

## **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 Accuracy	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

Document	File Name	Location in Work Papers	Source
BellSouth Pre-order and Ordering Overview Issue 1	PRE3 _ BellSouth Pre-order and Ordering Overview Issue 1.pdf	PRE-3-A-Disk 1	BLS
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
<i>Release Management</i>			
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	<p>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.</p> <p>BLS instituted the Quality Documentation Review process to address the occurrence of consistent format errors or deficiencies in BLS documentation, as identified by KCI.</p> <p>See Exceptions 53 and 55 for additional information on this issue. Exceptions 53 and 55 are closed.</p>
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.
<i>Document Structure and Format</i>			
PRE-3-2-1	Document version is indicated clearly within and throughout each document.	Satisfied	<p>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.</p> <p>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.</p> <p>See Exception 55 for additional information on this issue. Exception 55 is closed.</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
PRE-3-2-2	BLS document organization is consistent with its intended use.	Satisfied	<p>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.</p> <p>To address this issue, BLS has added additional table columns to identify the LENS and TAG versions applicable to the business rule.</p> <p>See Exception 55 for additional information on this issue. Exception 55 is closed.</p>
PRE-3-2-3	BLS documents contain information that is relevant to its intended audience.	Satisfied	<p>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.</p>
PRE-3-2-4	BLS documents contain a table of contents.	Satisfied	<p>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.</p>
PRE-3-2-5	BLS documents are logically organized with clear page numbering and section labeling.	Satisfied	<p>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.</p> <p>To address this issue, BLS added a header row to each table on each page identifying the appropriate section.</p> <p>See Exception 55 for additional information on this issue. Exception 55 is closed.</p>
PRE-3-2-6	BLS documents contain contact/help desk numbers.	Satisfied	<p>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.</p> <p>To address this issue, BLS added a comment to each pre-order document</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
			directing the user to contact their assigned Account Team for assistance.  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 <i>BLS Pre-Order Business Rules Data Dictionary</i> and <i>Appendix</i> , Versions 3.0 and 6.0 respectively, identified as their scope to provide additional information to the <i>BLS Pre-Order Business Rules</i> , the <i>Pre-Order Business Rules</i> , however, didn't reference the <i>Dictionary</i> or the <i>Appendix</i> .  To address this issue, BLS added a sentence in the objective statement of the <i>BLS Pre-Order Business Rules</i> identifying the <i>Dictionary</i> and the <i>Appendix</i> 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

Test Cross-Reference	Evaluation Criteria	Result	Comments
			is closed.
<i>Document Content</i>			
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	<p>KCI's initial testing revealed the majority of BLS pre-order documentation provided defined inputs and outputs.</p> <p>However, the Calculate Due Date (CDD) query process did not contain inputs or outputs. In response to this deficiency, KCI issued Exception 1.</p> <p>To address this issue, BLS added inputs/outputs specific to the CDD process in the Pre-Order Business Rules version 7.</p> <p>See Exception 1 for additional information on this issue. Exception 1 is closed.</p>
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 <sup>1</sup> .
<i>Document Accuracy</i>			
PRE-3-4-1	BLS documents correctly define data fields.	Satisfied	<p>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.</p> <p>To address this issue, BLS documented the correlation between the <i>API Reference Guide</i> and <i>Pre-Order Business Rules</i> by matching the TAG fields with the</p>

<sup>1</sup> 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
			business rules.  See Exception 63 for additional 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 <i>API Reference Guide</i> and <i>Pre-Order Business Rules</i> 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 <i>Pre-Order Business Rules</i> 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 <i>BellSouth Pre-Order Business Rules</i> , 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

Test Cross-Reference	Evaluation Criteria	Result	Comments
			<p>procedures.</p> <p>However methods and procedures were not defined for the Calculate Due Date (CDD) process. In response to this deficiency, KCI issued Exception 1.</p> <p>To address this issue, BLS added methods and procedures specific to the CDD process in the Pre-Order Business Rules version 7.</p> <p>See Exception 1 for additional information on this issue. Exception 1 is closed.</p>