

C. Provisioning Verification Evaluation – Resale and xDSL (PO&P13)

1.0 Description

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

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

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

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

2.0 Methodology

This section summarizes the test methodology.

2.1.1 Business Process Description (ADSL)

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

2.1.2 Business Process Description (Resale)

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

2.2 Scenarios

ADSL

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

Table IV-3.2: Detailed ADSL Test Scenarios

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

Resale

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

2.3 Test Targets & Measures

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

Table IV-3.3: Test Target Cross-Reference

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

2.4 Data Sources

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

Table IV-3.4: Data Sources for Provisioning Verification Test

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

2.4.1 Data Generation/Volumes

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

2.5 Evaluation Methods

ADSL

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

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

Interviews were also held with BellSouth provisioning personnel and with personnel from CLECs that purchase ADSL service from BellSouth. These

interviews were conducted to provide a better understanding of the ADSL end-to-end provisioning process.

Resale

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

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

2.6 Analysis Methods

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

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

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

3.0 Results Summary

This section identifies the discrete evaluation criteria and test results.

3.1 Results & Analysis

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

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

Table IV-3.5: Evaluation Criteria and Results

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

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

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

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

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

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

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

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

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

Test Cross-Reference	Evaluation Criteria	Result	Comments
			retrieved from the switch matched the information requested in corresponding, confirmed LSRs. 159 (91%) of the switch translations provided information consistent with the corresponding LSR. See Exception 114 for additional information on this issue. Exception 114 is closed.
PO&P-13-4-4	Provisioning was completed accurately for orders placed in PO&P-11 EDI & TAG Resale Functional Evaluation–Customer Service Record (CSR) Validation	Satisfied ⁷	Since there is no GPSC-approved or documented BLS standard for provisioning accuracy, KCI applied a standard of 95% for provisioning accuracy for CSRs. 70 CSRs were reviewed to determine if the CSRs matched the information requested in corresponding, confirmed LSRs. 63 (90%) of the CSRs provided information consistent with the corresponding LSR.

⁷ Although the test percentage is below the benchmark of 95%, the statistical evidence is not strong enough to conclude that the performance is below the benchmark with 95% confidence. In other words, the inherent variation in the process is large enough to have produced the substandard result, even with a process that is operating above the benchmark standard. The p-value, which indicates the chance of observing this result when the benchmark is being met, is 0.0604, above the .0500 cutoff for a statistical conclusion of failure.

Table IV-3.6: Provisioned Date⁸ vs. FOC Due Date⁹

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

Table IV-3.7: Summary of Resale Provisioning Validation Results¹⁰

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

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

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

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

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