

III. Test Plan Framework

A. Scope

The evaluation of BellSouth's OSS infrastructure in accordance with the Georgia Order requires the development of a test framework. The framework will ensure complete coverage of the Georgia PSC's third party testing targets across the dimensions of test scope defined in Section II - Introduction:

- Business Processes
- OSS Interfaces
- Test Objectives
- Product Categories

<i>Test Framework Dimensions</i>			
<i>Business Processes</i>	<i>Interfaces</i>	<i>Test Objectives</i>	<i>Product Categories</i>
Pre-Ordering	TAG	Functionality	Resale
Ordering & Provisioning	TAG EDI	Performance	UNE
Billing	ODUF/ADUF CRIS/CABS	Interface	
Maintenance & Repair	TAFI ECTA	Volume, Scalability Capacity Management	
Forecasting & Change Management	All	Documentation	

Figure III-I: Test Framework Dimensions

Test objectives were mapped across process domains to form objective-oriented tests. These tests were then refined by applicable interface type and/or product category to form test cycles.

Collectively, the domains define the systems, processes, products, and conditions to be tested, or the "test targets." The test approach, or the techniques and delivery vehicles required to execute the test, are defined by introducing additional dimensions of test methods. Finally, the dimension of performance metrics serves as the basis for determining whether or not an individual test event met stated objectives and achieved expected results. These concepts are described in greater detail below.

B. Approach

Test Methods

Test methods identify the type of testing required to address the test targets. Test methods fall into the following two broad categories:

- transactional analysis
- operational analysis

While transactional testing and operational analysis test cycles are structured in the same format and are evaluated by the same set of metrics, the approaches used to execute the test vary significantly.

Transactional Analysis

Transactional analysis is an automated testing process triggered by submission of test transactions that exercise the full range of OSS business rules and load conditions. It is initiated through test cases and may be characterized by the presence of mechanized systems and electronic gateways supporting the exchange of transaction data and collection of performance metrics.

Operational Analysis

Operational analysis is a multi-dimensional test method focused on the form, structure, and content of the test target. This method addresses the organizational (people), process, and technology aspects of BellSouth's OSS. It can be further divided into invasive analyses, which require entry into BellSouth's back-office operations, and non-invasive analyses, which may be conducted without direct involvement from BellSouth resources.

Test Techniques

The test methods can be further broken down into test techniques as follows:

Test Method	Test Technique	Description
Transactional	Transaction Processing	Execute and log test case, then compare to expected results.
	Performance Comparison	Compare performance results logged by HP test facilities against BellSouth's performance measures.
Operational	Inspection*	Conduct physical review of back-office activities, documents and systems.
	Interviews*	Conduct conversations with BellSouth personnel.
	Observation^	Monitor activities and collect information by observing and logging events as they occur.
	Document Review^	Conduct a review and analysis of publications and logs.

* Invasive
^ Non-invasive

Figure III-II: Transactional Analysis Evaluation Techniques

Transactional analysis requires the development of test scenarios and test cases as described below. Operational analysis, by contrast, requires the use of evaluation checklists.

Test Scenarios

Business scenarios will be created to describe the customers, products, and services that will be electronically requested from BellSouth. Test scenarios describe the logical and "typical" conditions applicable to a business process.

The test scenarios included in **Appendix B** of this document address a representative sample of the product, process, and account activity type combinations routinely ordered, billed, and/or repaired by BellSouth.

Test Cases

Each test scenario is applied to multiple test cases. A test case addresses a specific set of test conditions that produce a desired outcome. Each are characterized by a set of

procedures designed to execute a specific segment of test data (i.e. a customer account). Each test case contains a set of test conditions and corresponding expected results that are designed to evaluate CLEC interaction with BellSouth across the Pre-Order, Order & Provisioning, Billing, and Maintenance & Repair domains, that, when satisfied, demonstrate that BellSouth is providing nondiscriminatory access.

~~Test cases are written such that each of the target conditions/outcomes for a given test scenario takes on all possible values at least once (this is known as condition coverage). Test cases must be repeatable, controllable, and recordable for audit and reporting purposes.~~

Evaluation Checklists

Detailed and comprehensive evaluation checklists will be developed for all test objectives to be analyzed through operational analysis. These checklists will serve as objective criteria to be applied to inspection, interview, observation, and document review activities.

Test Cycles

Test cycles are the organizational tools that manage the testing process. Every test cycle includes a description of the test, its objectives, scope, entrance criteria, activities, and exit criteria. The full set of test cycles is contained in **Appendix F - Test Cycles**. The results accuracy and reporting phase is required in order to ensure that all test results have been collected, assessed, and documented.

Test Tools

Functional testing of BellSouth's OSS through the TAG, EDI, and ECTA interfaces will be conducted using the ~~HPxst (TAG) Test Client, PC-EDI, EDI-PC (for LSR for submissions for Billing functional test), EDI LAN-to-LAN, and BAP test tools, respectively. All of these tools are provided to requesting CLECs by BellSouth~~BellSouth provides all of these tools to CLECs that request them.

The ability of BellSouth's OSS to handle volumes projected for YE01 will be tested via test transaction generators (TTGs). These TTGs will allow normal and stress volumes to be efficiently sent against BellSouth's OSS through the specified interfaces. Volume tests are based on scaling a statistically and functionally representative sample of scenarios to projected volumes. The preliminary volume projection methodology is attached in **Appendix C - Volume Analysis**.

C. Evaluation & Results

Although transactional testing and operational analysis will generate different result types based on their varying approaches, the approach used to gather, assess, and report results against these performance standards metrics will remain consistent across all test cycles.

Results Assessment

Once the results from each test cycle have been collected, they will ~~must~~ be assessed in order to determine the performance of the Test. This activity includes comparing the expected results file with the actual results. Additionally, this activity involves verifying that all test conditions in a test cycle have been adequately exercised. KPMG will identify exceptions where significant defects in components (software, documentation, or process) are uncovered during the testing activities. KPMG, the Commission, and BellSouth will address exceptions through a process defined by the three parties. Severity 1, 2, and 3 failures or defects, as described below, will require re-testing.

<i>Defect Class</i>	<i>Definition</i>
<i>Severity 1</i>	An error which causes a program or system interrupt or which causes program execution to abort. AT&T and BELL System personnel refer to this type of error as a "show stopper". This error has the highest severity rating.
<i>Severity 2</i>	A severe error which causes a program not to perform properly or to produce unreliable results. Normally, the user cannot find an appropriate "workaround" for this type of error.
<i>Severity 3</i>	An error for which, while not minor, a "workaround" solution can be found for the user.

Figure III-III: Defect Severity Level Definitions

If a significant number of test conditions fail or are not covered, the test cycle will be rescheduled for execution following implementation of the appropriate corrective measures.

Results Reporting

After assessment, results will be reported. ~~Reporting includes migrating the results data into the pre-determined reporting templates. Additionally, the test cycle logs are included as part of the test cycle report. Each test cycle will have its own summary report and test~~

log to sufficiently disaggregate the test results and provide detailed reporting. KPMG is responsible for providing a final, independent results report at the end of each test cycle.

Upon completion of each transactional analysis test cycle, KPMG will ~~compare~~ validate the ~~disaggregated values of the KPMG-CLEC performance metrics produced by~~ BellSouth's own performance measurement systems and compare the raw data collected during the by the HP test facilities against to the metrics collected data reported by BellSouth's own performance measurement systems.

Evaluation Criteria, Performance Evaluation Metrics, and Standards of Performance

Both transactional testing and operational analysis require evaluation criteria, ~~performance~~ evaluation metrics, and standards of performance to assess test results. Test ~~performance~~ evaluation metrics provide the basis for determining whether or not an individual test event met stated objectives and achieved expected results. This activity serves to sharpen the test approach and scope by defining the specific criteria required to measure the success of each test event. Evaluation criteria, ~~performance~~ evaluation metrics, and standards of performance are described in detail in **Appendix D-1 - Performance Evaluation Metrics Criteria**. As ~~additional refinements to the metrics and~~ standards are identified ~~made~~ during test design, **Appendix D-1** will be updated.

Performance Evaluation metrics will be developed for each test to determine whether the results deviate from expectations. ~~In those cases where results deviate, statistical analysis will be undertaken to determine the significance of the deviation.~~

D. Entrance and Exit Criteria

Each test cycle, by nature of its testing objective, interface type, and process domain, mandates specific entrance and exit criteria. However, global entrance and exit criteria span all test cycles.

Entrance Criteria

Entrance criteria must be met before individual tests can commence. The following global entrance criteria apply to every individual test.

<i>Criterion</i>	<i>Responsible Party</i>
MTP must have been filed with the Georgia PSC.	BellSouth, <u>KPMG</u>
Exception reporting process must be defined.	Georgia PSC, KPMG, HP, BellSouth

<i>Criterion</i>	<i>Responsible Party</i>
The Georgia PSC must have established service quality measurements to be used in the test <u>established</u> .	Georgia PSC
All required BST interface capabilities must be operationally ready .	BellSouth, HP, KPMG

Figure III-IV Global Entrance Criteria

- ~~The Master Test Plan must have been approved.~~

The Master Test Plan ~~must have been~~ filed with the Georgia PSC.

- ~~Exception Reporting process must have been defined.~~

A defined process ~~must be in place~~ by which test defects are identified, assigned, resolved, and escalated. KPMG, HP and BellSouth ~~must have~~ agreed to this exception reporting process.

- ~~The Georgia PSC must have established service quality measurements established to be used in the test.~~

Metrics to be used in Georgia have been set out in the Georgia PSC's Order. Before many portions of the test can begin, these metrics must be agreed to and fully defined. In addition they must be fully functional, tested, and operationally ready. Fully functional BellSouth measurements are required to support collection of test results and to ensure that a method exists to monitor ongoing compliance. With assistance from the independent auditors KPMG, the Georgia PSC will assess the operational readiness of all required BellSouth measurements and verify that all requirements have been met.

- ~~All required BellSouth interface capabilities must be operationally ready.~~

Electronic interfaces to all OSS access functions of pre-ordering, ordering, provisioning, maintenance and repair, and billing ~~must be~~ fully tested and operational. All GUI interface capabilities ~~must be~~ operational.

Both global entrance criteria and test-specific entrance criteria (where applicable) ~~must be~~ defined for each test cycle.

Exit Criteria

Exit criteria must be met before the tests defined in the Test Plan can be concluded. Global exit criteria for each test cycle include the following:

<i>Criterion</i>	<i>Responsible Party</i>
All required test activities must be completed.	KPMG, HP
All change control, verification, and confirmation steps must be completed.	KPMG, HP
KPMG must audit the testing process, monitor the performance of the tests, evaluate the test plans, assess the accuracy of reported results, and report to the Georgia PSC.	KPMG

Figure III-V Global Exit Criteria

- ~~All required test activities must be completed.~~

~~For each test, all fact finding and analysis activities must be completed. All results and test methodologies must have been documented.~~

- ~~All change control, verification, and confirmation steps must be completed.~~

~~The results of test activities must be documented and reviewed for accuracy. Any results that require clarification or follow-up must be confirmed.~~

- ~~• KPMG must validate the reported results.~~

~~KPMG, in its role as an independent auditor, must review test scope, methods, data, and reporting, and assess the accuracy of the results. KPMG must then issue an interim report to the Georgia PSC.~~

Where applicable, test-specific exit criteria must be defined for each test cycle.

IV. Pre-Ordering Test Section

A. Overview

The purpose of this section is to define the specific pre-ordering tests to be undertaken in evaluating the systems and related operational elements associated with BellSouth's establishment and maintenance of business with CLECs. needed to prove nondiscriminatory access to BellSouth's OSS in order to comply with the Georgia Order and the Act.

B. Scope

The pre-ordering test scope is defined across by the following test dimensions: interface, test objective, product category, and test technique. The table identifies the test target, the interface under test, the primary test objective(s), the BST product offering, and the test technique(s) to be employed.

Test cycles are based on those combinations of test dimensions required within the scope of the Georgia Order.

<i>Test Cycle</i>	<i>Test Dimensions</i>			
	<i>Interface</i>	<i>Primary Test Objective</i>	<i>Product Category</i>	<i>Test Technique</i>
PRE-1: TAG Pre-Ordering Functional Test	TAG	Functionality	Product Independent	Transaction Processing
PRE-2: Pre-Ordering Performance Results Comparison	TAG	Performance	Product Independent	Performance Comparison
PRE-3: TAG Pre-Ordering Documentation Evaluation	TAG	Documentation	Product Independent	Document Review/ Observation
PRE-4: TAG Pre-Ordering Normal Volume Test	TAG	Volume & Performance	Resale, UNE	Volume Transaction Processing

PRE-5: TAG Pre-Ordering Peak Volume Test	TAG	Volume	Resale, UNE	Volume Transaction Processing
PRE-6: Pre-Ordering Processing Systems Scalability Evaluation Capacity Management Evaluation	TAG	Volume & Scalability Processing Capacity	Resale, UNE	Inspection Interview

Figure IV-I: Pre-Ordering Test Cycles

Pre-order volume testing is addressed within the O&P normal and peak volume performance tests. Pre-order scalability Capacity Management is addressed in the O&P Systems Scalability Capacity Management Evaluation.

C. Test Cycles

1.0 PRE-1: TAG Pre-Ordering Functional Test

1.1 Description

The TAG Pre-Ordering Functional Test will evaluate the functional elements of the pre-ordering process for UNEs as delivered to CLECs by the TAG interface. This test cycle will be executed by submitting stand-alone pre-order transactions against BellSouth test-bed accounts. Pre-Orders will be submitted as both stand-alone transactions and as integrated pre-order/order transactions. For a defined set of integrated transactions, information returned on the pre-order response will be used to populate fields on subsequent orders. This activity is undertaken to simulate the system-related activities of a CLEC wishing to integrate the pre-order and order functions.

TAG pre-ordering functionality and the documentation addressing its use will be tested in a cycle that will target customer service records, feature/service availability, telephone number assignment and cancellation, address validation, and appointment availability and due date calculation. Transactions will be submitted using multiple "entry points" (e.g., circuit identifier and telephone number for CSRs, or telephone number and partial address for address validations), request types, customer types (where applicable), and central office CO switch locations.

This test will require BellSouth to establish a test bed of customer accounts against which the requisite pre-order service inquiries may be placed. The test scenarios to be used in the TAG Pre-Ordering Functional Test are described in **Appendix B-1: Pre-Ordering Scenarios**.

The Test Cycle Manager will coordinate efforts with BellSouth to ensure that, where appropriate and prior to beginning the test, BellSouth's and HPKPMG's performance measurement systems are prepared to track test transaction performance. Test cycle performance data will be collected and delivered to the Pre-Ordering Performance Results Comparison Test (PRE-2), and KPMG as inputs to their respective test execution functions.

1.2 Objective

The objective of the TAG Functional Pre-Ordering Test is to ~~accurately evaluate~~ prove the existence of TAG functionality for electronically ordered UNEs in accordance with the TAG documentation.

1.3 Entrance Criteria

- Global Entrance Criteria ~~must be satisfied.~~
- TAG documentation and training ~~must be obtained.~~
- Test transaction tracking strategy ~~must be identified.~~
- Target ~~performance evaluation~~ metrics ~~must be identified.~~
- BellSouth and HP KPMG performance measurement tracking systems ~~must be prepared to track test transactions.~~
- All appropriate SRT activities ~~must be completed.~~
- Transaction submission tools installed and configured.
- ~~xst (TAG) Test Client terminal stations must be configured and installed~~
- BellSouth test-bed customer account data ~~must be loaded and verified by the Test Manager.~~
- Expected results files ~~must be completed.~~
- Integrated test management tools ~~must be installed and configured.~~
- Test cases and test instances ~~must have been developed and loaded.~~
- Test case execution ~~must be scheduled.~~
- Test cycle execution checklist ~~must have been created.~~
- Test logs ~~must have been created and results reporting template completed.~~

~~—Account and security access to TAG must be established.~~

~~—TAG connectivity must be established.~~

- Test execution team ~~must be~~ staffed, scheduled, and trained.
- Test Plan and evaluation criteria ~~must have been~~ defined and approved.

1.4 Test Scope

The test scope will address the following sub-processes and functions to evaluate TAG functionality.

<i>Test Objectives: Functionality, Performance, Documentation and Interface</i> <i>Test Technique: Transaction Processing</i>	
<i>Sub-Process</i>	<i>Function</i>
Validate Address	Create address validation request transaction.
	Send address request using BTN.
	Send address validation request using WTN.
	Send address validation request using partial address.
	Receive match response.
	Receive near-match response.
	Receive no-match response.
	Receive error response.
	Correct error(s).
	Resend address inquiry.
	Receive match response.
Retrieve CSR	Create CSR request transaction.
	Send CSR request using BTN.
	Send CSR request using WTN.

<i>Test Objectives, Functionality, Performance, Documentation, and Interface</i> <i>Test Technique: Transaction Processing</i>	
<i>Sub-Process</i>	<i>Function</i>
	Send CSR request using circuit identifier and state code.
	Send CSR request using miscellaneous account number.
	Send request for directory information only.
	Receive match response.
	Receive no-match response.
	<u>Receive error response.</u> Correct error(s).
	Correct error(s). <u>Receive error response.</u>
	Resend CSR inquiry.
	Receive match response.
Determine Product / Service Availability	Create service availability request transaction.
	Send service availability (LPIC, PIC, Switch Service Availability) request transaction.
	Receive availability response.
	Receive error response.
	Correct error(s).
	Resend service availability inquiry.
	Receive availability response.
Request Available Telephone Number(s)	Create available telephone number request transaction.
	Send TN request for specific number(s) (Easy, Sequential, Ascending, Vanity, etc.).
	Send TN request for random number(s).
	Send TN request for a range of specific numbers.

Test Objective: Functionality, Performance, Documentation, and Interface
Test Technique: Transaction Processing

Sub-Process	Function
	Send TN request for a range of random numbers.
	Receive available numbers response.
	Receive error response.
	Correct error(s).
	Resend available telephone number request.
	Receive available numbers response.
Reserve TN(s)	Create telephone number reservation transaction.
	Send reservation request for a single TN.
	Send reservation request for Multi-line Hunt.
	Send reservation request for Direct-In-Dial.
	<u>Send reservation extension request.</u>
	Receive confirmation response.
	Receive error response.
	Correct error(s).
	Resend TN reservation request.
	Receive confirmation response.
Cancel TN Reservation	Create telephone number reservation cancellation transaction.
	Send cancel reservation request for a single TN.
	Send cancel reservation request for Multi-line Hunt.
	Send cancel reservation request for Direct-In-Dial.
	Receive confirmation response.
	Receive error response.

Test Objectives: Functionality, Performance, Documentation, and Interface
Test Technique: Transaction Processing

Sub Process	Function
	Correct error(s).
	Resend cancel TN reservation request.
	Receive confirmation response.
	Receive match response.
Determine Appointment Availability	Create appointment availability request transaction.
	Send request for appointment availability.
	Receive valid response.
	Receive error response.
	Correct error(s).
	Resend available due date request.
	Receive valid response.
Calculate Due Date	Create due date calculation request transaction.
	Send request for due date calculation.
	Receive valid response.
	Receive error response.
	Correct error(s).
	Resend due date calculation request.
	Receive valid response.
<u>Pre-order / Order Integration</u>	<u>Submit pre-order transactions designated for integration test.</u>
	<u>Receive valid response.</u>
	<u>Receive error response.</u>

<i>Test Objectives: Functionality, Performance, Documentation, and Interface</i>	
<i>Test Technique: Transaction Processing</i>	
<i>Sub Process</i>	<i>Function</i>
	<u>Correct error.</u>
	<u>Resend transaction.</u>
	<u>Receive valid response.</u>

Figure IV-II: TAG Pre-Ordering Functional Test Scope

1.5 Test Activities

1. Submit pre-order TAG test case transactions according to schedule.
2. Log transaction identifier(s) and submission date/time stamp.
3. Receive transaction responses.
4. Log transaction identifier(s) and receipt date/time stamp.
5. Record pre-order response information for integration test transactions.
65. Format transaction response for comparator evaluation.
76. Match transaction response to submitted transaction.
87. Verify that transaction response contains expected results.
98. Flag any exceptions or mismatched responses and determine next steps in exception resolution process. (If none, go to Step 17.)
9. ~~Review exceptions to identify root cause(s).~~
10. ~~Report any Severity 1, 2, and 3 test exceptions.~~
11. ~~Troubleshoot exceptions and determine resolution procedures.~~
12. ~~Resolve exceptions in accordance with exception resolution process.~~
13. ~~Determine if test cycle should continue. (If not, go to Step 18.)~~
14. ~~Take corrective actions.~~

- ~~15. Increment transaction version numbers and resubmit transaction.~~
- ~~16. Log resubmission transaction identifier(s) and date/time stamp. (Go to step 3.)~~
10. Log documentation issues uncovered during transaction creation and submission process.
11. Resubmit transactions as necessary.
- ~~17. Review comparative results and identify pending/open transactions.~~
- 12.
13. Generate test results reports.
- ~~18.~~
- ~~19. Calculate and report performance evaluation metrics.~~
- 14.

1.6 Exit Criteria

- Global Exit Criteria must be satisfied.
- ~~Where applicable, d~~Disaggregated performance metrics report must be completed and delivered to Pre-Ordering Performance Results Comparison Test.
- Expected versus actual results report must be completed.
- Exceptions report must be completed.
- ~~Exceptions report due to d~~Documentation issue logs must be delivered to Document Review Test.
- Response information from integration pre-orders delivered to O&P-1 and O&P-2.
 - ~~—Post mortem analysis must be conducted.~~
- Test cycle results summary report must be completed.
- Exit review completed.
 - ~~—Results summary and formatted data must be delivered to KPMG.~~

~~—Disaggregated performance metrics report and raw electronic data must be delivered to Pre-Ordering Performance Results Comparison Test.~~

2.0 PRE-2: Pre-Ordering Performance Results Comparison

2.1 Description

The Pre-Ordering Performance Results Comparison is a comparative analysis of ~~performance of performance~~ results collected by ~~HP-KPMG~~ test management tools and by BellSouth's OSS performance measurement system. The source results collected from PRE-1: TAG Functional Test, O&P-3: EDI/TAG Normal Volume Performance Test, and O&P-4: EDI/TAG Peak Volume Performance Test will be compared to BellSouth's performance ~~metrics~~ results; accuracy and trends will be identified; and disparities will be analyzed for significance.

2.2 Objective

The objective of the Pre-Ordering Performance Results Comparison is to assess the accuracy of BellSouth's wholesale performance metrics results using test transactions.

2.3 Entrance Criteria

- Global Entrance Criteria ~~must be satisfied.~~
- Results comparison strategy ~~must be defined.~~
- TAG Pre-Ordering Functional Tests, including disaggregated performance metrics reports, ~~must be completed.~~
- TAG Normal and Peak Volume Performance Tests, including disaggregated performance metrics reports, ~~must be completed.~~
- BellSouth performance measurement system reports ~~must be compiled.~~
- Test execution ~~must be scheduled.~~
- Test logs ~~must have been created~~ and results reporting template completed.
- Test execution team ~~must be staffed, scheduled, and trained.~~
- Test Plan and evaluation criteria ~~must have been defined and approved.~~
- Guidelines for measuring variances ~~must be defined.~~

2.4 Test Scope

The test scope will address the following sub-processes and functions to compare and validate performance results.

<i>Test Objective Performance Test Technique Performance Comparison</i>	
<i>Sub-Process</i>	<i>Function</i>
Average OSS Response Interval	Address validation.
	CSR retrieval.
	Switched service availability.
	PIC/LPIC availability.
	Product / Service availability.
	Telephone Number(s) availability.
	TN reservation(s).
	TN reservation cancellation(s).
	Due Date determination / Appointment Availability.

Figure IV-III: Pre-Ordering Performance Results Comparison Test Scope

2.5 Test Activities

1. Acquire and format BellSouth and test performance data files.
2. Compare disaggregated BellSouth performance results with test management tools performance results.
3. Flag any unexplained variance in results comparison. ~~(If none, go to step 11.)~~ and determine next steps in exception and resolution process.
4. ~~Review exceptions to identify root cause.~~
5. ~~Report any Severity 1, 2, and 3 test exceptions.~~

- ~~6. Identify and quantify root cause(s) for variances in results.~~
 - ~~7. Troubleshoot exceptions and determine resolution procedures.~~
 - ~~8. Resolve unexplained variances in accordance with exception resolution process.~~
 - ~~9. Determine if test cycle should continue. (If no, go to step 12.)~~
 - ~~10. Take corrective actions.~~
 - ~~11. Resume results comparison analysis.~~
 - ~~12. Generate comparison ative analysis results reports.~~
- 2.

2.6 Exit Criteria

- Global Exit Criteria ~~must be satisfied.~~
- Comparison ative analysis report ~~must be completed.~~
- Results variance findings ~~must be documented.~~
- Exceptions report ~~must be completed.~~
- ~~—Post mortem analysis must be conducted.~~
- Test cycle results summary report ~~must be completed.~~
- ~~—Results summary and formatted data must be delivered to KPMG.~~

3.0 PRE-3: TAG Pre-Ordering Documentation Evaluation

3.1 Description

The TAG Pre-Ordering Documentation Evaluation is an analysis of the BellSouth-provided documentation used by CLECs to interface and interact with the TAG interface for pre-ordering activities. This evaluation is intended to review the ~~quality~~ availability, accuracy and completeness of BellSouth's pre-ordering documentation using a variety of operational analysis techniques. This test will ~~generate~~ receive exception reports due to issues pertaining to documentation as input from the PRE-1: TAG Functional Test, O&P-3: EDI/TAG Normal Volume Performance Test, and O&P-4: EDI/TAG Peak Volume Performance Test. These exceptions reports will address whether system functionality matches that described in the business rules documentation.

3.2 Objective

The objective of TAG Pre-Ordering Documentation Evaluation is to assess whether the documentation provided by BellSouth adequately assists CLECs in understanding how to implement and use all of the TAG pre-ordering functions available to them.

3.3 Entrance Criteria

- Global Entrance Criteria ~~must be satisfied.~~
- TAG and LEO documentation ~~must be obtained.~~
- ~~TTC vendor~~ Teams ~~must be staffed, scheduled, and trained.~~
- Documentation evaluation checklists must be completed.
- Test Plan and evaluation criteria must have been defined and approved.
- Interview guide/questionnaire(s) must be completed.
- ~~Interdependent test cycles must be scheduled.~~
- Exceptions reports due to documentation from PRE-1: TAG Functional Test ~~must have been received.~~
- Exceptions reports due to documentation ~~must have been received~~ from O&P-3: EDI/TAG Normal Volume Performance Test and O&P-4: EDI/TAG Peak Volume Performance Test.
- BellSouth and CLEC documentation order specialist and user contact information provided.
- ~~Test execution team must be identified, trained, and staffed.~~
- ~~Test logs must have been created and results reporting template completed.~~ Process for logging exceptions defined and accepted.
- ~~Documentation evaluation checklists must be completed.~~
- ~~Test Plan and evaluation criteria must have been defined and approved.~~

3.4 Test Scope

The test scope will address the following sub-processes and functions to evaluate TAG documentation along with additional relevant information identified during the test-



<i>Sub-Process</i>	
Pre-Ordering Documentation	LEO Implementation Guides (Pre-Ordering Sections of Volumes 1-4).
	Resale - CLEC Starter Kit (Pre-Ordering Sections).
	Resale CLEC Activation Requirements.
	TAG Programmer's Job Aid.
	TAG Training—Release 2.1.
	TAG API Reference Guide.
	Carrier Notification.

Figure IV-IV: TAG Pre-Ordering Document Review Test Scope

3.5 Test Activities

1. Conduct clarity and completeness reviews. Obtain relevant documentation needed to carry out business processes related to pre-ordering.
2. Conduct reviews during development, installation, and testing of interfaces. Conduct documentation evaluation using documentation evaluation checklists.
3. Conduct reviews during functional and volume test executions.
43. Conduct interviews with BellSouth documentation specialists.
54. Conduct interviews with CLEC documentation users.

- ~~65. Flag any exceptions or documentation error(s). (If none, go to step 11.) Log incidents noted during testing.~~
- ~~76. Review exceptions to identify root cause(s). Compile results.~~
- ~~87. Report any Severity 1, 2, and 3 test exceptions. Flag any exceptions or mismatched responses and determine next steps in execution resolution process.~~
- ~~8. Generate test results reports.~~
- ~~9. Troubleshoot exceptions and determine resolution procedures.~~
- ~~10. Resolve exceptions in accordance with exception resolution process.~~
- ~~11. Generate test results reports.~~

3.6 Exit Criteria

- Global Exit Criteria must be satisfied.
- Documentation checklists must be completed.
- Interview summaries completed.
- Exceptions report(s) must be completed.
- ~~Post mortem analysis must be completed.~~
- Summary evaluation report completed. Test cycle results summary report must be completed.
- Exit review completed.
- ~~Results summary and reports must be delivered to KPMG.~~

4.0 PRE-4: TAG Normal Volume Performance Test

4.1 Description

The TAG Normal Volume Performance Test will evaluate simultaneously the behavior and performance of the TAG interfaces under "normal" YE01 projected transaction load conditions. This test cycle will be executed in a manner consistent with the forecasted daily usage patterns and transaction mix (including error conditions) for each interface by TTGs capable of submitting large volumes of flow-through pre-ordering (TAG only) and

resale and UNE service request test cases. Patterns of time within the day and patterns of days within the month will be emulated. [See *Section VII O&P-3: EDI/TAG Normal Volume Performance Test* for the detailed requirements for this combined test.]

5.0 *PRE-5: TAG Peak Volume Performance Test*

5.1 Description

The TAG Peak Volume Performance Test will evaluate simultaneously the behavior and performance of the TAG interfaces under "peak" YE01 projected transaction load conditions. This test cycle will execute selected flow-through pre-ordering (TAG only) and resale and UNE test cases, including error conditions. The peak volume forecast will be developed using the peak hourly load identified for the TAG Normal Volume Performance Test, replicating those transaction volumes across an eight-hour period. Alternatively, if BellSouth's normal daily usage patterns are relatively flat, a multiple may be applied to the peak hourly load and the result replicated across an eight-hour day. [See *Section VII O&P-4: EDI/TAG Peak Volume Performance Test* for the detailed requirements for this combined test.]

6.0 *PRE-6: Pre-Order Processing Systems Scalability Capacity Management Evaluation*

6.1 Description

The Pre-Order Processing Capacity Management Evaluation is a detailed review of the safeguards and procedures in place to plan for and manage projected growth in the use of the cluster of pre-ordering applications.

~~The Pre-Order Processing Systems Scalability Evaluation is a review of the technical architecture and direct maintenance and support processes for the cluster of pre-ordering applications. The technical review will focus on the modularity of the technology architecture, data architecture, and application architecture to assess scalability. The operational review will focus on the work capacity of existing support resources and the number of resources required to maintain the future technology architecture.~~

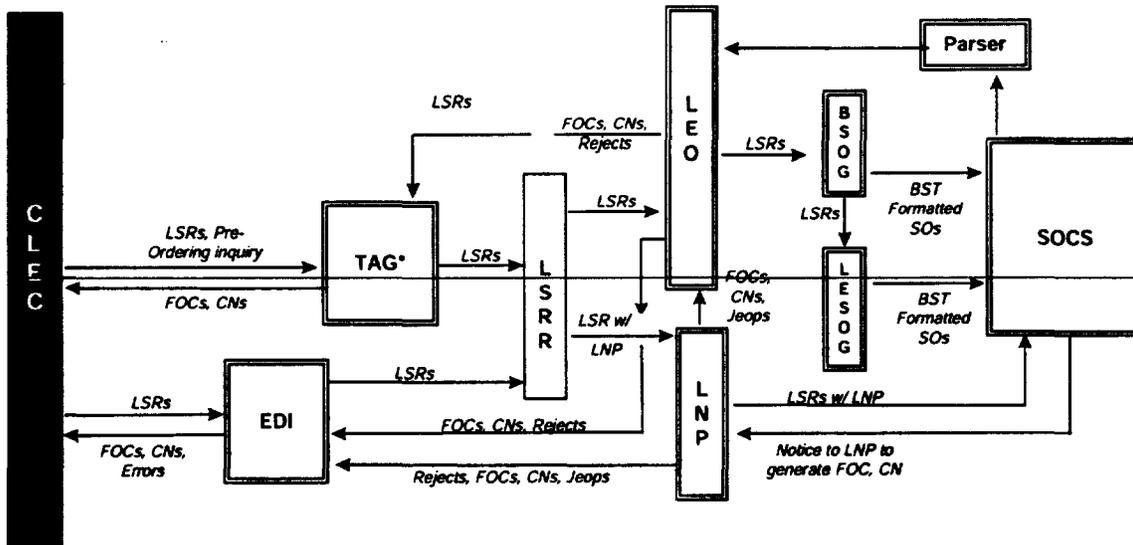


Figure IV V: BellSouth's Pre-Ordering & Ordering Network Elements

6.2 Objective

The objective of the Pre-Order Processing Systems Scalability Evaluation is to determine the degree to which these applications and associated maintenance and support workforce can scale to accommodate projected YE01 transaction volumes and CLEC users.

The objective of this evaluation is to determine the extent to which procedures to accommodate increases in the pre-order TAG interface transaction volumes and users are being actively managed.

6.3 Entrance Criteria

- Global Entrance Criteria satisfied.
- Availability of documentation identified as input.
- TAG technical documentation identified and obtained for:
 - Subsystem design
 - Software architecture
 - Technology architecture
 - Data model
 - Data communication architecture.
- Interview Guide / Questionnaire developed.

- Interviewees identified and scheduled.
- Detailed evaluation checklists developed.

~~—Global Entrance Criteria must be satisfied.~~

~~—TAG technical documentation must be identified and obtained for:~~

- ~~—Subsystem design~~
- ~~—Software architecture~~
- ~~—Technology architecture~~
- ~~—Data model~~
- ~~—Data communication architecture.~~

~~—Performance metrics must be defined and approved.~~

~~—Scalability evaluation matrix must be completed.~~

~~—Interview guide/questionnaire must be completed.~~

~~—Technical resources must be identified and scheduled for interviews.~~

~~—Test Plan and evaluation criteria must be defined and approved.~~

6.4 Test Scope

The test scope will address the following sub-processes and functions to evaluate TAG capacity management.

The scope will address the following sub-processes and functions to evaluate TAG scalability.

<p>Subprocess</p>	<p>Technical architecture modularity</p>
<p><u>TAG Capacity Management Scalability</u></p>	<p><u>Evaluate business volume tracking and forecasting.</u></p>

Sub-Process	Function
	Evaluate resource usage tracking and forecasting.
	Evaluate performance management procedures.
	Operations support resources work capacity Evaluate capacity management procedures.

Figure IV-VI: Pre-Order Processing Systems Capacity Management Scalability Evaluation Test Scope

6.5 Test Activities

Interviews will be conducted with system administration personnel responsible for the operation of TAG pre-order processing. These interviews will be supplemented with an analysis of BellSouth capacity management procedures as well as evidence of related activities such as: periodic capacity management reviews; system reconfiguration/load balancing; and, load increase induced upgrades.

1. Review procedural and other documentation related to TAG pre-order capacity management.
2. Conduct interviews with key systems administration and support personnel as appropriate.
3. Document findings.
4. Resolve exceptions.

1. ~~Identify all system documentation available for review.~~
2. ~~Conduct structured review of technical documentation.~~
3. ~~Conduct interviews with key development and support personnel.~~
4. ~~Document findings.~~
5. ~~Report any Severity 1, 2, and 3 test exceptions.~~

6.6 Exit Criteria

- Global Exit Criteria satisfied.
 - Documentation reviews completed.
 - Interviews completed.
 - Summary findings and conclusions.
 - Exit review completed.
- ~~—Scala Interviews must be completed and summarized.~~
- ~~—Summary findings document must be completed.~~
- ~~—Technical evaluations must be completed.~~
- ~~—Operational support evaluations must be completed.~~
- ~~—Results summary and reports must be delivered to KPMG.~~