

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 conditions¹ in the Reengineered Services, Installation and Maintenance Management System (RSIMMS) environment².

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 queries³. Sub-processes, functions, and evaluation criteria are summarized in the following table. The last column "Test Cross-Reference"

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.

indicates where the particular measures are addressed in section 3.1 “Results & Analysis.”

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

Sub-Process	Function	Evaluation Criteria	Test Cross-Reference
	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
	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
<i>Pre-Order Business Rules, Versions 2.0, 3.0, 4.0, 5.0, 6.0, and 7.0</i>	No Electronic Copy	PRE-1-A-1	BLS
<i>Pre-Order Business Rules Data Dictionary, Versions 1.0 and 3.0</i>	No Electronic Copy	PRE-1-A-2	BLS
<i>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</i>	No Electronic Copy	PRE-1-A-3	BLS
<i>TAG Programmers Job Aid</i>	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
<i>YE2001 Normal and Peak Forecast Methodology</i>	Fcast Summary.ppt	PRE-5-A-4	KCI
Peak Volume Test Schedule	schedule.xls	PRE-5-A-5	KCI

Document	File Name	Location in Work Papers	Source
System Readiness Test Log	SRT_by_date.xls	PRE-5-A-6	KCI
Results Data Tables	Results 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
Statistical Significance 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 43,000⁴ 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 Test⁵.

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.

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
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 rules⁷ 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

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).

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.

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 accounts⁹ 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 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.

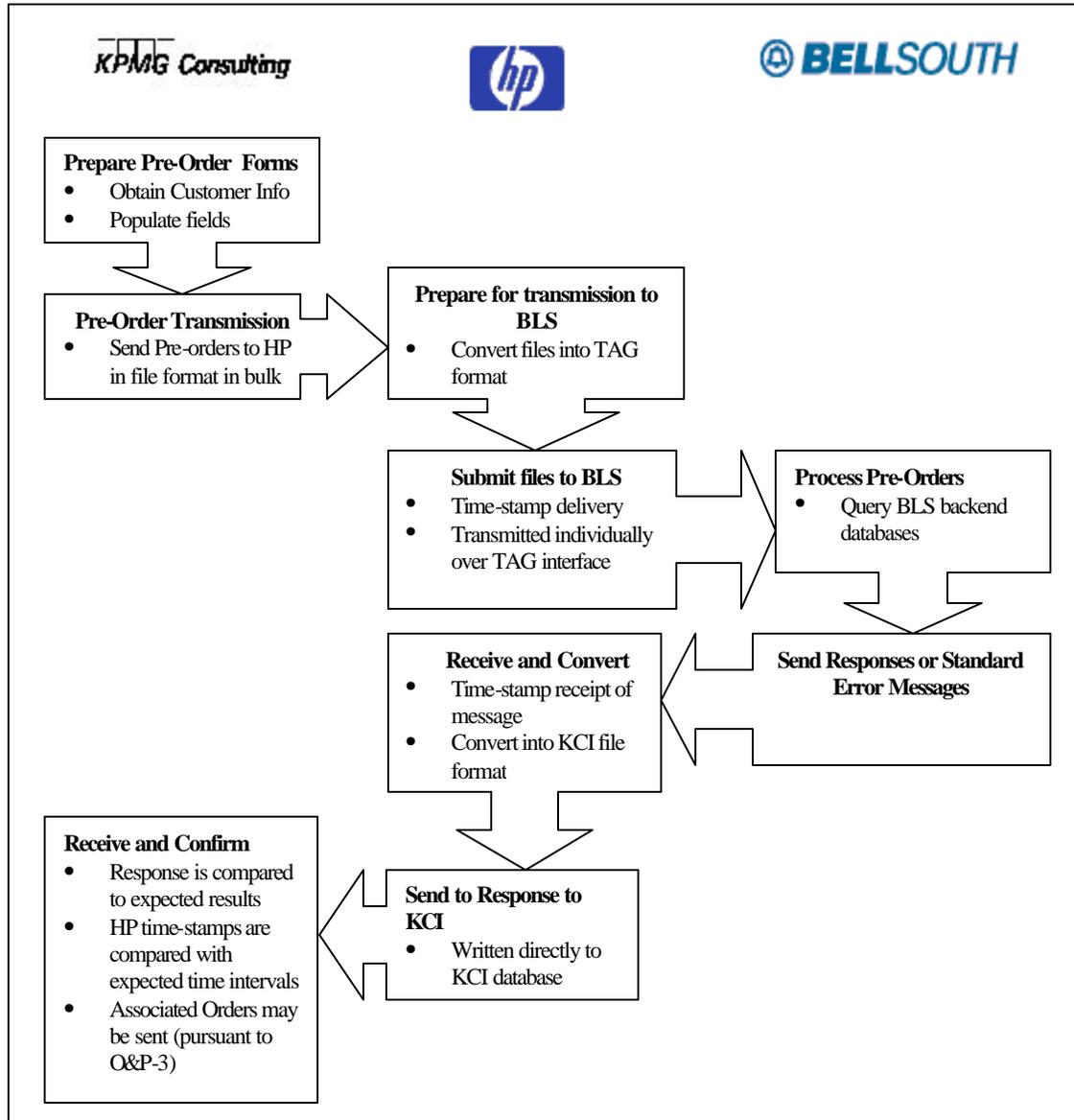
The test cases for the TAG Peak Volume Test (PRE-5) were submitted in an automated fashion. Transactions were provided in bulk to HP for conversion from the business file format to the TAG format. HP time-stamped and forwarded the transactions to BellSouth for processing according to the schedule provided by KCI. BellSouth processed the transactions and returned responses to HP. The test process is depicted in Figure IV-5.1¹⁰

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."

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-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 evaluation¹¹. 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 SQMs¹². 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 Results¹³

Test Cross-Reference	Evaluation Criteria	Result	Comments
<i>System Availability</i>			
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

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
			to recover BLS back-end functionality. The combined duration of downtime resulting from these restarts was less than 0.5% of total test time.
<i>Presence of Functionality</i>			
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
<i>Timeliness of Response^{15 16 17}</i>			
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	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

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
	system.		<p>data)</p> <ul style="list-style-type: none"> — 0.9 seconds (7/13/00 BLS Retail data) — 0.9 seconds (7/17/00 BLS Retail data) <p>Responses to AVQ_TNs were received in an average of:</p> <ul style="list-style-type: none"> — Day 1 - Initial: 6.8 seconds. — Day 1 - Retest: 2.7 seconds. — Day 2: 2.0 seconds. <p>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.</p>
PRE-5-3-2	The TAG interface provides timely pre-order responses from BLS's RSAG-Address back-end system.	Satisfied ¹⁹	<p>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:</p> <ul style="list-style-type: none"> — 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) <p>Responses to AVQs were received in an average of :</p> <ul style="list-style-type: none"> — Day 1 – Initial: 7.4 seconds. — Day 1 – Retest: 3.2 seconds. — Day 2: 2.5 seconds. <p>Although the KCI results exceed the BLS retail average by a statistically significant amount, it is KCI's professional judgment</p>

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
			that the response interval for Test-CLEC-submitted AVQ pre-orders is within a reasonable timeframe.
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	<p>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:</p> <ul style="list-style-type: none"> — 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) <p>Responses to AAQs were received in an average of:</p> <ul style="list-style-type: none"> — Day 1 – Initial: 2.8 seconds. — Day 1 – Retest: 1.6 seconds. — Day 2: 1.3 seconds. <p>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.</p>
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	<p>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:</p> <ul style="list-style-type: none"> — 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

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
			<p>data)</p> <p>Responses to TNAQs, TNSQs, and TNCAN_TNs were received in an average of:</p> <ul style="list-style-type: none"> — Day 1 – Initial: 8.3 seconds. — Day 1 – Retest: 3.2 seconds. — Day 2: 1.8 seconds. <p>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.</p>
PRE-5-3-5	The TAG interface provides timely pre-order responses from BLS's CRSECSR back-end system.	Satisfied	<p>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:</p> <ul style="list-style-type: none"> — 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) <p>Responses to CSRQs were received in an average of:</p> <ul style="list-style-type: none"> — Day 1 – Initial: 4.0 seconds. — Day 1 – Retest: 4.1 seconds. — Day 2: 2.8 seconds <p>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.</p>

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	<p>The KCI standard for pre-order timeliness is an average of 8.0 seconds.</p> <p>Responses to TNAQ_MLHs and TNCAN_MLHs were received in an average of:</p> <ul style="list-style-type: none"> — 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	<p>The KCI standard for pre-order timeliness is an average of 8.0 seconds.</p> <p>Responses to TNAQ_DIDs and TNCAN_DIDs were received in an average of:</p> <ul style="list-style-type: none"> — 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	<p>The GPSC-approved standard is parity with retail performance. Based on BLS July performance reports, KCI determined the standard response time for SAQ²⁵ queries to be:</p> <ul style="list-style-type: none"> — 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) <p>Responses to SAQs were received in an average of:</p> <ul style="list-style-type: none"> — Day 1 – Initial: 17.9 seconds. — Day 1 – Retest: 4.8 seconds. — Day 2: 4.0 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.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			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: <ul style="list-style-type: none"> — Day 1 – Initial: 0.1 Seconds — Day 1 – Retest: 0.02 Seconds — Day 2: 0.02 Seconds
<i>Accuracy of Response²⁷</i>			
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.

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.

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 Timeliness²⁸

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%

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.

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%
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	0	0	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%	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

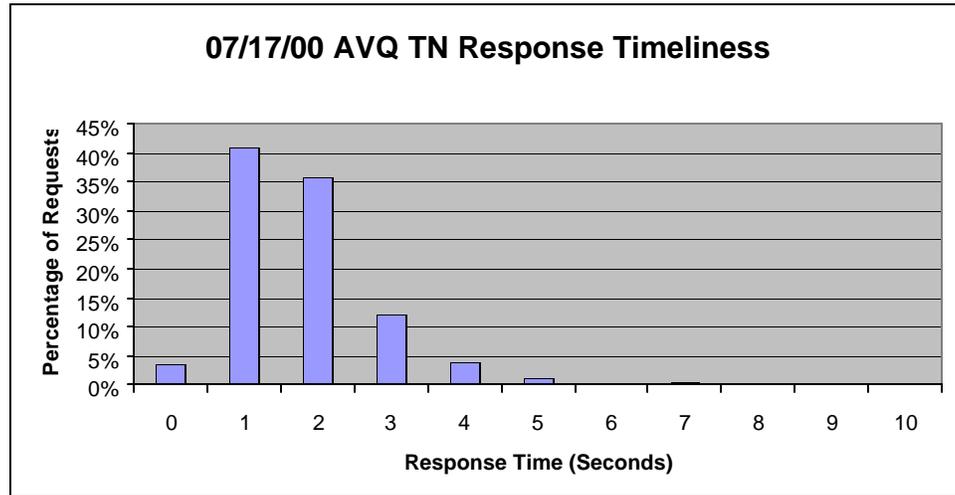
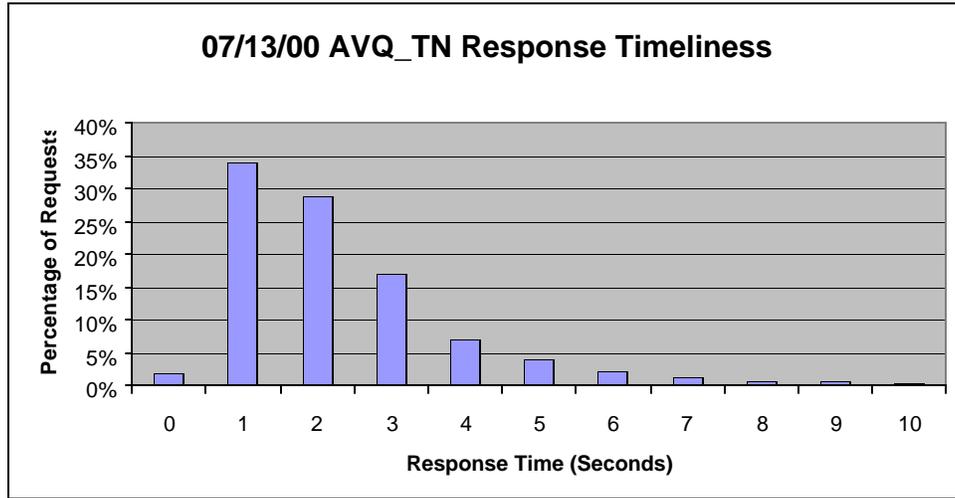


Figure IV-5.3: AVQ Response Distribution

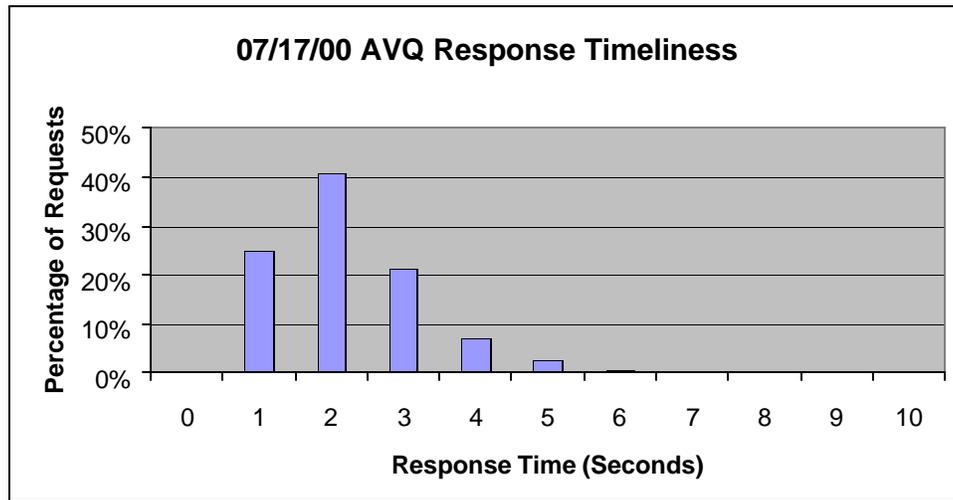
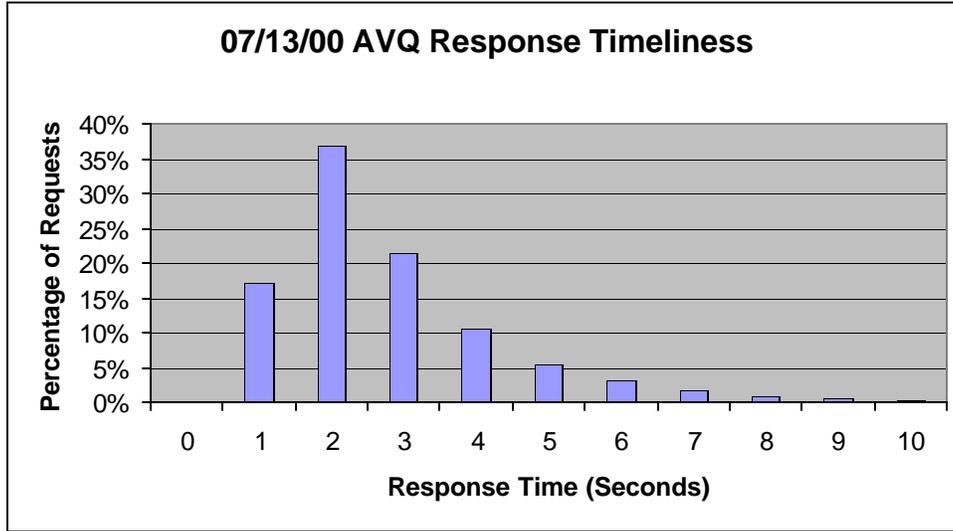


Figure IV-5.4: AAQ Response Distribution

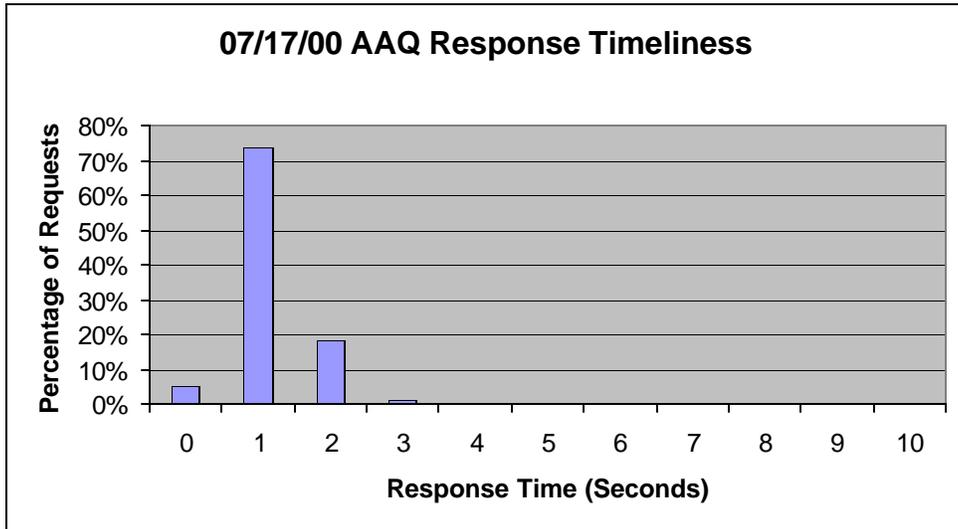
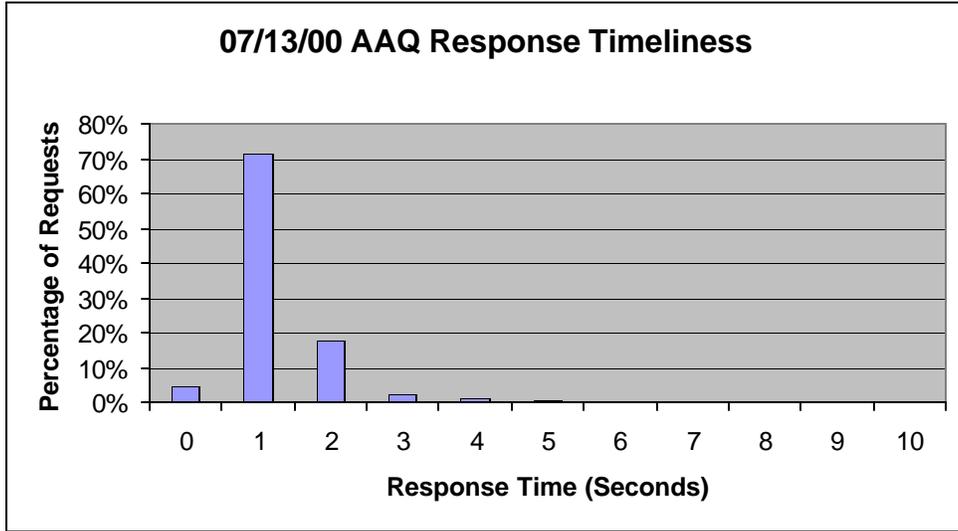
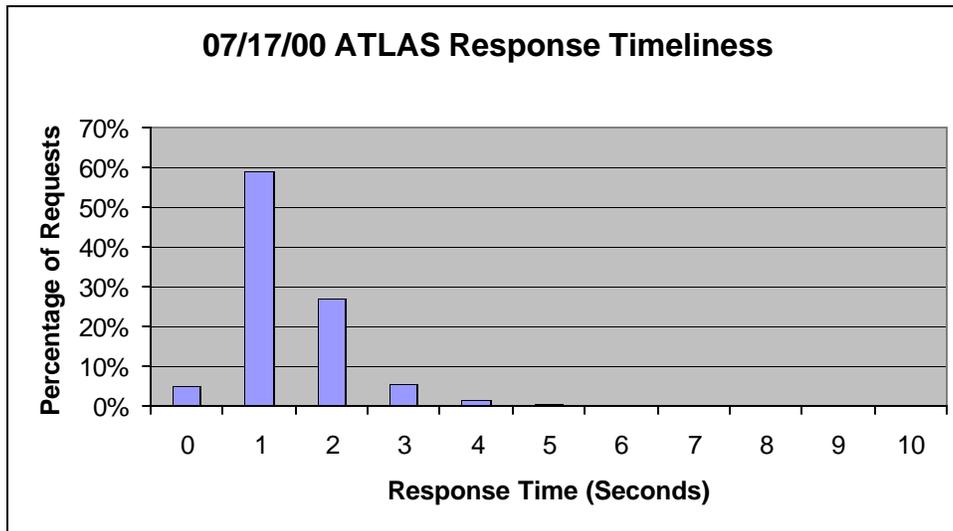
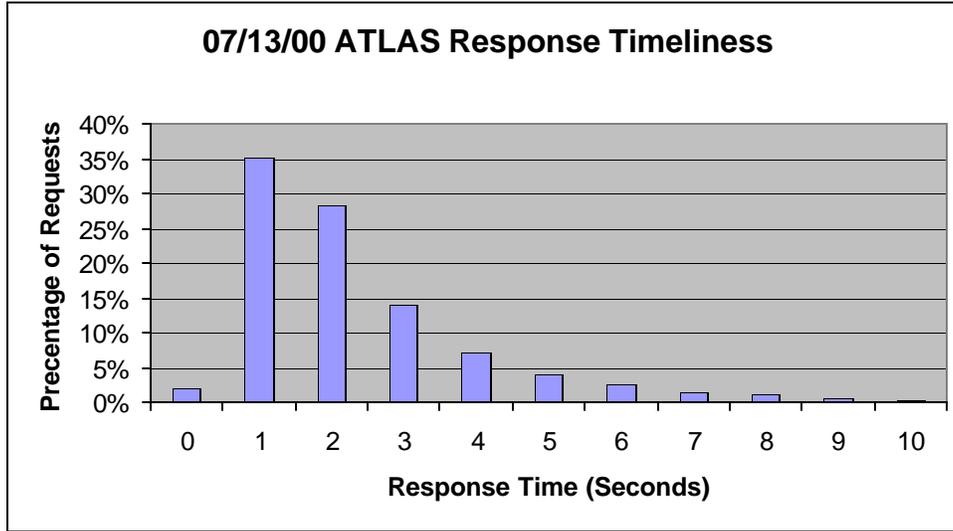


Figure IV-5.5: ATLAS Response Distribution²⁹



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

