 88% of DDs were equal to the LSR DDD. – 3% of DDs were earlier than the LSR DDD.

[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.

[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] Results are based on 239 LSRs submitted using BellSouth documentation to obtain input for the DDD field.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			– 9% of DDs were later than the LSR DDD. For LSRs submitted during initial testing and populated with a DDD obtained from electronic pre-order queries[39], 100% of DDs were equal to the LSR DDD. BLS implemented training for Local Carrier Service Center (LCSC) representatives on 3/9/00 to prevent earlier DDs from being issued on manually handled service requests. Based on a review of FOCs received after 3/9/00, 9% of DDs were earlier than the requested DDD. KCI initiated a subsequent re-test of Due Date accuracy on August 25, 2000. For LSRs submitted during re-testing and populated with a DDD obtained from BLS documentation[40]: – 90% of DDs were equal to the LSR DDD. – 8% of DDs were later than the LSR DDD. – 2% of DDs were earlier than the LSR DDD. For LSRs submitted during re-testing and populated with a DDD obtained from electronic pre-order queries: – 95% of DDs were equal to the LSR DDD. – 5% of DDs were later than the LSR DDD. See Exception 38 and Tables V-2.13 and V-2.14 for additional details. KCI has recommended closure of Exception 38 to the GPSC.

[39]Results are based on nine LSRs submitted using electronic pre-orders to obtain input for the DDD field.

[40] 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
O&P-2-4-4	BLS systems and representatives provide clear, accurate, and complete Completion Notifications (CNs).	Satisfied	A sample of CNs was examined for clarity, accuracy, and completeness relative to the BLS Business Rules (*LEO Guide, Volume 1*)[41]. CNs were received in response to completed service requests. During KCI's initial review of CN completeness, KCI observed a number of discrepancies between BLS-documented data requirements and actual data returned on CN responses. For example, Frame Due Time (FDT) and Circuit ID (ECCKT) were listed as required fields but were not populated on all responses. In addition, CHAN/PAIR was populated when it was not an applicable field according to *BellSouth Business Rules*. KCI issued Exception 68 to identify these response completeness issues. To address these issues, BLS published an updated version of *LEO Guide, Volume I* on August 28, 2000 to more accurately reflect CN data requirements. This version (7S) did not adequately define usage requirements, by specific order types, for some response fields[42]. 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.

[41] KCI defined an accurate CN as a correct response type relative to the LSR submitted (i.e., the CN was received in response to a completed LSR) that contains: a) all expected data elements (fields); b) no unexpected data elements (field); c) all required data values in the expected format; d) no prohibited data values. Expected and prohibited values were developed based on the *LEO Guide, Volume 1.*

[42] 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
O&P-2-4-5	BLS systems and representatives return clear and complete Jeopardy Notifications[43].	Satisfied	BLS documentation available during initial testing did not adequately define the process for categorizing and delivering Jeopardy Notifications[44]. BLS updated its *Pending Order Status Job Aid* in a 6/12/00 release to clarify the Jeopardy Notification process. See Exception 72 for additional information on this issue. Exception 72 is closed. KCI reviewed a sample of Jeopardy responses for completeness relative to the *BellSouth Business Rules* (*LEO Guide, Volume 1*). During KCI's initial review of Jeopardy response completeness, the BLS Business Rules (Issue 7S) did not adequately define usage requirements, by specific order types, for some response fields[45]. 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 Jeopardy responses. See Exception 68 for additional information on this issue. KCI has recommended closure of Exception 68 to the GPSC.

[43] Please see O&P-5 Results for additional information on Jeopardy Notification accuracy and completeness.

[44] For example, a response containing an indicator code of "Jeopardy" is not necessarily counted as a Jeopardy Notification in BellSouth Service Quality Measurement (SQM) calculations.

[45] 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
O&P-2-4-6	BLS systems provide clear, accurate, and complete Missed Appointment notifications.	Satisfied	BLS documentation available during initial testing did not adequately define the process for categorizing and delivering Missed Appointment Notifications[46]. BLS updated its *Pending Order Status Job Aid* in a 6/12/00 release to clarify the Missed Appointment notification process. See Exception 72 for additional information on this issue. Exception 72 is closed. KCI reviewed a sample of Missed Appointment responses for completeness relative to the *BellSouth Business Rules* (*LEO Guide, Volume 1*). During KCI's initial review of Missed Appointment response completeness, the *BellSouth Business Rules* (Issue 7S) did not adequately define usage requirements, by specific order types, for some response fields[47]. 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 Missed Appointment responses. See Exception 68 for additional information on this issue. KCI has recommended closure of Exception 68 to the GPSC.

[46] For example, a response containing an indicator code of "Jeopardy" could be considered a Missed Appointment Notification.

[47] 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
O&P-2-4-7	BLS service order tracking systems (CSOTS) provide accurate LSR status.	Satisfied	KCI compared a sample of order status queries in CSOTS[48] to the order status 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. During a functional re-test initiated on 8/25/00, KCI reviewed BLS's service order status accuracy. Based on re-test results, KCI noted four instances of Local Number Portability (LNP) service requests where the Completion Date provided on the CN response was later than the Completion Date identified within CSOTS. In addition, in response to one service request for an inside move, BLS delivered the CN response in advance of actual order completion[49]. In response to these issues, BLS opened a defect change request to populate LNP CNs with the date of actual completion. BLS opened an additional feature change to ensure that CNs are not sent until all applicable BLS service orders have been completed. A target date for implementation of these two releases has not yet been established. See Exception 125 for additional information on this issue. KCI has recommended closure of Exception 125 to the GPSC. The deficiencies noted are not significant enough to affect the overall evaluation.

[48] CSOTS provides the status of service requests once BellSouth has received Firm Order Confirmations (FOCs). The status of service requests in a pre-FOC state is not available via CSOTS.

[49] To perform customer moves, BellSouth generates two internal service orders. Although the customer's service request is not complete until the conclusion of both service orders, BellSouth delivered the CN response after completion of the first service order. The second service order completed several days later.

Table V-2.4: Integration Test Evaluation Criteria and Results

Test Cross-Reference	Evaluation Criteria	Result	Comments
Pre-order/Order Integration			
O&P-2-5-1	Information returned in response to pre-order System Availability Queries is compatible with requirements on corresponding orders.	Satisfied	Information transferred between fields received in response to Service Availability Queries and the three corresponding fields in the Order forms was inconsistent with respect to field name and format. To provide information on the relationship between pre-order responses and order fields, BellSouth plans to publish a "*Pre-Order to Firm Order Mapping Matrix*" on 3/30/01 (see Carrier Notification SN91082241 for additional information). While the names and formats of the pre-order and order fields did not agree, data content returned on the pre-order responses adequately fulfills order form input requirements. (See Table V-2.16)
O&P-2-5-2	Information returned in response to pre-order Appointment Availability Queries is compatible with requirements on corresponding orders.	Satisfied	Information transferred between fields received in response to Appointment Availability Queries and the two corresponding fields in the Order form was inconsistent with respect to field name and format. To provide information on the relationship between pre-order responses and order fields, BellSouth plans to publish a "*Pre-Order to Firm Order Mapping Matrix*" on 3/30/01 (see Carrier Notification SN91082241 for additional information). While the names and formats of the pre-order and order fields did not agree, data content returned on the pre-order responses adequately fulfills order form input requirements. (See Table V-2.16)

Test Cross-Reference	Evaluation Criteria	Result	Comments
O&P-2-5-3	Information returned in response to pre-order Calculate Due Date Queries is compatible with requirements on corresponding orders.	Satisfied	Information transferred between one field received in responses to Calculate Due Date queries and the two corresponding fields in the Order form was inconsistent with respect to field name and format. To provide information on the relationship between pre-order responses and order fields, BellSouth plans to publish a "*Pre-Order to Firm Order Mapping Matrix*" on 3/30/01 (see Carrier Notification SN91082241 for additional information). While the names and length of the pre-order and order fields did not agree, data content returned on the pre-order response adequately fulfills order form input requirements. (See Table V-2.16)
O&P-2-5-4	Information returned in response to pre-order Address Validation with Telephone Number Queries is compatible with requirements on corresponding orders.	Satisfied	Information transferred between the nine fields received in response to Address Validation Query by Telephone Number and six corresponding fields in the Order form was inconsistent with respect to field name, format and length. To provide information on the relationship between pre-order responses and order fields, BellSouth plans to publish a "*Pre-Order to Firm Order Mapping Matrix*" on 3/30/01 (see Carrier Notification SN91082241 for additional information). In addition to the field name and length inconsistencies, the data content returned on the pre-order response was inadequate to fulfill order form input requirements. For example, the length of the combined responses provided by the AVQ-TN (which must be concatenated prior to entry on the order form) may be greater then the length of the subsequent order field. While the documentation implies that potential address field length discrepancies could exist, KCI did not experience any actual instances of pre-order response field lengths exceeding

Test Cross-Reference	Evaluation Criteria	Result	Comments
			subsequent order field length requirements. BLS has opened a feature request to close the gap in the field size/length differences between pre-order and firm order requirements. An implementation date is currently being negotiated. (See Table V-2.16)
O&P-2-5-5	Information returned in response to pre-order Address Validation Queries is compatible with requirements on corresponding orders.	Satisfied	Information transferred between the nine fields received in response to Address Validation Queries and six corresponding fields in the Order form was inconsistent with respect to field name, format and length. To provide information on the relationship between pre-order responses and order fields, BellSouth plans to publish a "*Pre-Order to Firm Order Mapping Matrix*" on 3/30/01 (see Carrier Notification SN91082241 for additional information). In addition to the field name and length inconsistencies, the data content returned on the pre-order response was inadequate to fulfill order form input requirements. For example, the length of the combined responses provided by the AVQ-TN (which must be concatenated prior to entry on the order form) may be greater then the length of the subsequent order field. While the documentation implies that potential address field length discrepancies could exist, KCI did not experience any actual instances of pre-order response field lengths exceeding subsequent order field length requirements. BLS has opened a feature request to close the gap in the field size/length differences between pre-order and firm order requirements. An implementation date is currently being negotiated. (See Table V-2.16)

Test Cross-Reference	Evaluation Criteria	Result	Comments
O&P-2-5-6	Information returned in response to pre-order Telephone Number Availability Queries is compatible with requirements on corresponding orders.	Satisfied	Information transferred between one field received in response to Telephone Number Availability Queries and one corresponding field in the Order form was consistent with respect to field name, format, and length. (See Table V-2.16)
O&P-2-5-7	Information returned in response to pre-order Telephone Number Selection Queries is compatible with requirements on corresponding orders.	Satisfied	Information transferred between one field received in response to Telephone Number Selection Queries and one corresponding field in the Order form was consistent with respect to field name, format, and length. (See Table V-2.16)

Table V-2.5, Part 1: Error/Clarification Timeliness, Summary View – Initial Test Data

Clarification Timeliness Detail – 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	98	2	0	3	1	2	0	0
% FM	93%	2%	0%	3%	1%	2%	0%	0%
Partially Mechanized								
					<24hrs	24-48 hrs	48-72 hrs	>72 hrs
PM					141	77	10	9
% PM					60%	33%	4%	4%

Table V-2.5, Part 2: Error/Clarification Timeliness, On/After 2/8/00 – Initial Test Data

Clarification Timeliness Detail – On/After 2/8/2000								
Fully Mechanized								
	<1 hr	1-2 hrs	2-4 hrs	4-12 hrs	12-24 hrs	24-48 hrs	>48 hrs	>72 hrs
FM	52	2	0	0	1	1	0	0
% FM	93%	4%	0%	0%	2%	2%	0%	0%
Partially Mechanized								
					<24hrs	24-48 hrs	48-72 hrs	>72 hrs
PM					120	57	1	1
% PM					67%	32%	1%	1%

Table V-2.5, Part 3: Error/ Clarification Timeliness, Disaggregated View - Initial 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 hrs**	**>72 hrs**
2-wire Loop-Design	22	0	0	0	1	0	0	0
% 2-wire Loop-Design	96%	0%	0%	0%	4%	0%	0%	0%
2-wire Loop-Non Design	27	0	0	3	0	1	0	0
% 2-wire Loop-Non Design	87%	0%	0%	10%	0%	3%	0%	0%
2-wire Loop w/ INP - Design	0	0	0	0	0	0	0	0
% 2-wire Loop w/ INP - Design	0%	0%	0%	0%	0%	0%	0%	0%
2-wire Loop w/ INP - Non-Design	0	0	0	0	0	0	0	0
% 2-wire Loop w/ INP - Non Des.	0%	0%	0%	0%	0%	0%	0%	0%
2-wire Loop w/ LNP - Design	0	0	0	0	0	0	0	0
% 2-wire Loop w/ LNP - Design	0%	0%	0%	0%	0%	0%	0%	0%
2-wire Loop w/ LNP - Non-Design	0	0	0	0	0	0	0	0
% 2-wire Loop w/ LNP - Non-Des.	0%	0%	0%	0%	0%	0%	0%	0%
INP (Standalone)	0	2	0	0	0	0	0	0
% INP (Standalone)	0%	100%	0%	0%	0%	0%	0%	0%
LNP (Standalone)	0	0	0	0	0	0	0	0
% LNP (Standalone)	0%	0%	0%	0%	0%	0%	0%	0%
Switch Ports	12	0	0	0	0	1	0	0
% Switch Ports	92%	0%	0%	0%	0%	8%	0%	0%
Loop-Port Combination	24	0	0	0	0	0	0	0
% Loop-Port Combination	100%	0%	0%	0%	0%	0%	0%	0%
TOTALS	**85**	**2**	**0**	**3**	**1**	**2**	**0**	**0**
	91%	**2%**	**0%**	**3%**	**1%**	**2%**	**0%**	**0%**
Partially Mechanized								
Service Type					**< 24 hrs**	**24-48 hrs**	**48-72 hrs**	**>72 hrs**
2-wire Loop-Design					17	15	0	1
% 2-wire Loop-Design					52%	45%	0%	3%
2-wire Loop-Non Design					36	14	1	1
% 2-wire Loop-Non Design					69.2%	26.9%	1.9%	1.9%
2-wire Loop w/ INP - Design					0	1	0	1
% 2-wire Loop w/ INP - Design					0%	50%	0%	50%
2-wire Loop w/ INP - Non-Design					4	1	0	0
% 2-wire Loop w/ INP - Non Des.					80%	20%	0%	0%
2-wire Loop w/ LNP - Design					0	0	0	0
% 2-wire Loop w/ LNP - Design					0%	0%	0%	0%
2-wire Loop w/ LNP - Non-Design					0	0	0	0
% 2-wire Loop w/ LNP - Non-Des.					0%	0%	0%	0%
INP (Standalone)					2	1	0	0

Clarification Timeliness Detail - Disaggregated View								
% INP (Standalone)					67%	33%	0%	0%
LNP (Standalone)					0	0	0	0
% LNP (Standalone)					0%	0%	0%	0%
Switch Ports					11	17	5	4
% Switch Ports					29.7%	45.9%	13.5%	10.8%
Loop-Port Combination					39	20	4	2
% Loop-Port Combination					60%	31%	6%	3%
TOTALS					109	69	10	9
					55%	35%	5%	5%

Notes:
(Notes apply to Table V-2.5, Parts 1, 2, and 3)

1. Initial test results include data from November 9, 1999 through May 31, 2000.
2. 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.
3. 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.
4. 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 BLS 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.
5. On 2/7/00 BellSouth completed a systems and process fix to address timeliness of response issues. In addition to aggregate results for the entire test period, results for the period beginning after the implementation fix are also presented.
6. Timeliness information pertaining to the LNP service requests for which BellSouth was unable to provide actual FM/PM data is not included in the above table.
7. Calculations are based on business days (i.e., weekends and BellSouth holidays are not counted).
8. The disaggregated breakdown of ERR/CLR timeliness reflects the GPSC's disaggregation levels outlined in the June 6, 2000 - test-specific Service Quality Measurements.
9. Totals may not equal 100% due to rounding.

Table V-2.6, Part 1: Error/Clarification Timeliness, Summary View – First Re-test Data

Error/Clarification Timeliness Detail								
Fully Mechanized								
	<1 hr	1-2 hrs	2-4 hrs	4-12 hrs	12-24 hrs	24-48 hrs	48-72 hrs	>72 hrs
FM	16	3	1	0	2	0	2	0
% FM	67%	13%	4%	0%	8%	0%	8%	0%
Partially Mechanized								
					<24hrs	24-48 hrs	48-72 hrs	>72 hrs
PM					84	8	4	6
% PM					82%	8%	4%	6%

Table V-2.6, Part 2: Error/Clarification Timeliness, Disaggregated View – First 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
2-wire Loop Design	7	0	0	0	0	0	0	0
% 2-wire Loop-Design	100%	0%	0%	0%	0%	0%	0%	0%
2-wire Loop-Non Design	1	0	0	0	0	0	0	0
% 2-wire Loop-Non Design	100%	0%	0%	0%	0%	0%	0%	0%
2-wire Loop w/ INP - Design	0	0	0	0	0	0	0	0
% 2-wire Loop w/ INP - Design	0%	0%	0%	0%	0%	0%	0%	0%
2-wire Loop w/ INP - Non Design	0	0	0	0	0	0	0	0
% 2-wire Loop w/ INP - Non Design	0%	0%	0%	0%	0%	0%	0%	0%
2-wire Loop w/ LNP - Design	0	0	0	0	1	0	0	0
% 2-wire Loop w/ LNP - Design	0%	0%	0%	0%	100%	0%	0%	0%
2-wire Loop w/ LNP - Non Design	0	0	1	0	1	0	1	0
% 2-wire Loop w/ LNP - Non Design	0%	0%	33%	0%	33%	0%	33%	0%
INP (Standalone)	0	0	0	0	0	0	0	0
% INP (Standalone)	0%	0%	0%	0%	0%	0%	0%	0%
LNP (Standalone)	0	0	0	0	0	0	0	0
% LNP (Standalone)	0%	0%	0%	0%	0%	0%	0%	0%
Switch Ports	0	0	0	0	0	0	0	0
% Switch Ports	0%	0%	0%	0%	0%	0%	0%	0%
Loop Port Combination	3	0	0	0	0	0	1	0
% Loop Port Combination	75%	0%	0%	0%	0%	0%	25%	0%
DL	5	3	0	0	0	0	0	0
% DL	63%	38%	0%	0%	0%	0%	0%	0%
TOTALS	16	3	1	0	2	0	2	0
	67%	13%	4%	0%	8%	0%	8%	0%

Partially Mechanized								
Service Type					<24 hrs	24-48 hrs	48-72 hrs	>72 hrs
2-wire Loop Design					26	1	1	0
% 2-wire Loop-Design					93%	4%	4%	0%
2-wire Loop-Non Design					29	2	0	2
% 2-wire Loop-Non Design					88%	6%	0%	6%
2-wire Loop w/ INP - Design					0	0	0	0
% 2-wire Loop w/ INP - Design					0%	0%	0%	0%
2-wire Loop w/ INP - Non Design					0	0	0	0
% 2-wire Loop w/ INP - Non Design					0%	0%	0%	0%
2-wire Loop w/ LNP - Design					3	1	2	0
% 2-wire Loop w/ LNP - Design					50%	17%	33%	0%
2-wire Loop w/ LNP - Non Design					10	3	0	1
% 2-wire Loop w/ LNP - Non Design					71%	21%	0%	7%
INP (Standalone)					0	0	0	0
% INP (Standalone)					0%	0%	0%	0%
LNP (Standalone)					0	0	0	0
% LNP (Standalone)					0%	0%	0%	0%
Switch Ports					5	0	0	2
% Switch Ports					71%	0%	0%	29%
Loop Port Combination					2	0	1	0
% Loop Port Combination					67%	0%	33%	0%
DL					9	1	0	1
% DL					82%	9%	0%	9%
TOTALS					84	8	4	6
					82%	8%	4%	6%

Notes:
(Notes apply to Table V-2.6, Parts 1, 2, and 3)

1. First re-test results reflect data from August 25 through November 15, 2000.
2. Results are based on actual Fully Mechanized (FM) and Partially Mechanized (PM) performance of LSRs submitted by KCI. KCI determined that a ERR/CLR was FM or 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.
3. On 2/7/00 BellSouth completed a systems and process fix to address timeliness of response issues. In addition to aggregate results for the entire test period, results for the period beginning after the implementation fix are also presented.
4. Calculations are based on business days (i.e., weekends and BellSouth holidays are not counted).
5. The disaggregated breakdown of ERR/CLR 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 V-2.7, Part 1: Error/Clarification Timeliness, Summary View - Second Re-test Data

Error/Clarification Timeliness Detail								
Fully Mechanized								
	<1 hr	1-2 hrs	2-4 hrs	4-12 hrs	12-24 hrs	24-48 hrs	48-72 hrs	>72 hrs
FM	84	3	0	0	0	1	1	0
% FM	94%	3%	0%	0%	0%	1%	1%	0%

Table V-2.7, Part 2: Error/Clarification Timeliness, Disaggregated View - Second 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
2-wire Loop Design	12	0	0	0	0	0	0	0
% 2-wire Loop-Design	100%	0%	0%	0%	0%	0%	0%	0%
2-wire Loop-Non Design	2	0	0	0	0	0	0	0
% 2-wire Loop-Non Design	100%	0%	0%	0%	0%	0%	0%	0%
2-wire Loop w/ LNP - Design	1	1	0	0	0	0	0	0
% 2-wire Loop w/ LNP - Design	50%	50%	0%	0%	0%	0%	0%	0%
2-wire Loop w/ LNP - Non Design	8	0	0	0	0	1	1	0
% 2-wire Loop w/ LNP - Non Design	80%	0%	0%	0%	0%	10%	10%	0%
Loop Port Combination	61	2	0	0	0	0	0	0
% Loop Port Combination	97%	3%	0%	0%	0%	0%	0%	0%
TOTALS	84	3	0	0	0	1	1	0
	94%	3%	0%	0%	0%	1%	1%	0%

Notes:
(Notes apply to Table V-2.7, 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. KCI determined that a ERR/CLR 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 ERR/CLR 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 V-2.8, Part 1: Firm Order Confirmation Timeliness, Summary View – Initial Test Data

Firm Order Confirmation Timeliness Detail - Aggregate						
Flow-Through						
	<3 hrs	3-24 hrs	24-36 hrs	36-48 hrs	48-72 hrs	>72 hrs
FT	48	0	1	2	0	1
% FT	92%	0%	2%	4%	0%	2%
Non-Flow-Through						
	<3 hrs	3-24 hrs	24-36 hrs	36-48 hrs	48-72 hrs	>72 hrs
NFT	54	79	31	30	7	7
% NFT	26%	38%	15%	14%	3%	3%

Table V-2.8, Part 2: Firm Order Confirmation Timeliness, On/After 2/8/00 – Initial Test Data

Firm Order Confirmation Timeliness Detail - On/After 2/8/00						
Flow-Through						
	<3 hrs	3-24 hrs	24-36 hrs	36-48 hrs	48-72 hrs	>72 hrs
FT	39	0	0	1	0	0
% FT	98%	0%	0%	2%	0%	0%
Non-Flow-Through						
	<3 hrs	3-24 hrs	24-36 hrs	36-48 hrs	48-72 hrs	>72 hrs
NFT	42	65	23	24	3	0
% NFT	27%	41%	15%	15%	2%	0%

Table V-2.8, Part 3: Firm Order Confirmation Timeliness, Disaggregated View – Initial 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**
2-wire Loop-Design	1	0	0	0	0	0
% 2-wire Loop-Design	100%	0%	0%	0%	0%	0%
2-wire Loop-Non Design	7	0	0	0	0	0
% 2-wire Loop-Non Design	100%	0%	0%	0%	0%	0%
2-wire Loop w/ INP – Design	0	0	0	0	0	0
% 2-wire Loop w/ INP – Design	0%	0%	0%	0%	0%	0%
2-wire Loop w/ INP – Non-Design	0	0	0	0	0	0
% 2-wire Loop w/ INP – Non Des.	0%	0%	0%	0%	0%	0%
2-wire Loop w/ LNP – Design	0	0	0	0	0	0
% 2-wire Loop w/ LNP – Design	0%	0%	0%	0%	0%	0%
2-wire Loop w/ LNP – Non-Design	0	0	0	0	0	0
% 2-wire Loop w/ LNP – Non-Des.	0%	0%	0%	0%	0%	0%
INP (Standalone)	0	0	0	1	0	0
% INP (Standalone)	0%	0%	0%	100%	0%	0%
LNP (Standalone)	0	0	0	0	0	0
% LNP (Standalone)	0%	0%	0%	0%	0%	0%
Switch Ports	7	0	1	1	0	1
% Switch Ports	70%	0%	10%	10%	0%	10%
Loop-Port Combination	21	0	0	0	0	0
% Loop-Port Combination	100%	0%	0%	0%	0%	0%
TOTALS	**36**	**0**	**1**	**1**	**0**	**1**
	92%	**0%**	**3%**	**3%**	**0%**	**3%**
Non-Flow-Through						
Service Type	**<3 hrs**	**3-24 hrs**	**24-36 hrs**	**36-48 hrs**	**48-72 hrs**	**>72 hrs**
2-wire Loop-Design	6	11	7	3	0	0
% 2-wire Loop-Design	22%	41%	26%	11%	0%	0%
2-wire Loop-Non Design	7	13	2	6	1	1
% 2-wire Loop-Non Design	23%	43%	7%	20%	3%	3%
2-wire Loop w/ INP – Design	0	0	1	0	0	1
% 2-wire Loop w/ INP – Design	0%	0%	50%	0%	0%	50%
2-wire Loop w/ INP – Non-Design	0	3	1	1	0	0
% 2-wire Loop w/ INP – Non Des.	0%	60%	20%	20%	0%	0%
2-wire Loop w/ LNP – Design	0	4	0	1	1	0
% 2-wire Loop w/ LNP – Design	0%	67%	0%	17%	17%	0%
2-wire Loop w/ LNP – Non-Design	0	5	0	3	1	0
% 2-wire Loop w/ LNP – Non-Design	0%	56%	0%	33%	11%	0%
INP (Standalone)	0	1	2	0	0	0
% INP (Standalone)	0%	33%	67%	0%	0%	0%

Firm Order Confirmation Timeliness Detail - Disaggregated View						
LNP (Standalone)	1	1	0	0	0	0
% LNP (Standalone)	50%	50%	0%	0%	0%	0%
Switch Ports	8	14	10	9	1	2
% Switch Ports	18%	32%	23%	20%	2%	5%
Loop-Port Combination	21	18	6	7	2	2
% Loop-Port Combination	38%	32%	11%	13%	4%	4%
TOTALS	43	70	29	30	6	6
	23%	38%	16%	16%	3%	3%

Notes:
(Notes apply to Table V-2.8, Parts 1, 2, and 3)

1. Initial functional test results reflect data from November 9, 1999 through May 31, 2000.
2. Directory Listing disaggregation is provided as supplemental information, to maintain consistency in total counts between Part 1 and Part 2. This category is not required by the GPSC's requested levels of disaggregation.
3. Results are based on actual Fully-Mechanized (FM) and Partially Mechanized (PM) performance of LSRs submitted by KCI. KCI determined that a FOC was FM or 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. In addition, KCI placed all Fatal Reject responses (ERRs) within the FM category, in line with the BLS Service Quality Measurement (SQM) definitions.
4. 'Discrepancies' refer to those orders for which KCI was unable to obtain actual FM/PM classifications from BellSouth.
5. The disaggregated breakdown of FOC 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 V-2.9, Part 1: Firm Order Confirmation Timeliness, Summary View – First Re-test Data

Firm Order Confirmation Timeliness Detail						
Flow-Through						
	<3 hrs	3-24 hrs	24-36 hrs	36-48 hrs	48-72 hrs	>72 hrs
FT	33	22	3	1	0	0
% FT	56%	37%	5%	2%	0%	0%
Non-Flow-Through						
	<3 hrs	3-24 hrs	24-36 hrs	36-48 hrs	48-72 hrs	>72 hrs
NFT	20	42	6	2	0	4
% NFT	27%	57%	8%	3%	0%	5%
Discrepancy						
	<3 hrs	3-24 hrs	24-36 hrs	36-48 hrs	48-72 hrs	>72 hrs
Discrepancy	7	15	8	1	4	0
Discrepancy %	20%	43%	23%	3%	11%	0%

Table V-2.9, Part 2: Firm Order Confirmation Timeliness, Disaggregated View – First 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
2-wire Loop-Design	0	3	0	0	0	0
% 2-wire Loop-Design	0%	100%	0%	0%	0%	0%
2-wire Loop-Non Design	11	4	1	0	0	0
% 2-wire Loop-Non Design	69%	25%	6%	0%	0%	0%
2-wire Loop w/ INP – Design	0	0	0	0	0	0
% 2-wire Loop w/ INP – Design	0%	0%	0%	0%	0%	0%
2-wire Loop w/ INP – Non-Design	0	0	0	0	0	0
% 2-wire Loop w/ INP – Non Des.	0%	0%	0%	0%	0%	0%
2-wire Loop w/ LNP – Design	0	5	0	1	0	0
% 2-wire Loop w/ LNP – Design	0%	83%	0%	17%	0%	0%
2-wire Loop w/ LNP – Non-Design	0	4	2	0	0	0
% 2-wire Loop w/ LNP – Non-Des.	0%	67%	33%	0%	0%	0%
INP (Standalone)	0	0	0	0	0	0
% INP (Standalone)	0%	0%	0%	0%	0%	0%
LNP (Standalone)	0	0	0	0	0	0
% LNP (Standalone)	0%	0%	0%	0%	0%	0%
Switch Ports	1	0	0	0	0	0
% Switch Ports	100%	0%	0%	0%	0%	0%
Directory Listing	16	0	0	0	0	0
%Directory Listing	100%	0%	0%	0%	0%	0%
Loop-Port Combination	6	6	0	0	0	0

Firm Order Confirmation Timeliness Detail - Disaggregated View						
% Loop-Port Combination	50%	50%	0	0	0%	0
TOTALS	34	22	3	1	0	0
	57%	37%	5%	2%	0%	0%
Non-Flow-Through						
Service Type	**<3 hrs**	**3-24 hrs**	**24-36 hrs**	**36-48 hrs**	**48-72 hrs**	**>72 hrs**
2-wire Loop-Design	7	13	1	0	0	1
% 2-wire Loop-Design	32%	59%	5%	0%	0%	5%
2-wire Loop-Non Design	10	4	2	1	0	0
% 2-wire Loop-Non Design	59%	24%	12%	6%	0%	0%
2-wire Loop w/ INP - Design	0	0	0	0	0	0
% 2-wire Loop w/ INP - Design	0%	0%	0%	0%	0%	0%
2-wire Loop w/ INP - Non-Design	0	0	0	0	0	0
% 2-wire Loop w/ INP - Non Des.	0%	0%	0%	0%	0%	0%
2-wire Loop w/ LNP - Design	0	0	0	0	0	0
% 2-wire Loop w/ LNP - Design	0%	0%	0%	0%	0%	0%
2-wire Loop w/ LNP - Non-Design	0	0	0	0	0	0
% 2-wire Loop w/ LNP - Non-Design	0%	0%	0%	0%	0%	0%
INP (Standalone)	0	0	0	0	0	0
% INP (Standalone)	0%	0%	0%	0%	0%	0%
LNP (Standalone)	0	0	0	0	0	0
% LNP (Standalone)	0%	0%	0%	0%	0%	0%
Switch Ports	0	11	3	1	0	1
% Switch Ports	0%	69%	19%	6%	0%	6%
Directory Listings	3	4	0	0	0	0
% Directory Listings	43%	57%	0%	0%	0%	0%
Loop-Port Combination	0	10	0	0	0	2
% Loop-Port Combination	0%	83%	0%	0%	0%	17%
TOTALS	20	42	6	2	0	4
	27%	57%	8%	3%	0%	5%
Discrepancy						
Service Type	**<3 hrs**	**3-24 hrs**	**24-36 hrs**	**36-48 hrs**	**48-72 hrs**	**>72 hrs**
2-wire Loop-Design	3	0	0	0	0	0
% 2-wire Loop-Design	100%	0%	0%	0%	0%	0%
2-wire Loop-Non Design	2	0	0	0	2	0
% 2-wire Loop-Non Design	50%	0%	0%	0%	50%	0%
2-wire Loop w/ INP - Design	0	0	0	0	0	0
% 2-wire Loop w/ INP - Design	0%	0%	0%	0%	0%	0%
2-wire Loop w/ INP - Non-Design	0	0	0	0	0	0
% 2-wire Loop w/ INP - Non Des.	0%	0%	0%	0%	0%	0%
2-wire Loop w/ LNP - Design	0	7	1	1	0	0
% 2-wire Loop w/ LNP - Design	0%	78%	11%	11%	0%	0%
2-wire Loop w/ LNP - Non-Design	0	5	7	0	0	0
% 2-wire Loop w/ LNP - Non-Design	0%	42%	58%	0%	0%	0%
INP (Standalone)	0	0	0	0	0	0
% INP (Standalone)	0%	0%	0%	0%	0%	0%

Firm Order Confirmation Timeliness Detail - Disaggregated View						
LNP (Standalone)	0	2	0	0	0	0
% LNP (Standalone)	0%	100%	0%	0%	0%	0%
Switch Ports	0	1	0	0	0	0
% Switch Ports	0%	100%	0%	0%	0%	0%
Directory Listings	2	0	0	0	0	0
% Directory Listings	100%	0%	0%	0%	0%	0%
Loop-Port Combination	0	0	0	0	2	0
% Loop-Port Combination	0%	0%	0%	0%	100%	0%
TOTALS	7	15	8	1	4	0
	20%	43%	23%	3%	11%	0%

Notes:
(Notes apply to Table V-1.9, Part 1 and 2)

1. Initial re-test results reflect data from August 25, 2000 through November 15, 2000.
2. Directory Listing disaggregation is provided as supplemental information, to maintain consistency in total counts between Part 1 and Part 2. This category is not required by the GPSC's requested levels of disaggregation.
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. 'Discrepancies' refer to those orders for which KCI was unable to obtain actual FT/NFT classifications from BellSouth.
5. The disaggregated breakdown of FOC 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 V-2.10, Part 1: Firm Order Confirmation Timeliness, Summary View - Second Re-test Data

Firm Order Confirmation Timeliness Detail						
Flow-Through						
	<3 hrs	3-24 hrs	24-36 hrs	36-48 hrs	48-72 hrs	>72 hrs
FT	38	5	1	0	1	0
% FT	84%	11%	2%	0%	2%	0%

Table V-2.10, Part 2: Firm Order Confirmation Timeliness, Disaggregated View - Second 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
2-wire Loop Design	4	0	0	0	0	0
% 2-wire Loop-Design	100%	0%	0%	0%	0%	0%
2-wire Loop-Non Design	5	0	1	0	1	0
% 2-wire Loop-Non Design	71%	0%	14%	0%	14%	0%
2-wire Loop w/ LNP - Design	2	2	0	0	0	0
% 2-wire Loop w/ LNP - Design	50%	50%	0%	0%	0%	0%
2-wire Loop w/ LNP - Non Design	0	2	0	0	0	0
% 2-wire Loop w/ LNP - Non Design	0%	100%	0%	0%	0%	0%
Loop Port Combination	27	1	0	0	0	0
% Loop Port Combination	96%	4%	0%	0%	0%	0%
DL	0	0	0	0	0	0
% DL	0%	0%	0%	0%	0%	0%
TOTALS	38	5	1	0	1	0
	84%	11%	2%	0%	2%	0%

Notes:
(Notes apply to Table V-2.10, Parts 1 and 2)

1. Second 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. Timeliness information pertaining to the LNP service requests for which BellSouth was unable to provide actual FT/NFT data is not included in the above table.
4. Calculations are based on business days (i.e., weekends and BellSouth holidays are not counted).
5. The disaggregated breakdown of FOC 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 V-2.11, Part 1: Completion Notice Due Date (CN DD) vs. Completion Notification Delivery Date - Initial Test Data

	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	134	77%	29	22%	88%	91	68%	72%
CN Date Received = CN DD + 1 day	21	12%	2	10%	6%	19	900%	15%
CN Date Received = CN DD + 2 days	3	2%	0	0%	0%	3	100%	2%
CN Date Received = CN DD + 3-5 days	8	5%	1	13%	3%	7	88%	6%
CN Date Received = CN DD + >=6 days	7	4%	1	14%	3%	6	86%	5%
TOTAL	173	100%	33		100%	126		100%

Notes:

1. Initial test results include data from November 9, 1999 through May 31, 2000.
2. Flow-Through = The number of CNs received on within the specified timeframe that were Flow-Through LSRs.
3. % Flow-Through = The percentage of CNs received within the specified timeframe that were Flow-Through LSRs.
4. % of Total Flow-Through = The percentage of total Flow-Through LSRs that received CNs within the specified timeframe.
5. Non Flow-Through = The number of CNs received within the specified timeframe that were Non-Flow-Through LSRs.
6. % Non-Flow-Through = The percentage of CNs received within the specified timeframe that were Non-Flow- Through LSRs.
7. % of Total Non-Flow-Through = The percentage of total Non-Flow-Through LSRs that received CNs within the specified timeframe.
8. 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.
9. CN Timeliness information pertaining to the LNP service requests for which BellSouth was unable to provide actual FT/NFT data *is* included in the above table. However, the FT-specific detail in not included. As a result, the Total CNs Received will not equal the sum of FT Received and NFT Received columns.
10. Calculations are based on business days (i.e., weekends and BellSouth holidays are not counted).
11. Totals may not equal 100% due to rounding.

Table V-2.11, Part 2: Completion Notice Due Date (CN DD) vs. Completion Notification Delivery Date - Initial Test Data

	TOTAL		Product Delivery Analysis														
	CNs Received	% of Total CNs	No. of Loops[1]	Loops as a % of CNs Received[2]	% of Total Loops[3]	No. of Ports[1]	Ports as a % of CNs Received[2]	% of Total Ports[3]	No. Of Combos[1]	Combos as a % of CNs Received[2]	% of Total Combos[3]	No. NP[1]	NP as a % of CNs Received[2]	% of Total NP[3]	No. DL[1]	NP as a % of CNs Received[2]	% of Total DL[3]
CN Date Received = CN DD	134	77%	32	24%	80%	26	19%	72%	38	28%	78%	17	13%	74%	21	16%	84%
CN Date Received = CN DD + 1 day	21	12%	6	29%	15%	5	24%	14%	5	24%	10%	2	10%	9%	3	14%	12%
CN Date Received = CN DD + 2 days	3	2%	0	0%	0%	1	33%	3%	1	33%	2%	1	33%	4%	0	0%	0%
CN Date Received = CN DD + 3-5 days	8	5%	1	13%	3%	2	25%	6%	3	38%	6%	1	13%	4%	1	13%	4%
CN Date Received = CN DD + >=6 days	7	4%	1	14%	3%	2	29%	6%	2	29%	4%	2	2%	9%	0	0%	0%
TOTAL	173	100%	40		100%	36		100%	49		100%	23		100%	25		100%

Notes:

1. The number of CNs by product type (Loop, Port, Port-Loop Combo, Number Portability, Directory Listing) that received LSRs within the specified timeframe.
2. The percentage of CNs by product type (Loop, Port, Port-Loop Combo, Number Portability, Directory Listing) that received LSRs within the specified timeframe.
3. The percentage of Total LSRs by product type (Loop, Port, Port-Loop Combo, Number Portability, Directory Listing) that were received within the specified timeframe.
4. Calculations are based on business days (i.e. weekends and BellSouth holidays are not counted).
5. Loop with Number Portability LSRs are included in the NP column.
6. Totals may not equal 100% due to rounding.

Table V-2.12, Part 1: Completion Notice Due Date (CN DD) vs. Completion Notification Delivery Date – Re-test Data

	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	57	70%	20	35%	67%	37	65%	73%
CN Date Received = CN DD + 1 day	15	19%	5	33%	17%	10	67%	20%
CN Date Received = CN DD + 2 days	4	5%	3	75%	10%	1	25%	2%
CN Date Received = CN DD + 3-5 days	4	5%	2	50%	7%	2	50%	4%
CN Date Received = CN DD + >=6 days	1	1%	0	0%	0%	1	100%	2%
TOTAL	**81**	**100%**	**30**		**100%**	**51**		**100%**

Table V-2.12, Part 2: Completion Notice Due Date (CN DD) vs. Completion Notification Delivery Date - Re-test Data

	TOTAL		Product Delivery Analysis														
	CNs Received	% of Total CNs	No. of Loops[1]	Loops as a % of CNs Received[2]	% of Total Loops[3]	No. of Ports[1]	Ports as a % of CNs Received[2]	% of Total Ports[3]	No. Of Combos[1]	Combos as a % of CNs Received[2]	% of Total Combos[3]	No. NP[1]	NP as a % of CNs Received[2]	% of Total NP[3]	No. DL[1]	DL as a % of CNs Received[2]	% of Total DL[3]
CN Date Received = CN DD	40	83%	10	25%	91%	9	23%	82%	13	33%	72%	4	10%	100%	4	10%	100%
CN Date Received = CN DD + 1 day	5	10%	1	20%	9%	1	20%	9%	3	60%	17%	0	0%	0%	0	0%	0%
CN Date Received = CN DD + 2 days	0	0%	0	0%	0%	0	0%	0%	0	0%	0%	0	0%	0%	0	0%	0%
CN Date Received = CN DD + 3-5 days	2	4%	0	0%	0%	1	50%	9%	1	50%	6%	0	0%	0%	0	0%	0%
CN Date Received = CN DD + >=6 days	1	2%	0	0%	0%	0	0%	0%	1	100%	6%	0	0%	0%	0	0%	0%
TOTAL	48	100%	11		100%	11		100%	18		100%	4		100%	4		100%

	TOTAL		Product Delivery Analysis														
	CNs Received	% of Total CNs	No. of Loops[1]	Loops as a % of CNs Received[2]	% of Total Loops[3]	No. of Ports[1]	Ports as a % of CNs Received[2]	% of Total Ports[3]	No. Of Combos[1]	Combos as a % of CNs Received[2]	% of Total Combos[3]	No. NP[1]	NP as a % of CNs Received[2]	% of Total NP[3]	No. DL[1]	DL as a % of CNs Received[2]	% of Total DL[3]
CN Date Received = CN DD	57	70%	12	21%	52%	12	21%	80%	15	26%	65%	10	18%	91%	8	14%	89%
CN Date Received = CN DD + 1 day	15	19%	9	60%	39%	2	13%	13%	3	20%	13%	1	7%	9%	0	0%	0%
CN Date Received = CN DD + 2 days	4	5%	1	25%	4%	0	0%	0%	2	50%	9%	0	0%	0%	1	25%	11%

CN Date Received = CN DD + 3-5 days	4	5%	1	25%	4%	1	25%	7%	2	50%	9%	0	0%	0%	0	0%	0%
CN Date Received = CN DD + >=6 days	1	1%	0	0%	0%	0	0%	0%	1	100%	4%	0	0%	0%	0	0%	0%
TOTAL	81	100%	23		100%	15		100%	23		100%	11		100%	9		100%

Notes:

1. Re-test results include data from August 25, 2000 through November 15,2000.
2. The number of CNs by product type (Loop, Port, Port-Loop Combo, Number Portability, Directory Listing) that received LSRs within the specified timeframe.
3. The percentage of CNs by product type (Loop, Port, Port-Loop Combo, Number Portability, Directory Listing) that received LSRs within the specified timeframe.
4. The percentage of Total LSRs by product type (Loop, Port, Port-Loop Combo, Number Portability, Directory Listing) that were received within the specified timeframe.
5. Calculations are based on business days (i.e., weekends and BellSouth holidays are not counted).
6. Loop with Number Portability LSRs are included in the NP column.
7. Totals may not equal 100% due to rounding.

Table V-2.13: Desired Due Date from KCI's Local Service Request (LSR DDD) vs. Committed Due Date from BLS's Firm Order Confirmation (FOC DD)

	Total		Flow-Through Analysis				Delivery Method Analysis									
	Number	Percent	FT	% FT	NFT	%NFT	Loops	% Loops	Ports	% Ports	Port-Loop Combo	% Port-Loop Combo	NP	%NP	DL	% DL
LSR DDD = FOC DD	219	88%	37	80%	188	90%	55	95%	42	84%	52	79%	45	96%	25	93%
LSR DDD not = FOC DD	29	12%	9	20%	20	10%	3	5%	8	16%	14	21%	2	4%	2	7%
Total	**248**	**100%**	**46**	**100%**	**208**	**100%**	**58**	**100%**	**50**	**100%**	**66**	**100%**	**47**	**100%**	**27**	**100%**
Distribution of Earlier Due Dates																
DD = DDD - 1 day	3	38%	0	0%	3	43%	0	0%	1	33%	2	67%	0	0%	0	0%
DD = DDD - 2 days	1	13%	1	100%	0	0%	0	0%	1	33%	0	0%	0	0%	0	0%
DD = DDD - 3-5 days	3	38%	0	0%	3	43%	0	0%	1	33%	1	33%	0	0%	1	100%
DD = DDD - >=6 days	1	13%	0	0%	1	14%	1	100%	0	0%	0	0%	0	0%	0	0%
Total Earlier (DD before DDD)	**8**	**3%**	**1**	**3%**	**7**	**4%**	**1**	**2%**	**3**	**6%**	**3**	**5%**	**1**	**2%**	**1**	**4%**
Distribution of Later Due Dates																
DD = DDD + 1 day	10	48%	4	50%	6	46%	0	0%	4	80%	5	46%	1	50%	0	0%
DD = DDD + 2 days	4	19%	3	38%	1	8%	0	0%	1	20%	3	27%	0	0%	0	0%
DD = DDD + 3-5 days	3	14%	1	13%	2	15%	1	50%	0	0%	1	9%	1	50%	0	0%
DD = DDD + >=6 days	4	19%	0	0%	4	31%	1	50%	0	0%	2	18%	0	0%	1	100%
Total Later (DD after DDD)	**21**	**9%**	**8**	**25%**	**13**	**7%**	**2**	**3%**	**5**	**10%**	**11**	**17%**	**2**	**4%**	**1**	**4%**

Notes:

1. Initial test results include data from November 9, 1999 through May 31, 2000.
2. 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.
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. Totals may not equal 100% due to rounding.

Table V-2.14: Desired Due Date from KCI's Local Service Request (LSR DDD) vs. Committed Due Date from BLS's Firm Order Confirmation (FOC DD) - Re-test Data

	Total		Flow-Through Analysis				Delivery Method Analysis									
	Number	Percent	FT	% FT	NFT	% NFT	Loops	% Loops	Ports	% Ports	Port - Loop Combo	% Port - Loop Combo	NP	% NP	DL	% DL
LSR DDD = FOC DD	135	90%	53	87%	82	92%	50	91%	11	65%	20	83%	31	100%	23	100%
LSR DDD not = FOC DD	15	10%	8	13%	7	8%	5	9%	6	35%	4	17%	0	0%	0	0%
Total	**150**	**100%**	**61**	**100%**	**89**	**100%**	**55**	**100%**	**17**	**100%**	**24**	**100%**	**31**	**100%**	**23**	**100%**
Distribution of Earlier Due Dates																
DD = DDD - 1 day	1	50%	1	50%	0	0%	1	50%	0	0%	0	0%	0	0%	0	0%
DD = DDD - 2 days	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
DD = DDD - 3-5 days	1	50%	1	50%	0	0%	1	50%	0	0%	0	0%	0	0%	0	0%
DD = DDD - >=6 days	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Total Earlier (DD before DDD)	2	1%	2	3%	0	0%	2	4%	0	0%	0	0%	0	0%	0	0%
Distribution of Later Due Dates																
DD = DDD + 1 day	2	18%	2	50%	0	0%	0	0%	0	0%	4	100%	0	0%	0	0%
DD = DDD + 2 days	2	18%	0	0%	2	29%	1	33%	1	17%	0	0%	0	0%	0	0%
DD = DDD + 3-5 days	7	64%	2	50%	5	71%	2	67%	5	83%	0	0%	0	0%	0	0%
DD = DDD + >=6 days	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Total Later (DD after DDD)	11	7%	4	7%	7	8%	3	5%	6	35%	4	17%	0	0%	0	0%

Notes:

1. Re-test results include data from August 25, 2000 through October 9, 2000. The re-test has not yet completed.
2. 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.
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 BLS-provided data against the KCI-obtained data for consistency in FT/NFT classification. For those cases where KCI was unable to obtain Actual Flow-Through Indicators from BellSouth, KCI placed the orders in a FT/NFT category based on their *expected* FT status.
5. Totals may not equal 100% due to rounding.

Table V-2.53: Jeopardy Notification Timeliness Detail

Jeopardy Notification Detail - Disaggregated View Jeopardy Date Received versus FOC DD						
Service Type	>48 hrs before DD	24-48 hrs before DD	Same day as DD	24 hrs after DD	24-48 hrs after DD	TOTAL
UNE Loop-Port Combination	2	0	0	0	0	2
% Loop-Port Combination	40%	0%	0%	0%	0%	100%
UNE 2-wire Loop with Number Portability	0	0	0	0	0	0
% 2-wire Loop with NP	0%	0%	0%	0%	0%	0%
UNE 2-wire Loop without Number portability	3	0	0	0	0	0
% 2-wire Loop without NP	60%	0%	0%	0%	0%	100%
UNE Other	0	0	0	0	0	0
% UNE Other	0%	0%	0%	0%	0%	0%
TOTAL	5	0	0	0	0	0
	100%	0%	0%	0%	0%	0%

Notes:

1. Calculations are based on business days (i.e., weekends and BellSouth holidays are not counted).
2. KCI has included the following service order types in the "UNE Other" category: UNE Port; UNE Stand Alone Directory Listing; and UNE Stand Alone Number Portability.
3. The disaggregated breakdown of Jeopardy timeliness reflects the GPSC's disaggregation levels outlined in the June 6, 2000 - test-specific Service Quality Measurements.

Table V-2.16: Pre-Order-Order Integration Test Results

Pre-Order Response			Order Form		Comments
Form Name	Field Name	Format	Field Name	Format	
SAQ					
1.	USOC	5 A/N Characters	FEATURE	3-6 A/N Characters	The pre-order response returns the USOC data in the correct format to populate an order form. However, the corresponding field name in the PS order form is FEATURE.
2.	CLLI	11 A/N Characters	LST	11 A/N Characters	The pre-order response returns the CLLI data in the correct format to populate an order form. However, the corresponding field name in the LSR order form is LST.
3.	CIC	4 Numeric Characters	PIC/LPIC	4 A/N Characters	The pre-order response returns the PIC/LPIC data in the correct format to populate an order form. However, the RS order form has two fields, PIC and LPIC. There is no notation on the pre-order form indicating whether the number returned is the PIC or LPIC.
AVQ					
1.	HOUSE-NUM THOROUGHFARE STREET-NAME 1 STREET-SUFFIX	13 A/N Characters 35 A/N Characters 44 A/N Characters 4 A/N Characters	EU-STREET 1	35 A/N Characters	The order field EU-STREET 1 is constructed by concatenating the four fields from the pre-order query. The combined length of the four pre-order fields could exceed the maximum length of the order field.
2.	CITY	32 A/N Characters	EU-CITY	25 A/N Characters	The pre-order response returns the data in the correct format. However, the field name is different on the order form. The pre-order response could exceed the size limitation of the EU-CITY field on the order form.
3.	STATE	2 Alpha Characters	EU-STATE	2 Alpha Characters	The pre-order response returns the data in the correct format. However, the field name is different on the order form.

Pre-Order Response			Order Form		Comments
Form Name	Field Name	Format	Field Name	Format	
4.	FLR	14 A/N Characters	EU-FLOOR	12 A/N Characters	The pre-order returns the data in an incorrect format. The response added the FLR abbreviation to the data. The field name is also different on the order form. The pre-order response could exceed the size limitation of the EU-FLOOR field on the order form.
AAQ					
1.	COAVAIL DAYS	Mon-Sun (Y or N) XXXXXXX	DDD	YYMMDD	The pre-order response returned the data in Y or N form, specifying the days of the week available to perform service. The response is incompatible with the field DDD on the order form which requires Year, Month, and Date numerals.
2.	COAVAIL DAYS	Mon-Sun (Y or N) XXXXXXX	DDDO-CC	CC	The pre-order response returned the data in Y or N form, specifying the days of the week available to perform service. The response is incompatible with the field DDDO-CC order form, which requires two Century numerals.
CDD					
1.	CDD	CCYYMMDD	DDD DDDO-C	YYMMDD	The pre-order response returned the data in the form Century, Century, Year, Year, Month, Month, and Day, Day. The response is inconsistent with the order form requirement, which splits the date into two fields.
AVQ-TN					
1.	HOUSE-NUM THOROUGHFARE STREET-NAME 1 STREET SUFFIX	13 A/N Characters 10 A/N Characters 44 A/N Characters 4 A/N Characters	EU-STREET 1	35 A/N Characters	The order field EU-STREET 1 is constructed by concatenating the four fields from the pre-order query. The combined length of the four pre-order fields could exceed the maximum length of the order field.

Pre-Order Response			Order Form		Comments
Form Name	Field Name	Format	Field Name	Format	
2.	CITY	32 A/N Characters	EU-CITY	25 A/N Characters	The pre-order response returns the data in the correct format. However, the field name is different on the order form. The pre-order response could exceed the size limitation of the EU-CITY field on the order form.
3.	STATE	2 Alpha Characters	EU-STATE	2 Alpha Characters	The pre-order response returns the data in the correct format. However the field name is different on the order form.
4.	ZIPCODE	5 Numeric Characters	EU-ZIPCODE	5 Numeric Characters	The pre-order response does not return any data that can be used for the EU-ZIPCODE field on the order form. Therefore, an error was returned when submitting an order with this field left blank.
5.	UNIT-ROOM	RM 14 A/N Characters	EU-ROOM	9 A/N Characters	The pre-order response returns the data in an incorrect format. The response added the RM abbreviation to the data. The field name is also different on the order form. The pre-order response could exceed the size limitation of the EU-ROOM field on the order form field.
6.	ELEV-FLOOR	FLR 14 A/N Characters	EU-FLOOR	12 A/N Characters	The pre-order returns the data in an incorrect format. The response added the FLR abbreviation to the data. The field name is also different on the order form. The pre-order response could exceed the size limitation of the EU-FLOOR field on the order form.
TNAQ					
1.	TN	10 A/N Characters	TN	10 A/N Characters	The Telephone Numbers were returned in the correct format. The numbers were entered into the TNSQ pre-order.
TNSQ					
1.	TN	10 A/N Characters	TN	10 A/N Characters	The Telephone Numbers were confirmed in the correct format

C. Test Results: EDI/TAG Normal Volume Performance Test (O&P-3)

1.0 Description

The objective of the Electronic Data Interchange (EDI)/Telecommunications Access Gateway (TAG) Normal Volume Performance Test (O&P-3) was to evaluate BellSouth's Operating Support Systems (OSS) associated with ordering at specified volumes. Competitive Local Exchange Carriers (CLECs) submit orders to BellSouth's OSS via two primary Application Program Interfaces: EDI and TAG. O&P-3 evaluated BellSouth's ability to accurately and quickly process orders using the EDI and TAG interfaces under "normal" year-end 2001 (YE01) projected transaction load conditions[1] in the Reengineered Services, Installation and Maintenance Management System (RSIMMS) environment[2].

2.0 Methodology

This section summarizes the test methodology.

2.1 Business Process Description

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

2.2 Scenarios

Test scenarios for the EDI/TAG Normal Volume Test fall into two categories: Resale and Unbundled Network Elements (UNEs).

2.2.1 Resale

Appendix B-2: Resale Ordering Scenarios of the *Master Test Plan (MTP)*[3] describes 26 resale test scenarios. During the initial pre-testing of the BellSouth ordering systems, six of the scenarios would not flow-through[4] the system and therefore were not used for the test. From the remaining 20 scenarios, 20 test seeds were generated by applying BellSouth's OSS electronic ordering business rules[5] and logical business requirements to format orders. The following table describes each of the Resale scenarios used during this test:

---

[1] KCI forecasted hourly transaction rates for individual order and pre-order types drawing on data from current order and pre-order daily volume rates, BellSouth 2001 transaction forecasts and from CLEC 2001 transaction forecasts, where obtainable.

[2] See the *RSIMMS and Production System Review* for a description of the differences between the production and RSIMMS environments.

[3] Version 4.1, March 28, 2000.

[4] Flow-through is defined as electronic transmission through a gateway and acceptance into BellSouth's back-office ordering systems without manual intervention by a customer service representative.

[5] KCI used the *Local Exchange Ordering (LEO) Implementation Guide*, Volume 1, Issues 7J, 7K, 7L, 7M, 7N, 7O, 7P, and 7Q to apply BellSouth's business rules.

Table V-3.1: Resale Scenarios

Scenario Number	Scenario Category	Scenario Description
201	Resale	Migration "As Is" of a business customer from BellSouth with Plain Old Telephone Service (POTS) lines to CLEC.
202	Resale	Migration "As Is" of a residential customer with POTS line from BellSouth to CLEC.
204	Resale	Partial migration of a business customer with POTS lines from BellSouth to CLEC on a trial basis.
205	Resale	Migration "As Specified" of a residential POTS customer from BellSouth to CLEC.
206	Resale	Partial migration of a residential customers second POTS line from BellSouth to CLEC.
207	Resale	New business customer installs POTS lines.
208	Resale	New residence customer installs POTS line.
209	Resale	Add five POTS lines to existing CLEC business customer.
210	Resale	Add POTS line to existing residential CLEC customer.
213	Resale	Suspend POTS service of a CLEC residential customer (seasonal suspend).
214	Resale	Restore POTS service of a CLEC residential customer.
218	Resale	Change TN of CLEC residential customer with POTS line.
219	Resale	CLEC residential customer with two POTS lines requests TN change on ancillary line.
220	Resale	Change Long Distance Service Provider for a CLEC residential POTS customer.
221	Resale	Change Long Distance Service Provider for a CLEC business POTS customer.
222	Resale	Partially disconnect four of six business POTS lines.
223	Resale	Disconnect a CLEC business customers five POTS lines.
224	Resale	Disconnect a residential CLEC customers two POTS lines.
225	Resale	Change information in directory listing (DL) for a residential customer with POTS service.
226	Resale	CLEC residential customer with POTS line changes information on DL.

2.2.2 Unbundled Network Element (UNE)-based Scenarios

Appendix B-3: UNE Ordering Scenarios of the *MTP* describes 40 UNE test scenarios intended for use in the EDI/TAG Normal Volume Performance Test. During the initial pre-testing of the BellSouth ordering systems, 29 of the scenarios did not flow through the system and were therefore not used for the test[6]. From the remaining 11 scenarios, 11 test seeds were generated by applying BellSouth's OSS electronic ordering business rules and logical business requirements to format orders. The following table describes each of the UNE scenarios used during this test:

Table V-3.2: UNE Scenarios

Scenario Number	Scenario Category	Scenario Description
301	Loop	A CLEC orders two new SL1 unbundled analog loops from BLS in support of a customer's service request.
305	Loop	A CLEC orders two SL1 unbundled analog loops in support of a full migration service request from an existing BLS customer. The customer lines are migrated "as-specified" to the CLEC business.
350	Loop LNP	A CLEC orders two SL1 unbundled analog loops with LNP in support of a full migration service request from an existing BLS customer. The customer lines are migrated "as-specified" to the CLEC.
387	LNP	A CLEC orders Local Number Portability (LNP) for two lines in support of an existing resale customer migration to CLEC facilities.
395	Port	A CLEC orders two new business unbundled analog ports from BLS in support of a new business customer's service request.
397	Port	A CLEC orders two new residential unbundled analog ports from BLS in support of a new business customer's service request.
420	Combo	A CLEC orders two new business unbundled analog loop - port combinations from BLS in support of a new business customer's service request.
422	Combo	A CLEC orders two new residential unbundled analog loop - port combinations from BLS in support of a new residential customer's service request.
428	Combo	A CLEC orders two residential unbundled analog loop - port combinations from BLS for one of its resale residential customers.
445	Combo	An existing CLEC customer is moving to another state. The CLEC orders BLS to disconnect both of its unbundled loop-port combinations.
610	Combo	A CLEC changes the Billing Telephone Number (BTN) of an analog loop/port combination two-line residential customer.

[6] The volume test methodology is designed to assess electronic interface and back-end system processing capabilities, not manual processes. Therefore, orders that must fall out for manual processing are not included in the test.

2.3 Test Targets & Measures

The test target was the EDI and TAG interfaces and back-end systems[7] supporting order processing. 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 V-3.3: Test Target Cross-Reference

Sub-Process	Function	Evaluation Criteria	Test Cross-Reference
Submit Orders in Projected Normal Volumes	Create order transactions	Availability of Interface	O&P-3-1-1 O&P-3-1-2
		Timeliness of Response	O&P-3-3-1 O&P-3-3-2
	Send orders in LSR format	Availability of Interface	O&P-3-1-1 O&P-3-1-2
	Receive acknowledgements	Availability of Interface	O&P-3-1-1 O&P-3-1-2
		Accuracy of Response	O&P-3-2-1 O&P-3-2-1 O&P-3-4-1 O&P-3-4-2
		Timeliness of Response	O&P-3-3-1 O&P-3-3-2
	Receive FOCs or error/reject notifications	Availability of Interface	O&P-3-1-1 O&P-3-1-2
		Accuracy of Response	O&P-3-2-1 O&P-3-2-1 O&P-3-4-1 O&P-3-4-2
		Timeliness of Response	O&P-3-3-3 O&P-3-3-4

[7] The RSIMMS environment is designed to access copies of the PSIMMS, COFFI, BOCRIS, BOCABS and LMOS/Host systems, and to access the production COFIUSOC, ATLAS, RSAG, and DSAP systems.

2.4 Data Sources

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

Table V-3.4: Data Sources for EDI/TAG Normal Volume Performance Test (O&P-3)

Document	File Name	Location in Work Papers	Source
Local Exchange Ordering (LEO) Implementation Guide, Volume 1 Issues 7J, 7K, 7M, 7N, 7O, And 7P were utilized.	No Electronic Copy	O&P-1-B-1	BLS
LEO Implementation Guide, Volume 2. Issue 6B, July 99	No Electronic Copy	O&P-1-B-2	BLS
LEO Implementation Guide, Volume 3. Issue3A August 98	No Electronic Copy	O&P-1-B-3	BLS
LEO Implementation Guide, Volume 4. Issue 7F October 99	No Electronic Copy	O&P-1-B-4	BLS
Product and Services Interval Guide	No Electronic Copy	O&P-1-B-5	BLS
Local Servcie Request Error Messages (Version TCIF 7)	O&P_ errors.pdf	O&P-1-A-4	BLS
CLEC Service Order Tracking System (CSOTS) Users Guide	O&P_csots.pdf	O&P-1-A-1	BLS
Local Number Portability (LNP) Odering Guide (Issue 1b-October 1999)	O&P_LNPgd.pdf	O&P-1-A-3	BLS
EDI Interfacing Testing Agreement-LNP	O&P-EDIvalid.doc	O&P-1-A-8	BLS
Telecommunications Access Gateway (TAG) API Reference Guide, Versions 2.2.0.2, 2.2.0.4, 2.2.0.5, 2.2.0.7, 2.2.0.8, and 2.2.1.1	No Electronic Copy	PRE-1-A-3	BLS
BellSouth 3 Month Hourly Order History	Order history.xls	O&P-3-A-1	BLS
2000, 2001 Bellsouth LSR Volume Forecast	BSTFORCAST.xls	O&P-3-A-2	BLS
2000, 2001 Aggergated CLEC Forecast	CLEC_BST_FORECAST.xls	O&P-3-A-3	CLECs
YE2001 Normal and Peak Forecast Methedology	Fcast Summary.ppt	O&P-3-A-4	KCI
Volume Test RSIMMS Test Scenarios	Volum_Test_Cases.xls	O&P-3-A-5	KCI

Document	File Name	Location in Work Papers	Source
Local Exchange Ordering (LEO) Implementation Guide, Volume 1 Issues 7J, 7K, 7M, 7N, 7O, And 7P were utilized.	No Electronic Copy	O&P-1-B-1	BLS
Normal Volume Test Schedule	Schedule.xls	O&P-3-A-6	KCI
System Readiness Test Log	SRT_by_date_.doc	O&P-3-A-7	KCI
Results Data Tables	CD ROM	O&P-3-A-8	KCI
GPSC Order Adopting Standards and Benchmarks	GPSC_standards.tif	O&P-3-A-9	GPSC

2.4.1 *Data Generation/Volumes*

The TAG/EDI Normal Volume Test evaluated BellSouth's performance by sending approximately 35,000 orders with 118,000 associated pre-orders on two occasions over a ten-hour period. This test and the pre-ordering (PRE-4) volume test were executed concurrently.

Volumes for this test were determined by forecasting BellSouth's expected order volume for year-end 2001. To support forecast development, KCI obtained a detailed order history and anticipated transaction growth rates from CLECs and BellSouth. Transaction types were forecasted individually based on expected growth rates for each order and pre-order type. KCI also analyzed the distribution of transactions over the course of a normal business day. These data were then combined to determine the number and type of orders to be sent each hour. Orders were then scheduled for transmission to BellSouth via TAG and EDI. 60% of the transactions submitted were via the TAG interface, while 40% were via EDI[8].

Table V-3.5 shows the order volumes submitted during each day of the Normal Volume Test[9].

[8] Volumes for order transmission interface type (EDI or TAG) were determined based on current CLEC usage and projected implementation dates provided by CLECs. To best replicate the actual ordering process, EDI orders were "batched" prior to transmission to BellSouth.

[9] Two normal volume test cycles were initially planned. However, BellSouth performance failure required "re-testing" of Normal Volume Day 1 on three subsequent days. Following implementation of system fixes by BellSouth, KCI/HP conducted System Readiness Testing (SRTs) to verify that BellSouth's system was functioning. After these SRTs, additional Normal Volume Day 1 tests were conducted. Normal Volume Day 2 was executed successfully in one attempt.

Table V-3.5: Normal Test Generated Volumes

Delivery Method	Day 1 06/02/00	Day 1, Retest 1[10] 06/14/00	Day 1, Retest 2 06/20/00	Day 1, Retest 3 07/24/00	Day 2 08/1/00
DL	646	646	646	646	644
LNP	3,396	3,396	3,396	3,396	3,395
Loop with LNP	5,097	5,097	5,097	5,097	5,096
Resale	15,288	15,282	15,288	15,289	15,269
UNE Loop	1,988	1,987	1,988	1,988	1,986
UNE Loop-Port Combo	8,474	8,474	8,474	8,474	8,469
UNE Port	67	67	67	67	65
Total	**34,956**	**34,949**	**34,956**	**34,957**	**34,924**

2.5 *Evaluation Methods*

In preparation for the test, order transaction seeds were written according to BellSouth business rules, and loaded into the KCI transaction test system. These templates were then submitted to Hewlett Packard (HP) and to BellSouth during Systems Readiness Testing (SRT)[11]. SRT confirmed the functionality of HP and KCI's transactional systems and verified that orders would flow-through the BellSouth system. The order seeds were used as templates to build the order volumes used in the subsequent tests. Orders were submitted on a scheduled submission date and time determined by KCI prior to the start of the test. As appropriate, testers made final updates (e.g., desired due dates or other information) and processed the transactions.

The EDI/TAG Normal Volume Performance Test (O&P-3) evaluated BellSouth's interfaces and systems at year-end, 2001 (YE01) projected order volumes in BellSouth's RSIMMS environment for two ten-hour periods. This test was executed by submitting Resale and UNE orders against test-bed accounts[12] that were provisioned by BellSouth based on KCI's specifications and verified by KCI prior to initiation of the test.

In order to fully test the capacity of BellSouth's OSS supporting ordering under realistic load conditions, the test was conducted simultaneously with the TAG Normal Volume Performance Test (PRE-4), which tested the OSS components

[10] The Normal Volume test was originally scheduled for two test cycles. KCI conducted retests in accordance with the "test until you pass" testing philosophy specified in the *MTP*.

[11] KCI conducted a number of SRTs between April 11, 2000 and August 1, 2000. After completing several of the SRTs, BellSouth requested additional testing. These additional tests were used by BellSouth to ensure that its back-end systems and the Interfaces were functioning correctly.

[12] Refer to Section V, "Overview" for a detailed description of the Ordering and Provisioning test bed process and detail of accounts.

supporting pre-ordering. The order transaction loads were distributed geographically across four Central Offices (COs) in the state of Georgia. BellSouth established and configured customer test accounts prior to initiation of the test.

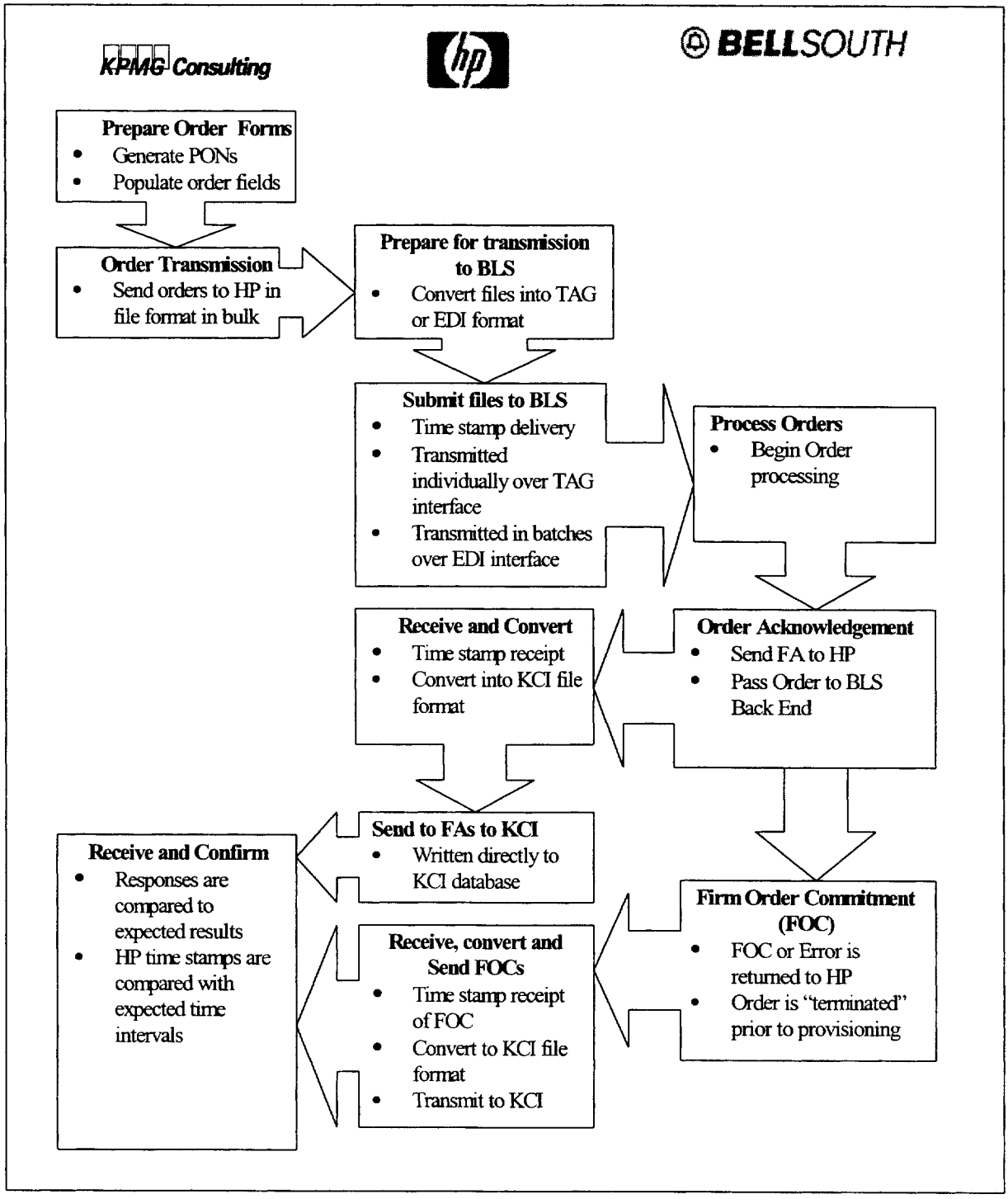
The test cases for the EDI/TAG Normal Volume Test were submitted in an automated fashion. Transactions were provided in bulk to HP for conversion from the business file format to the TAG and EDI formats. HP time-stamped and forwarded the transactions to BellSouth for processing according to the schedule provided by KCI. BellSouth processed the transactions and returned Functional Acknowledgements (FAs) and Firm Order Commitments (FOCs) to HP. The test process is depicted in Figure V-3.1.[13]

As pre-order and order volume transactions were submitted, error messages or positive responses were returned. A transaction was deemed complete if a Functional Acknowledgment (FA) and a Firm Order Confirmation (FOC) were received (or if an expected error was received). The results were logged and compared to expected ordering system functionality and business processes, as outlined in Section V, "Ordering & Provisioning Overview." A representative number of intentional errors were included in a specified number of orders. These orders were sent to test BellSouth's ability to process errors and to ensure that systems could not be programmed for automatic response. Fifty EDI orders and 75 TAG orders containing planned errors were submitted during the EDI/TAG Normal Volume Test.

Transactions (LSRs) were submitted and the results logged and compared to the expected ordering system functionality and business processes, as outlined in Section V, "Ordering & Provisioning Overview." The number, timeliness, and correctness of responses were recorded and evaluated.

[13] See Section V, "Ordering & Provisioning Overview" for a complete description of the file transfer process.

Figure V-3.1: O&P Normal Volume Test Process



2.6 *Analysis Methods*

The EDI/TAG Normal Volume Performance Test included a checklist of evaluation criteria developed by KCI during the initial phase of the BellSouth - Georgia OSS Evaluation. These evaluation criteria provided a framework of norms, standards and guidelines for the EDI/TAG Normal Volume Performance Test.

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.[14] In many cases, results in this section were calculated based on KCI/HP times tamps, which may differ significantly from the BellSouth time measurement points reported in the SQMs. For those evaluation criteria that do not map to the GPSC-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 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-3.6: O&P-3 Test Evaluation Criteria and Results[15]

Test Cross-Reference	Evaluation Criteria	Result	Comments
Interface Availability			
O&P-3-1-1	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[16]. BLS maintained 100% EDI availability throughout each iteration of the test[17].

[14] 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 test standards.

[15] See Tables V-3.7 through V-3.11 for detailed results on each test day. Percentages are rounded to the nearest whole number.

[16] Regularly scheduled hours of availability for the TAG/EDI interfaces are published on the BellSouth Interconnection Web site (www.interconnection.bellsouth.com/oss/oss_hour.html). Notices of specific

Test Cross-Reference	Evaluation Criteria	Result	Comments
O&P-3-1-2	TAG 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[16]. HP continuously sent orders and pre-orders throughout each iteration of the test. While connectivity was maintained throughout the test, HP and BLS conducted "coordinated bounces" of their servers on several occasions. These system restarts were conducted primarily to recover BLS back-end functionality. The combined duration of downtime resulting from these restarts was less than 0.5% of test time.
System Functionality			
O&P-3-2-1	The EDI interface provides expected system responses[18].	Satisfied	The KCI standard is 99% of expected system responses received. The Normal Volume test results are as follows: Day 1- Initial: – 64% (9,001/13,983) of expected FAs and 63% (8,748/13,983) of expected FOCs were received. Day 1 - Retest 1: – 100% (13,979 /13,979) of expected FAs and 94% (13,079 /13,979) of expected FOCs were received. Day 1 - Retest 2: – 100% (13,983/13,983) of expected FAs and 75% (10,506/13,983) of expected FOCs were received. Day 1 - Retest 3: – 100% (13,983/13,983) of expected FAs and 99% (13,872/13,983) of expected FOCs were received.

scheduled system downtime (e.g., for a new system release or fix) are communicated through Carrier Notifications posted on the BellSouth Web site.

[17] During the execution of the Normal Volume test, KCI/HP continuously submitted transactions, via the EDI interface, according to a predetermined schedule. During this period, HP maintained continuous connectivity with BellSouth via EDI and successfully transmitted all of the orders at their scheduled times.

[18] An expected system response is defined for this criterion as an FA for each order, an FOC for each correctly formatted error, and an error or clarification (ERR/CLR) for each invalid service request.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			Day 2: – 100% (13,973/13,973) of expected FAs and 99% (13,838/13,973) of expected FOCs were received.
O&P-3-2-2	The TAG interface provides expected system responses[18].	Satisfied	The KCI standard is 99% of expected system responses received. The Normal Volume test results are as follows: Day 1 - Initial – 100% (20,906/20,951) of expected FAs and 97% (20,348/20,951) of expected FOCs were received. Day 1 - Retest 1: – 84% (17,524/20,968) of expected FAs and 77% (16,073/20,968) of expected FOCs were received. Day 1 - Retest 2: – 100% (20,880/20,973) of expected FAs were received and 99% (20,725/20,973) of expected FOCs were received. Day 1 - Retest 3: – 100% (20,929/20,974) of expected FAs and 99% (20,829/20,974) of expected FOCs were received. Day 2: – 99% (20,904/20,951) of expected FAs and 99% (20,776/20,951) of expected FOCs were received.
Timeliness of System Response[19]			
O&P-3-3-1	BLS's EDI interface provides timely Functional Acknowledgements (FAs).	Not Satisfied	The KCI standard is 95% of FAs received in less than 30 minutes. Performance on only one test day met or exceeded the test standard. Results from LSRs submitted during the Normal Volume test: Day 1 - Initial:

[19] See Tables V-3.7 through 3.11 and Figures V-3.2 and V-3.3 for additional detail on timeliness of response results.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			– 2% (21/9,001) of FAs were received within 30 minutes. Day 1 - Retest 1: – 93% (12,978/13,979) of FAs were received within 30minutes . Day 1 - Retest 2: – 30% (4,122/13,983) of FAs were received within 30 minutes. Day 1 - Retest 3: – 18% (2,523/13,983) of FAs were received within 30 minutes[20]. Day 2: – 98% (13,734/13,973) of FAs were received within 30 minutes.
O&P-3-3-2	BLS's TAG interface provides timely Functional Acknowledgements (FAs).	Satisfied	The KCI standard is 95% of FAs received in less than 30 minutes. Results from LSRs submitted during the Normal Volume test are: Day 1 - Initial: – 100% (20,906/20,906) of FAs were received within 30 minutes. Day 1 - Retest 1: – 100% (17,482/17,524) of FAs were received within 30 minutes. Day 1 - Retest 2: – 100% (20,866/20,880) of FAs were received within 30 minutes Day 1 Retest 3: – 100% (20,929/20,929) of FAs were received within 30 minutes Day 2: – 100% (20,904/20,904) of FAs were received within 30 minutes.

[20] All Functional Acknowledgements were received within 90 minutes of the LSR being sent.

Test Cross-Reference	Evaluation Criteria	Result	Comments
O&P-3-3-3	BLS's EDI interface provides timely Firm Order Confirmations (FOCs).	Satisfied	The GPSC-approved standard for flow-through (FT) FOCs is 95% received within three hours. LSRs submitted during the Normal Volume Day tests received FOCs within the following timeframes[21]: Day 1 - Initial: – 1% (79/8,748) of FOCs were received within three hours[22]. Day 1 - Retest 1: – 2% (269/13,079) of FOCs were received within three hours. Day 1 - Retest 2: – 81% (8,488/10,506) of FOCs were received within three hours. Day 1 - Retest 3: – 100% (13,872/13,872) of FOCs were received within three hours. Day 2: – 100% (13,838/13,838) of FOCs were received within three hours.
O&P-3-3-4	BLS's TAG interface provides timely Firm Order Confirmations (FOCs).	Satisfied	The GPSC-approved standard for flow-through (FT) FOCs is 95% received within three hours. LSRs submitted during the Normal volume test yielded the following results[21]: Day 1 - Initial: – 34% (6,922/20,348) of FOCs were received within three hours. Day 1 - Retest 1: – 33% (5,251/16,073) of FOCs were received within three hours. Day 1 - Retest 2: – 100% (20,725/20,725) of FOCs were received within three hours.

[21] BellSouth implemented system fixes after unsuccessful volume days prior to KCI's retest activity.
[22] BellSouth experienced internal system problems during the initial hours of the test. These problems resulted in an order backlog that existed for the remainder of the day.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			Day 1 Retest 3: – 100% (20,829/20,829) of FOCs were received within three hours. Day 2: – 100% (20,776/20,776) of FOCs were received within three hours.
Accuracy of System Response			
O&P-3-4-1	BLS systems provide accurate[23] Firm Order Confirmations (FOCs).	Satisfied	The KCI standard is 95% accuracy of response type. Of the FOCs analyzed, 100% were correct relative to the LSR submitted (i.e. were received in response to a correctly formatted LSR).
O&P-3-4-2	BLS systems provide accurate order errors (ERRs)/clarifications (CLRs).	Satisfied	The KCI standard is 95% accuracy of response type. Of the ERRs/CLRs analyzed, 100% were correct relative to the LSR submitted (i.e. incorrectly formatted LSR received expected response).

[23] For this criterion, KCI defined an accurate response to be a system response that is consistent with the technical specifications for EDI/ TAG responses *and* to be consistent with the transaction that initiated the response (e.g., a correctly formatted LSR received a FOC). In the case of error/clarification responses, KCI verified that these were only received for incorrectly formatted LSRs. The contents of the response files (FOCs/ERRs/CLRs) were evaluated for accuracy and completeness for purposes of this test on a sample basis only. A more complete accuracy evaluation for conformance to the BellSouth business rules was undertaken in feature/function testing (OP-1, OP-2, and PO&P-11).

Table V-3.7: Day-One Normal Volume Re-Test Three (July 24, 2000) Acknowledgement Detailed Results[24]

Product Type	Interface	LSR Sent	Number of ACKs Received	Percentage of Expected ACKs Received	ACK Received < 30 min	Percentage of ACKs received < 30 min	Average LSR To ACK Business Minutes
DL	EDI	258	258	100.0%	55	21.3%	38.919
LNP	EDI	1,358	1,358	100.0%	274	20.2%	39.490
Loop with LNP	EDI	2,039	2,039	100.0%	383	18.8%	39.045
Resale	EDI	6,118	6,118	100.0%	1,028	16.8%	39.093
UNE Loop	EDI	795	795	100.0%	162	20.4%	38.216
UNE Loop-Port Combo	EDI	3,389	3,389	100.0%	617	18.2%	39.232
UNE Port	EDI	26	26	100.0%	4	15.4%	39.615
Subtotal		13,983	13,983	100.0%	2,523	18.0%	39.106
DL	TAG	388	373	96.1%	373	100.0%	0.003
LNP	TAG	2,038	2,038	100.0%	2,038	100.0%	0.001
Loop with LNP	TAG	3,058	3,058	100.0%	3,058	100.0%	0.000
Resale	TAG	9,171	9,156	99.8%	9,156	100.0%	0.001
UNE Loop	TAG	1,193	1,178	98.7%	1,178	100.0%	0.002
UNE Loop-Port Combo	TAG	5,085	5,085	100.0%	5,085	100.0%	0.001
UNE Port	TAG	41	41	100.0%	41	100.0%	0.024
Subtotal		20,974	20,929	99.8%	20,929	100.0%	0.001
Total		34,957	34,912	99.9%	23,452	67.2%	15.663

[24] Data from the two successful test cycles are presented.

Table V-3.8: Day-One Normal Volume Re-Test Three (July 24, 2000) FOC Detailed Results

Product Type	Interface	LSRs Sent	Number of FOCs Received	Percentage of Expected FOCs Received	FOCs Received < 3 hrs	Percentage of FOCs Received < 3 hrs	Average LSR To FOC Business Minutes
DL	EDI	258	248	96.1%	248	100.0%	83.477
LNP	EDI	1,358	1,351	99.5%	1,351	100.0%	72.493
Loop with LNP	EDI	2,039	2,039	100.0%	2,039	100.0%	70.820
Resale	EDI	6,118	6,045	98.8%	6,045	100.0%	81.913
UNE Loop	EDI	795	784	98.6%	784	100.0%	86.537
UNE Loop-Port Combo	EDI	3,389	3,389	100.0%	3,389	100.0%	88.645
UNE Port	EDI	26	16	61.5%	16	100.0%	51.346
Subtotal		13,983	13,872	99.2%	13,872	100.0%	81.264
DL	TAG	388	373	96.1%	373	100.0%	19.928
LNP	TAG	2,038	2,036	99.9%	2,036	100.0%	11.784
Loop with LNP	TAG	3,058	3,058	100.0%	3,058	100.0%	12.267
Resale	TAG	9,171	9,075	99.0%	9,075	100.0%	17.675
UNE Loop	TAG	1,193	1,178	98.7%	1,178	100.0%	20.431
UNE Loop-Port Combo	TAG	5,085	5,083	100.0%	5,083	100.0%	20.978
UNE Port	TAG	41	26	63.4%	26	100.0%	12.171
Subtotal		20,974	20,829	99.3%	20,829	100.0%	17.301
Total		34,957	34,701	99.3%	34,701	100.0%	42.870

Table V-3.9: Day-Two Normal Volume Test (August 1, 2000) Acknowledgement Detailed Results

Product Type	Interface	LSR Sent	Number of ACKs[25] Received	Percentage of Expected ACKs Received	ACK Received < 30 min	Percentage of ACKs received < 30 min	Average LSR To ACK Business Minutes
DL	EDI	258	258	100.0%	248	96.1%	15.298
LNP	EDI	1,358	1,358	100.0%	1,358	100.0%	14.655
Loop with LNP	EDI	2,039	2,039	100.0%	2,025	99.3%	15.077
Resale	EDI	6,108	6,108	100.0%	5,956	97.5%	15.029
UNE Loop	EDI	795	795	100.0%	786	98.9%	15.557
UNE Loop-Port Combo	EDI	3,389	3,389	100.0%	3,337	98.5%	15.683
UNE Port	EDI	26	26	100.0%	24	92.3%	13.577
Subtotal		13,973	13,973	100.0%	13,734	98.3%	15.191
DL	TAG	386	371	96.1%	371	100.0%	0.034
LNP	TAG	2,037	2,037	100.0%	2,037	100.0%	0.021
Loop with LNP	TAG	3,057	3,057	100.0%	3,057	100.0%	0.020
Resale	TAG	9,161	9,145	99.8%	9,145	100.0%	0.021
UNE Loop	TAG	1,191	1,175	98.7%	1,175	100.0%	0.025
UNE Loop-Port Combo	TAG	5,080	5,080	100.0%	5,080	100.0%	0.022
UNE Port	TAG	39	39	100.0%	39	100.0%	0.103
Subtotal		20,951	20,904	99.8%	20,904	100.0%	0.022
Total		34,924	34,877	99.9%	34,638	99.3%	6.099

[25] An ACK is a Functional Acknowledgement, which is an electronic acknowledgement sent to a CLEC from BellSouth verifying that BellSouth has received a firm order.

Table V-3.10: Day-Two Normal Volume Test (August 1, 2000) FOC Detailed Results

Product Type	Interface	LSRs Sent	Number of FOCs Received	Percentage of Expected FOCs Received	FOCs Received < 3 hrs	Percentage of FOCs Received < 3 hrs	Average LSR To FOC Business Minutes
DL	EDI	258	248	96.1%	248	100.0%	56.740
LNP	EDI	1,358	1,358	100.0%	1,358	100.0%	38.830
Loop with LNP	EDI	2,039	1,955	95.9%	1,955	100.0%	41.370
Resale	EDI	6,108	6,087	99.7%	6,087	100.0%	51.715
UNE Loop	EDI	795	785	98.7%	785	100.0%	57.470
UNE Loop-Port Combo	EDI	3,389	3,389	100.0%	3,389	100.0%	59.510
UNE Port	EDI	26	16	61.5%	16	100.0%	26.038
Subtotal		13,973	13,838	99.0%	13,838	100.0%	51.285
DL	TAG	386	371	96.1%	371	100.0%	20.648
LNP	TAG	2,037	2,037	100.0%	2,037	100.0%	11.765
Loop with LNP	TAG	3,057	2,960	96.8%	2,960	100.0%	11.782
Resale	TAG	9,161	9,130	99.7%	9,130	100.0%	17.942
UNE Loop	TAG	1,191	1,174	98.6%	1,174	100.0%	20.976
UNE Loop-Port Combo	TAG	5,080	5,080	100.0%	5,080	100.0%	21.589
UNE Port	TAG	39	24	61.5%	24	100.0%	10.308
Subtotal		20,951	20,776	99.2%	20,776	100.0%	17.561
Total		34,924	34,614	99.1%	34,614	100.0%	31.043

The figures below depict the number of orders received for each response time. Normal volume day two had 4004 FOCs that were received within one minute of the LSR being sent to BellSouth; these data are not depicted on the chart.

Figure V-3.2: Normal Volume Test Day One - Re-Test Three

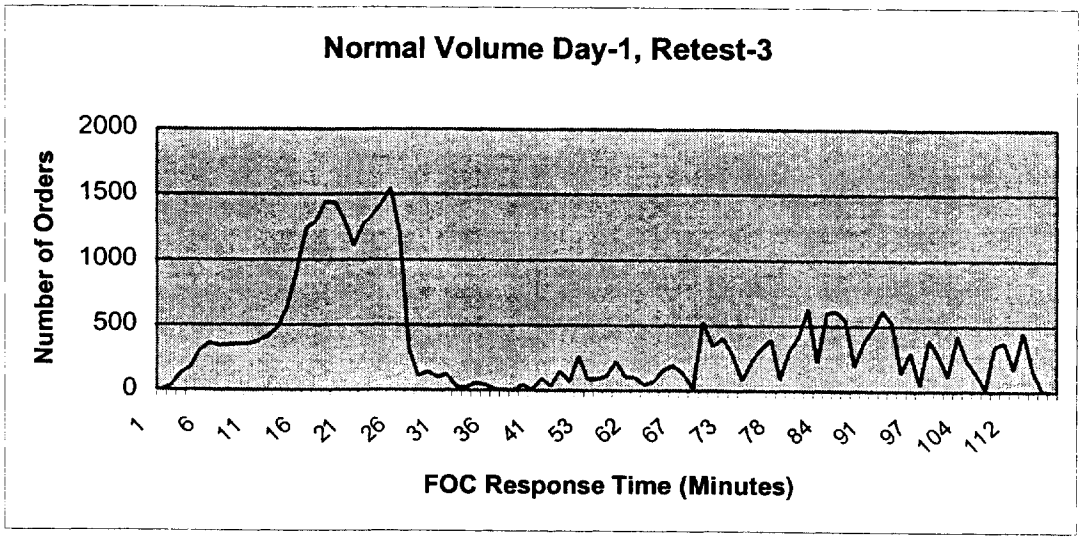
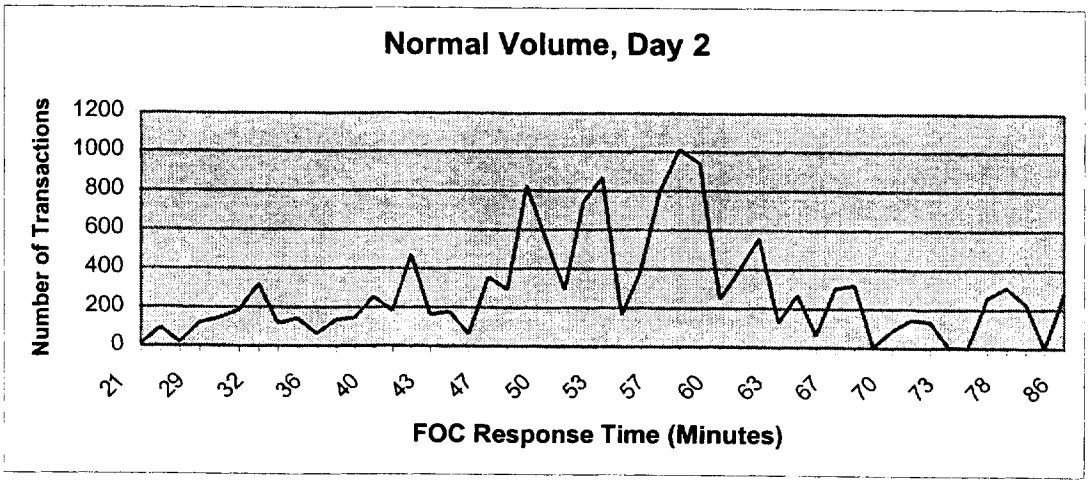


Figure V-3.3: Normal Volume Test Day Two



D. Test Results: EDI/TAG Peak Volume Performance Test (O&P-4)

1.0 Description

The objective of the Electronic Data Interchange (EDI) / Telecommunications Access Gateway (TAG) Peak Volume Performance Test (O&P-4) was to evaluate BellSouth's Operating Support Systems (OSS) associated with ordering at specified volumes. Competitive Local Exchange Carriers (CLECs) submit orders to BellSouth's OSS via two primary Application Program Interfaces: EDI and TAG. O&P-4 evaluated BellSouth's ability to accurately and quickly process orders using the EDI and TAG interfaces under "peak," year-end 2001 (YE01) projected transaction load conditions[1] in the Reengineered Services, Installation and Maintenance Management System (RSIMMS) environment[2].

2.0 Methodology

This section summarizes the test methodology.

2.1 Business Process Description

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

2.2 Scenarios

Test scenarios for the EDI/TAG Peak Volume Test fall into two categories: Resale and Unbundled Network Elements (UNEs).

2.2.1 Resale

Appendix B-2: Resale Ordering Scenarios of the *Master Test Plan (MTP)*[3] describes 26 resale test scenarios. During the initial pre-testing of the BellSouth ordering systems, six of the scenarios would not flow-through[4] the system and therefore were not used for the test[5]. From the remaining 20 scenarios, 20 test seeds were generated by applying BellSouth's OSS electronic ordering business rules[6] and

---

[1] KCI forecasted hourly transaction rates for individual order and pre-order types drawing on data from current order and pre-order daily volume rates, BellSouth 2001 transaction forecasts and from CLEC 2001 transaction forecasts, where obtainable.

[2] See the *RSIMMS and Production System Review* for a description of the differences between the production and RSIMMS environment.

[3] Version 4.1, March 28, 2000.

[4] Flow-through is defined as electronic transmission through a gateway and acceptance into BellSouth's back-office ordering systems without manual intervention by a customer service representative.

[5] The volume test methodology is designed to assess electronic interface and back-end system processing capabilities, not manual processes. Therefore, orders that must fall out for manual processing are not included in the volume test.

[6] KCI used the *Local Exchange Ordering (LEO) Implementation Guide*, Volume 1. Issues 7J, 7K, 7L, 7M, 7N, 7O, 7P and 7Q, to apply BellSouth's business rules.

logical business requirements to format orders. The following table describes each of the Resale scenarios used during this test:

Table V-4.1: Resale Scenarios

Scenario Number	Scenario Category	Scenario Description
201	Resale	Migration "As Is" of a business customer from BellSouth with Plain Old Telephone Service (POTS) lines to CLEC.
202	Resale	Migration "As Is" of a residential customer with POTS line from BellSouth to CLEC.
204	Resale	Partial migration of a business customer with POTS lines from BellSouth to CLEC on a trial basis.
205	Resale	Migration "As Specified" of a residential POTS customer from BellSouth to CLEC.
206	Resale	Partial migration of a residential customer's second POTS line from BellSouth to CLEC.
207	Resale	New business customer installs POTS lines.
208	Resale	New residence customer installs POTS line.
209	Resale	Add five POTS lines to existing CLEC business customer.
210	Resale	Add POTS line to existing residential CLEC customer.
213	Resale	Suspend POTS service of a CLEC residential customer (seasonal suspend).
214	Resale	Restore POTS service of a CLEC residential customer.
218	Resale	Change TN of CLEC residential customer with POTS line.
219	Resale	CLEC residential customer with two POTS lines requests TN change on ancillary line.
220	Resale	Change Long Distance Service Provider for a CLEC residential POTS customer.
221	Resale	Change Long Distance Service Provider for a CLEC business POTS customer.
222	Resale	Partially disconnect four of six business POTS lines.
223	Resale	Disconnect a CLEC business customers five POTS lines.
224	Resale	Disconnect a residential CLEC customers two POTS lines.
225	Resale	Change information in directory listing (DL) for a residential customer with POTS service.
226	Resale	CLEC residential customer with POTS line changes information on DL.

2.2.2 UNE-based Scenarios

Appendix B-3: UNE Ordering Scenarios of the *MTP* describes 40 UNE test scenarios intended for use in the EDI/TAG Peak Volume Performance Test[7]. During the initial pre-testing of the BellSouth ordering systems, 29 of the scenarios did not flow through the system and were therefore not used for the test. From the remaining 11 scenarios, 11 test seeds were generated by applying BellSouth's OSS electronic ordering business rules and logical business requirements to format orders. The following table describes each of the UNE scenarios used during this test:

Table V-4.2: UNE Scenarios

Scenario Number	Scenario Category	Scenario Description
301	Loop	A CLEC orders two new SL1 unbundled analog loops from BLS in support of a customer's service request.
305	Loop	A CLEC orders two SL1 unbundled analog loops in support of a full migration service request from an existing BLS customer. The customer lines are migrated "as-specified" to the CLEC business.
350	Loop LNP	A CLEC orders two SL1 unbundled analog loops with LNP in support of a full migration service request from an existing BLS customer. The customer lines are migrated "as-specified" to the CLEC.
387	LNP	A CLEC orders Local Number Portability (LNP) for two lines in support of an existing resale customer migration to CLEC facilities.
395	Port	A CLEC orders two new business unbundled analog ports from BLS in support of a new business customer's service request.
397	Port	A CLEC orders two new residential unbundled analog ports from BLS in support of a new business customer's service request.
420	Combo	A CLEC orders two new business unbundled analog loop - port combinations from BLS in support of a new business customer's service request.
422	Combo	A CLEC orders two new residential unbundled analog loop - port combinations from BLS in support of a new residential customer's service request.
428	Combo	A CLEC orders two residential unbundled analog loop - port combinations from BLS for one of its resale residential customers.
445	Combo	An existing CLEC customer is moving to another state. The CLEC orders BLS to disconnect both of its unbundled loop-port combinations.
610	Combo	A CLEC changes the (Billing Telephone Number) BTN of an analog loop/port combination two-line residential customer.

[7] The volume test methodology is designed to assess electronic interface and back-end system processing capabilities, not manual processes. Therefore orders that must fall out for manual processing are not included in the volume test.

2.3 *Test Targets & Measures*

The test targets were the EDI and TAG interfaces and back-end systems[8] supporting order processing. 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 V-4.3: Test Target Cross-Reference

Sub-Process	Function	Evaluation Criteria	Test Cross-Reference
Submit Orders in Projected Peak Volumes	Create order transactions	Availability of Interface	O&P-4-1-1 O&P-4-1-2
		Timeliness of Response	O&P-4-3-1 O&P-4-3-2
	Send orders in LSR format	Availability of Interface	O&P-4-1-1 O&P-4-1-2
	Receive acknowledgements	Availability of Interface	O&P-4-1-1 O&P-4-1-2
		Accuracy of Response	O&P-4-2-1 O&P-4-2-1 O&P-4-4-1 O&P-4-4-2
		Timeliness of Response	O&P-4-3-1 O&P-4-3-2
	Receive FOCs or error/reject notifications	Availability of Interface	O&P-4-1-1 O&P-4-1-2
		Accuracy of Response	O&P-4-2-1 O&P-4-2-1 O&P-4-4-1 O&P-4-4-2
		Timeliness of Response	O&P-4-3-3 O&P-4-3-4

[8] The RSIMMS environment is designed to access copies of the PSIMMS, COFFI, BOCRIS BOCABS and the LMOS/Hose systems, and to access the production COFIUSOC, ATLAS, RSAG, and DSAP systems.

2.4 Data Sources

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

Table V-4.4: Data Sources for EDI/TAG Peak Volume Performance Test (O&P-4)

Document	File Name	Location in Work Papers	Source
Telecommunications Access Gateway (TAG) API Reference Guide, Versions 2.2.0.2, 2.2.0.4, 2.2.0.5, 2.2.0.7, 2.2.0.8, and 2.2.1.1	No Electronic Copy	PRE-1-A-3	BLS
Local Exchange Ordering (LEO) Implementation Guide, Volume 1 Issues 7J, 7K, 7M, 7N, 7O, And 7P were utilized.	No Electronic Copy	O&P-1-B-1	BLS
LEO Implementation Guide, Volume 2. Issue 6B, July 99	No Electronic Copy	O&P-1-B-2	BLS
LEO Implementation Guide, Volume 3. Issue3A August 98	No Electronic Copy	O&P-1-B-3	BLS
LEO Implementation Guide, Volume 4. Issue 7F October 99	No Electronic Copy	O&P-1-B-4	BLS
Product and Services interval Guide	No Electronic Copy	O&P-1-B-5	BLS
Local Servcie Request Error Messages (Version TCIF 7)	O&P_ errors.pdf	O&P-1-A-4	BLS
CLEC Service Order Tracking System (CSOTS) Users Guide	O&P_csots.pdf	O&P-1-A-1	BLS
Local Number Portability (LNP) Odering Guide (Issue 1b-October 1999)	O&P_LNPgd.pdf	O&P-1-A-3	BLS
BellSouth 3 Month Hourly Order History	Order history.xls	O&P-4-A-1	BLS
2000, 2001 Bellsouth LSR Volume Forecast	BSTFORCAST.xls	O&P-4-A-2	BLS
2000, 2001 Aggergated CLEC Forecast	CLEC_BST_FORECAST.xls	O&P-4-A-3	CLECs
YE2001 Normal and Peak Forecast Methodology	Fcast Summary.ppt	O&P-4-A-4	KCI
Volume Test RSIMMS Test Scenarios	Volum_Test_Cases.xls	O&P-4-A-5	KCI
Peak Volume Test Schedule	Schedule.xls	O&P-4-A-6	KCI
System Readiness Test Log	SRT_by_date_.doc	O&P-4-A-7	KCI
Results Data Tables	CD ROM	O&P-4-A-8	KCI
GPSC Order Adopting Standards and Benchmarks	GPSC_standards.tif	O&P-4-A-9	GPSC

2.4.1 Data Generation/Volumes

The TAG/EDI Peak Volume Test tested BellSouth's performance by sending approximately 43,000 orders with 118,000 associated pre-orders on two occasions over an eight-hour period. This test and the pre-order (PRE-5) peak volume test were executed concurrently.

Volumes for this test were determined by forecasting BellSouth's expected order volume for year-end 2001. To support forecast development, KCI obtained a detailed ordering history and anticipated transaction growth rates from CLECs and BellSouth. Transaction types were forecasted individually based on expected growth rates for each order and pre-order type. KCI also analyzed the distribution of transactions over the course of a normal business day. These data were then combined to determine the number and types of orders to be sent each hour. 60% of transactions submitted were via the TAG interface, while 40% were via EDI[9].

Peak Volumes were defined as 150% of transaction volume levels during the busiest consecutive eight hours of the Normal Volume Test.

Table V-4.5 shows the order volumes submitted during each day of the Peak Volume Test[10].

Table V-4.5: Peak Volume Test Generated Volumes

Delivery Method	Day 1, 07/10/00	Day 1, Retest 1[11], 07/13/00	Day 2, 07/17/00
DL	825	825	825
LNP	4,435	4,435	4,435
Loop with LNP	4,441	4,440	4,441
Resale	19,894	19,902	19,896
UNE Loop	2,572	2,571	2,573

[9] Volumes for order transmission interface type (EDI or TAG) were determined based on current CLEC usage and projected implementation dates provided by CLECs. To best replicate the actual ordering process, EDI orders were "batched" prior to transmission to BellSouth.

[10] Two peak volume test cycles were initially planned. However, BellSouth performance failure required "re-testing" of Peak Volume Day 1 on one subsequent day. Following implementation of system fixes by BellSouth, KCI conducted SRTs to verify that BellSouth's system was functioning. After these SRTs, additional Peak Volume Day 1 tests were conducted. Peak Volume Day 2 was executed successfully in one attempt.

[11] The Peak volume test was originally scheduled for two testing days. Upon analyzing data from Day 1, KCI chose to conduct a retest in accordance with the "test until pass" testing philosophy detailed in the *MTP*.

Delivery Method	Day 1, 07/10/00	Day 1, Retest 1[11], 07/13/00	Day 2, 07/17/00
UNE Loop-Port Combo	11,054	11,052	11,054
UNE Port	71	69	71

2.5 *Evaluation Methods*

In preparation for the test, order transaction seeds were written according to BellSouth business rules and loaded into the KCI transaction test system. These templates were then submitted to Hewlett Packard (HP) and to BellSouth during Systems Readiness Testing (SRT)[12]. SRT confirmed the functionality of HP and KCI's transactional systems and verified that orders would flow-through the BellSouth system. The order seeds were used as templates to build the order volumes used in the subsequent tests. Orders were submitted on a scheduled submission date and time determined by KCI prior to the start of the test. As appropriate, testers made final updates (e.g., desired due dates or other information) and processed the transactions.

The EDI/TAG Peak Volume Performance Test (O&P-4) evaluated BellSouth's interfaces and systems at year-end, 2001 (YE01) projected order volumes in BellSouth's RSIMMS environment for two eight-hour periods. This test was executed by submitting Resale and UNE orders against test-bed accounts[13] that were provisioned by BellSouth based on KCI's specifications and verified by KCI prior to initiation of the test.

In order to fully test the capacity of BellSouth's OSS under realistic load conditions, the test was conducted simultaneously with the TAG Volume Performance Test (PRE-5), which tested the OSS components supporting pre-ordering. The order transaction loads were distributed geographically across four Central Offices (COs) in the state of Georgia. BellSouth established and configured customer test accounts prior to initiation of the test.

The test cases for the EDI/TAG Peak Volume Test were submitted in an automated fashion. Transactions were provided in bulk to HP for conversion from the business file format to the TAG and EDI formats. HP time stamped and forwarded the transactions to BellSouth for processing according to the schedule provided by the KCI. BellSouth processed the transactions and returned

[12] KCI conducted a number of SRTs between April 11, 2000 and August 1, 2000. After completing several of the SRTs, BellSouth requested additional testing. These additional tests were used by BellSouth to ensure that its back-end systems and the Interfaces were functioning correctly.

[13] Refer to Section V, "Overview" for a detailed description of the Ordering and Provisioning test bed process and detail of accounts.

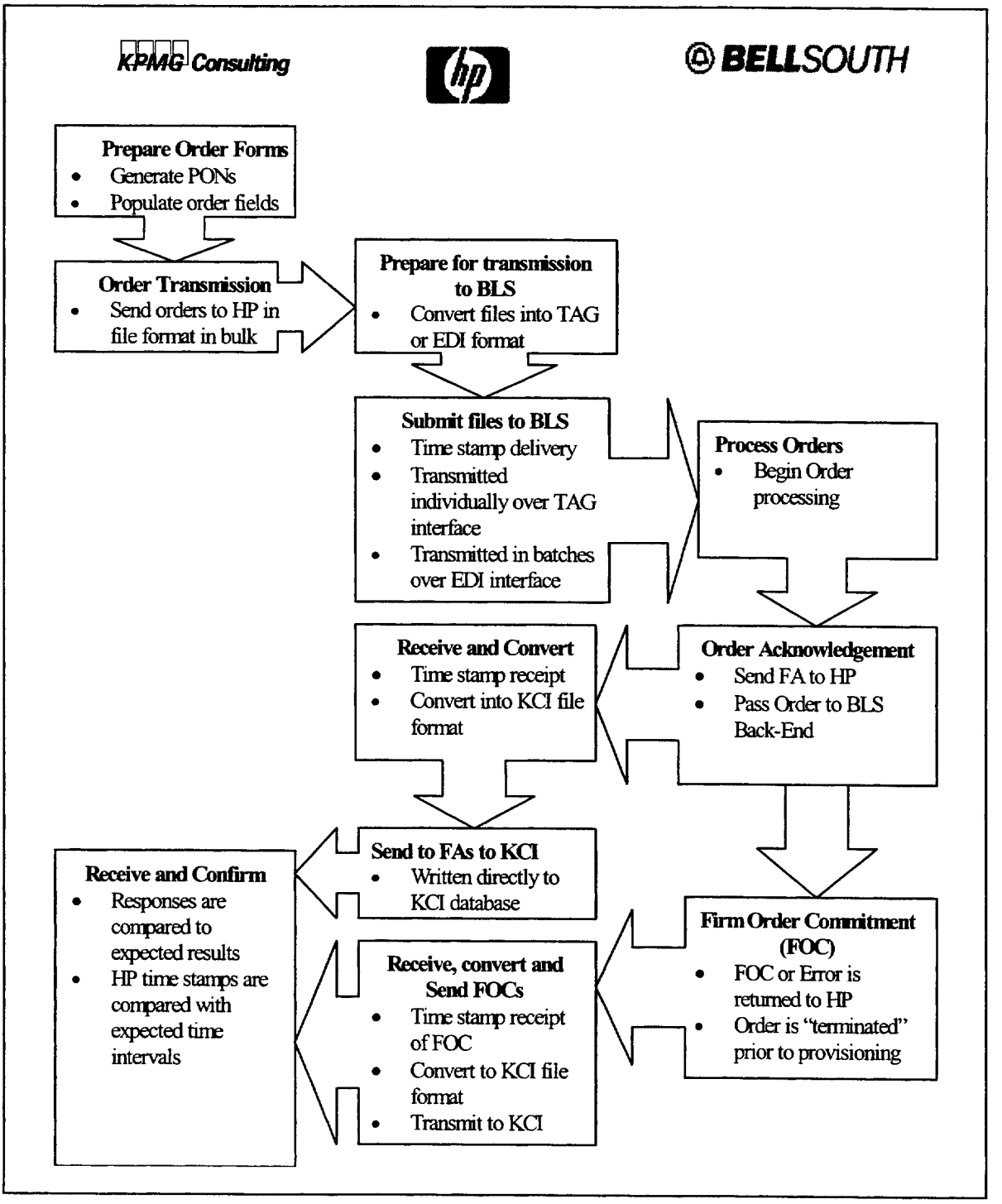
Functional Acknowledgements (FAs) and Firm Order Commitments (FOCs) to HP. The test process is depicted in Figure V-4.1[14].

As pre-order and order volume transactions were submitted, error messages or positive responses were returned. A transaction was deemed complete if a Functional Acknowledgement (FA) and a Firm Order Confirmation (FOC) were received (or if an expected error was received). The results were logged and compared to expected ordering system functionality and business processes, as outlined in Section V Overview. A representative number of intentional errors were included in a specified number of orders. These orders were sent to test BellSouth's ability to process errors and to ensure that systems could not be programmed for automatic response. Forty-one EDI orders and 58 TAG orders containing planned errors were submitted during the EDI/TAG Peak Volume Test.

Transactions (LSRs) were submitted and the results logged and compared to the expected ordering system functionality and business processes, as outlined in Section V, "Overview." The number, timeliness, and correctness of responses were recorded and evaluated.

[14] See Section V, "Overview" for a complete description of the file transfer process.

Figure V-4.1: O&P Peak Volume Test Process



2.6 *Analysis Methods*

The EDI/TAG Peak Volume Performance Test included a checklist of evaluation criteria developed by KCI during the initial phase of the BellSouth - Georgia OSS Evaluation. These evaluation criteria provided a framework of norms, standards and guidelines for the test.

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.[15] In many cases, results in this section were calculated based on KCI/HP time stamps, which may differ significantly from the BellSouth time measurement points reported in the SQMs. For those evaluation criteria that do not map to the GPSC-approved measures, KCI has applied its own standard, based on KCI's 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.

Table V-4.6: O&P-4 Test Evaluation Criteria and Results[16]

Test Cross-Reference	Evaluation Criteria	Result	Comments
Interface Availability			
O&P-4-1-1	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[17]. BLS maintained 100% EDI availability throughout each iteration of the test[18].

[15] 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 test standards.

[16] See Tables V-4.7 through V-4.11 for detailed results on each test day. Percentages are rounded to the nearest whole number.

[17] Regularly scheduled hours of availability for the TAG/EDI interfaces are published on the BellSouth 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.

Test Cross-Reference	Evaluation Criteria	Result	Comments
O&P-4-1-2	TAG 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[19]. HP continuously sent orders and pre-orders throughout each iteration of the test. While connectivity was maintained throughout the test, HP and BLS conducted "coordinated bounces" of their servers on several occasions. These system restarts were conducted primarily to recover BLS back-end functionality. The combined duration of downtime resulting from these restarts was less than 0.1% of test time.
System Functionality[20]			
O&P-4-2-1	The EDI interface provides expected system responses[21].	Satisfied	The KCI standard is 99% of expected system responses received. The Peak Volume test yielded the following results: Day 1 Initial: – 100% (17,319/17,319) of expected FAs were received. – 70% (12,040/17,319) of expected FOCs were received. Day 1, Retest 1: – 100% (17,319/17,319) of expected FAs, were received. – 100% (15,816/15,863) of expected FOCs were received[22]. Day 2: – 100% (17,321/17,321) of expected FAs were received. – 99% (17,198/17,321) of expected

[18] During the execution of the Peak Volume test, KCI/HP continuously submitted transactions, via the EDI interface, according to a predetermined schedule. During this period, HP maintained continuous connectivity with BellSouth via EDI and successfully transmitted all of the orders at their scheduled times.

[19] Regularly scheduled hours of availability for the TAG interface are published on the BellSouth 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.

[20] An expected system response is defined for this criterion as any system response that is consistent with technical specifications for EDI and TAG responses.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			FOCs were received.
O&P-4-2-2	The TAG interface provides expected system responses.	Satisfied	The KCI standard is 99% of expected system responses received. The Peak Volume test yielded the following results: Day 1 Initial: – 96% (24,902/25,973) of expected FAs were received. – 74% (19,337/25,973) of expected FOCs were received. Day 1, Retest 1: – 99% (25,644/25,975) of expected FAs, were received. – 99% (23,428/23,784) of expected FOCs were received.[23] Day 2: – 100% (25,882/25,974) of expected FAs were received. – 99% (25,697/25,867) of expected FOCs were received[24].
Timeliness of System Response[25]			
O&P-4-3-1	BLS's EDI interface provides timely Functional Acknowledgements (FAs).	Not Satisfied[26]	The KCI standard is 95% of FAs received in less than 30 minutes. Performance on only one test day met or exceeded the test standard. Results from LSRs submitted during

[21] An expected system response is defined for this criterion as an FA for each order, an FOC for each correctly formatted error, and an error or clarification (ERR/CLR) for each invalid service request.

[22] The number of expected EDI FOCs for the day one Peak Retest is less than the number of expected FAs because 1,456 planned errors were submitted to BellSouth. These "planned errors" were processed by the BellSouth EDI interface, identified as non-flow-through, fallout orders.

[23] The number of expected TAG FOCs for the day one Peak Retest is less than the number of expected FAs because 2,225 planned errors were submitted to BellSouth and handled appropriately. These "planned errors" were processed by the BellSouth TAG interface and identified as non-flow-through, fallout orders.

[24] Following the submission of orders during the test, KCI identified 1,099 LSRs for which we had no record of receiving FOCs from BellSouth. PONs from those 1,099 were transmitted to BellSouth. BellSouth provided detailed logs indicating that the FOCs relating to 929 of those LSRs had been transmitted to HP. In accordance with established FOC retransmission procedures and BellSouth's proof that the FOCs in question were available, KCI determined that BellSouth had provided expected system responses for those orders.

[25] See Tables V-4.7 through V-4.9 for additional detail on timeliness results.

[26] 100% (17,319/17,319) (17,319/17,319) (17,321/17,321) of FAs received from BellSouth on each day of peak volume testing were received within 90 minutes of the submission of the LSR.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			the Peak Volume test are: Day 1 Initial: – 100% (17,110/17,319) of FAs were received within 30 minutes. Day 1, Retest 1: – 86% (14,858/17,319) of FAs were received within 30 minutes. Day 2: – 98% (16,931/17,321) of expected FAs were received within 30 minutes[27].
O&P-4-3-2	BLS's TAG interface provides timely Functional Acknowledgements (FAs).	Satisfied	The KCI standard is 95% of FAs received in less than 30 minutes. Results from LSRs submitted during the Peak Volume test are: Day 1 Initial: – 100% (24,902/24,902) of received FAs were received in less than 30 minutes. Day 1, Retest 1: – 100%(25,632/25,632) of received FAs were received within 30 minutes. Day 2: – 100% (25,882/25,882) of received FAs were received within 30 minutes.
O&P-4-3-3	BLS's EDI interface provides timely Firm Order Confirmations (FOCs).	Satisfied	The GPSC-approved standard for flow-through (FT) FOCs is 95% received within three hours. LSRs submitted during the Peak Volume Day Tests received FOCs within the following timeframes[28]: Day 1 Initial: – 100% (12,040/12,040) of FOCs received were received in less than three hours for FT LSRs.

[27] During the third test, all late FAs were received during the same time period.
[28] BellSouth implemented system fixes after unsuccessful volume days prior to KCI executing retest activity.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			Day 1, Retest 1: – 99% (15,661/15,816) of FOCs received were received in less than three hours for FT LSRs. Day 2: – 96% (16,560/17,198) of FOCs received were received in less than three hours for FT LSRs.
O&P-4-3-4	BLS's TAG interface provides timely Firm Order Confirmations (FOCs).	Satisfied	The GPSC-approved standard for flow-through (FT) FOCs is 95% received within three hours. LSRs submitted during the Peak volume Test: Day 1 Initial: – 92% (17,717/19,337) of FOCs received were received in less than three hours for FT LSRs. Day 1, Retest 1: – 100% (23,421/23,421) of FOCs received were received in less than three hours for FT LSRs. Day 2: – 98% (24,228/24,790) of FOCs received were received in less than three hours for FT LSRs..
Accuracy of System Response			
O&P-4-4-1	BLS systems provide accurate[29] Firm Order Confirmations (FOCs).	Satisfied	The KCI standard is 95% accuracy of response type. Of the FOCs analyzed, 100% were correct relative to the LSR submitted (i.e., were received in response to a correctly formatted LSR).

[29] For this criterion, KCI defined an accurate response to be a system response that is consistent with the technical specifications for EDI/ TAG responses *and* to be consistent with the transaction that initiated the response (e.g. a correctly formatted LSR received a FOC). In the case of error/clarification responses, KCI verified that these were only received for incorrectly formatted LSRs. The contents of the response files (FOCs/ERRs/CLRs) were evaluated for accuracy and completeness for purposes of this test on a sample basis only. A more complete accuracy evaluation for conformance to the BellSouth business rules was undertaken in feature/function testing (OP-1, OP-2, and PO&P-11).

Test Cross-Reference	Evaluation Criteria	Result	Comments
O&P-4-4-2	BLS systems provide accurate order errors (ERRs)/clarifications (CLRs).	Satisfied	The KCI standard is 95% accuracy of response type. Of the ERRs/CLRs analyzed, 100% were correct relative to the LSR submitted (i.e. incorrectly formatted LSR received expected response).

Table V-4.7: Day-One Retest One Peak Volume Test (July 13, 2000) Acknowledgement Detailed Results[30]

Product Type	Interface	LSR Sent	Number of ACK[31]s Received	Percentage of Expected ACKs Received	ACK Received < 30 min	Percentage of ACKs received < 30 min	Average LSR To ACK Business Minutes
DL	EDI	330	330	100.0%	286	86.7%	19.148
LNP	EDI	1,774	1,774	100.0%	1,534	86.5%	19.289
Loop with LNP	EDI	1,776	1,776	100.0%	1,505	84.7%	19.793
Resale	EDI	7,960	7,960	100.0%	6,746	84.7%	19.296
UNE Loop	EDI	1,030	1,030	100.0%	886	86.0%	19.354
UNE Loop-Port Combo	EDI	4,421	4,421	100.0%	3,878	87.7%	19.23
UNE Port	EDI	28	28	100.0%	23	82.1%	19.464
Subtotal		17,319	17,319	100.0%	14,858	85.8%	19.330
DL	TAG	495	480	97.0%	479	99.8%	0.097
LNP	TAG	2,661	2,633	98.9%	2,630	99.9%	0.106
Loop with LNP	TAG	2,664	2,634	98.9%	2,634	100.0%	0.074
Resale	TAG	11,942	11,794	98.8%	11,792	100.0%	0.056
UNE Loop	TAG	1,541	1,501	97.4%	1,500	99.9%	0.13
UNE Loop-Port Combo	TAG	6,631	6,562	99.0%	6,557	99.9%	0.056
UNE Port	TAG	41	40	97.6%	40	100.0%	0.
Subtotal		25,975	25,644	98.7%	25,632	100.0%	0.068
Total		43,294	42,963	99.2%	40,490	94.2%	7.833

[30] Only data from the two successful test cycles is presented here.

[31] An ACK is a Functional Acknowledgement, which is an electronic acknowledgement sent to a CLEC from BellSouth, verifying that BellSouth has received a firm order.

Table V-4.8: Day-One Retest One Peak Volume Test (July 13, 2000) FOC Detailed Results

Product Type	Interface	LSRs Sent	Number of FOCs Received	Percentage of Expected FOCs Received	FOCs Received < 3 hrs	Percentage of FOCs Received < 3 hrs	Average LSR To FOC Business Minutes
DL	EDI	330	322	97.6%	315	97.8%	71.136
LNP	EDI	1,774	1,771	99.8%	1,771	100.0%	50.474
Loop with LNP	EDI	1,776	1,734	97.6%	1,734	100.0%	49.246
Resale	EDI	7,960	7,944	99.8%	7,850	98.8%	72.089
UNE Loop	EDI	1,030	1,022	99.2%	1,014	99.2%	68.556
UNE Loop-Port Combo	EDI	4,421	3,003	67.9%	2,957	98.5%	51.702
UNE Port	EDI	28	20	71.4%	20	100.0%	48.786
Subtotal		**17,319**	**15,816**	**91.3%**	**15,661**	**99.0%**	**63.016**
DL	TAG	495	479	96.8%	479	100.0%	25.529
LNP	TAG	2,661	2,616	98.3%	2,616	100.0%	29.977
Loop with LNP	TAG	2,664	2,554	95.9%	2,554	100.0%	29.27
Resale	TAG	11,942	11,792	98.7%	11,792	100.0%	26.742
UNE Loop	TAG	1,541	1,503	97.5%	1,503	100.0%	26.18
UNE Loop-Port Combo	TAG	6,631	4,450	67.1%	4,450	100.0%	18.365
UNE Port	TAG	41	27	65.9%	27	100.0%	15.683
Subtotal		**25,975**	**23,421**	**90.2%**	**23,421**	**100.0%**	**25.714**
Total		**43,294**	**39,237**	**90.6%**	**39,082**	**99.6%**	**40.750**

Table V-4.9: Day-Two Peak Volume Test (July 17, 2000) Acknowledgement Detailed Results

Product Type	Interface	LSR Sent	Number of ACKs Received	Percentage of Expected ACKs Received	ACK Received < 30 min	Percentage of ACKs received < 30 min	Average LSR To ACK Business Minutes
DL	EDI	330	330	100.0%	306	92.7%	19.776
LNP	EDI	1,774	1,774	100.0%	1,649	93.0%	20.448
Loop with LNP	EDI	1,776	1,776	100.0%	1,592	89.6%	20.485
Resale	EDI	7,962	7,962	100.0%	7,294	91.6%	20.143
UNE Loop	EDI	1,030	1,030	100.0%	961	93.3%	20.15
UNE Loop-Port Combo	EDI	4,421	4,421	100.0%	3,983	90.1%	19.933
UNE Port	EDI	28	28	100.0%	26	92.9%	19.893
Subtotal		**17,321**	**17,321**	**100.0%**	**15,811**	**91.3%**	**20.1485**
DL	TAG	495	482	97.4%	482	100.0%	0.044
LNP	TAG	2,661	2,660	100.0%	2,660	100.0%	0.014
Loop with LNP	TAG	2,665	2,658	99.7%	2,658	100.0%	0.057
Resale	TAG	11,934	11,885	99.6%	11,885	100.0%	0.033
UNE Loop	TAG	1,543	1,532	99.3%	1,532	100.0%	0.023
UNE Loop-Port Combo	TAG	6,633	6,622	99.8%	6,622	100.0%	0.06
UNE Port	TAG	43	43	100.0%	43	100.0%	0.
Subtotal		**25,974**	**25,882**	**99.6%**	**25,882**	**100.0%**	**0.040**
Total		**43,295**	**43,203**	**99.8%**	**41,693**	**96.5%**	**8.102**

Table V-4.10: Day-Two Peak Volume Test (July 17, 2000) FOC Detailed Results

Product Type	Interface	LSRs Sent[32]	Number of FOCs Received	Percentage of Expected FOCs Received	FOCs Received < 3 hrs	Percentage of FOCs Received < 3 hrs	Average LSR To FOC Business Minutes
DL	EDI	330	322	97.6%	308	95.7%	76.788
LNP	EDI	1,774	1,766	99.5%	1,766	100.0%	58.824
Loop with LNP	EDI	1,776	1,723	97.0%	1,723	100.0%	55.564
Resale	EDI	7,962	7,938	99.7%	7,550	95.1%	81.465
UNE Loop	EDI	1,030	1,022	99.2%	981	96.0%	76.946
UNE Loop-Port Combo	EDI	4,421	4,407	99.7%	4,214	95.6%	81.976
UNE Port	EDI	28	20	71.4%	18	90.0%	65.786
Subtotal		17,321	17,198	99.3%	16,560	96.3%	76.3019
DL	TAG	495	462	93.3%	446	96.5%	33.115
LNP	TAG	2,661	2,600	97.7%	2,600	100.0%	28.316
Loop with LNP	TAG	2,665	2,528	94.9%	2,528	100.0%	26.913
Resale	TAG	11,934	11,370	95.3%	10,994	96.7%	34.034
UNE Loop	TAG	1,543	1,466	95.0%	1,424	97.1%	34.497
UNE Loop-Port Combo	TAG	6,633	6,335	95.5%	6,207	98.0%	34.052
UNE Port	TAG	43	29	67.4%	29	100.0%	21.163
Subtotal		25,974	24,790[33]	95.4%	24,228	97.7%	32.708
Total		43,295	41,988	97.0%	40,788	97.1%	50.564

[32] Includes planned errors, where no response is expected to be returned.

[33] Does not include 929 FOCs that were transmitted by BellSouth but not received by KCI.

E. Test Results: Provisioning Verification (O&P-5)

1.0 Description

The objective of the Provisioning Verification Test (O&P-5) was to perform a comprehensive review of BellSouth's ability to accurately and expeditiously complete the provisioning of Competitive Local Exchange Carrier (CLEC) orders. The test incorporated orders submitted through both the Telecommunications Access Gateway (TAG), tested in (O&P-2), and Electronic Data Interface (EDI), tested in (O&P-1) interfaces. This analysis focused on electronically ordered Unbundled Network Elements (UNEs) and on types of orders that require physical provisioning.

The Provisioning and Verification Test verified that orders submitted were properly provisioned, were completed within the pre-defined BellSouth intervals, and followed BellSouth methods and procedures for provisioning. This evaluation included orders supplemented and cancelled, as well as those submitted with anticipated errors in order to test the impact on provisioning.

For selected scenarios, specifically UNE-Loop orders with local number portability (LNP), involvement of CLECs operating in Georgia was solicited to incorporate the use of their facilities[1], as well as to enhance the "real world" nature of the test. Through interviews, the CLECs were also asked to provide information regarding their experiences with provisioning.

2.0 Methodology

This section summarizes the test methodology.

2.1 Business Process Description

The provisioning process begins once the Service Order Control System (SOCS) produces a complete and accurate service order[2]. The process for provisioning is determined by the type of service order (designed or non-designed). 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.

There are four sub-processes associated with provisioning:

Order Assignment: Orders requiring cable pair assignments are routed to the Loop Facility Assignment Control System (LFACS) or are manually assigned

[1] The KCI CLEC did not utilize its own switch or facilities.

[2] See Section V, "Ordering & Provisioning Overview" for a complete description of the ordering process.

through the Address Facilities Inventory Group (AFIG). LFACS feeds appropriate downstream systems based on the service work assignment.

Order Design: This sub-process includes all circuit design activities. Orders for designed circuits are routed to the Trunks Integrated Record Keeping System (TIRKS) for automated design model matching, or are manually assigned by the Circuit Provisioning Group (CPG).

Service Work: This sub-process begins once the order assignment and design information is received by the various BellSouth Service Centers (i.e. Work Management Center [WMC] utilizing Work Force Administration [WFA] systems) for service work (i.e., implementation and testing of service). Service work is final once the service center systems are updated with work completion information.

Provisioning Completion: This sub-process begins once the service completion information is received by WFA - Control (WFA-C) for designed services, or by the Line Maintenance Operations System (LMOS) for non-designed services. Provisioning is complete once completion notice information is sent to SOCS and WFA, and billing information has been sent to either the Customer Records Information System (CRIS) or the Carrier Access Billing Systems (CABS).

The BellSouth UNE Center is the focal point for UNE conversions, including UNE analog loops and UNE ports. Specifically, the coordination center is responsible for all provisioning activity involving plain old telephone service (POTS), as well as special service circuits for UNE products, Interim Number Portability (INP), and Local Number Portability (LNP).

CLECs have the opportunity to choose from the following three types of analog loop conversions:

- Non-coordinated - Loop conversion occurs on a specific frame due date, with no coordination required from the BellSouth UNE Center.
- Coordinated non-time specific - Loop conversion occurs on a specific frame due date and is coordinated with the BellSouth UNE Center prior to the conversion. The BellSouth UNE Center coordinates conversion between the CLEC customer and a Central Office technician(s).
- Coordinated time specific - Loop conversion is performed at a specific frame due date and time. The BellSouth UNE Center coordinates conversion between the CLEC customer and a Central Office technician(s).

The provisioning process begins once BellSouth's UNE Center provisioning systems receive local service requests (LSRs). For coordinated analog loop conversions and port orders, a coordinator at the UNE Center verifies the order and places a call to the CLEC to obtain concurrence. During actual provisioning

of a coordinated order, the UNE Center directs the relevant BellSouth provisioning organizations, including the Central Office technician and Recent Change Management Administration Group (RCMAG) switch translation personnel, through the process. Following provisioning, the UNE Center then places another call to the CLEC to confirm completion and obtain acceptance of the ordered service installation.

2.2 *Scenarios*

Scenarios for this test can be found in Section 2.2 of O&P-1 EDI Functional Test and O&P-2 TAG Functional Test.

2.3 *Test Targets & Measures*

The test target was the provisioning of UNEs ordered through the EDI and TAG interfaces. Sub-processes, functions, evaluation criteria and associated test cross-reference numbers 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-5.1: Test Target Cross-Reference

Sub-Process	Function	Evaluation Criteria	Test Cross-Reference
Receive Completion Notification	Receive completion notification transaction	Timeliness of Response Completeness of Data Accuracy of Response	O&P- 1-2-4, O&P-1-3-4, O&P-2-2-3, O&P- 2-2-4
	Match response to order transaction and confirmation	Provisioning Validation	O&P- 5-1-1
	Verify timeliness of completion	Provisioning Timeliness of Response/ Completion	O&P- 5-1-1
Support Provisioning Process	Perform provisioning activity accurately	Provisioning Accuracy Procedural Adherance OS/DA Accuracy	O&P-5-2-1, O&P-5-2-2, O&P-5-2-3, O&P-5-2-4, O&P-5-2-5, O&P-5-2-7
	Confirm provisioning on orders requiring coordination	Provisioning Coordination Procedural Adherence	O&P-5-2-3, O&P-5-2-4
	Manage provisioning process	Provisioning Accuracy Procedural Adherence	O&P-5-2-1, O&P-5-2-2, O&P-5-2-3, O&P-5-2-4, O&P-5-2-5, O&P-5-2-6, O&P-5-2-7