

B. Test Results: ODUF/ADUF Usage Functional Test (BLG-2)

1.0 Description

The Optional Daily Usage File/Access Daily Usage File (ODUF/ADUF)¹ Usage Functional Test evaluated the functional elements associated with message processing of usage data by BellSouth (BLS) on behalf of a Competitive Local Exchange Carrier (CLEC). KCI simulated a non-facility based CLEC providing Unbundled Network Element (UNE) services to business and residential customers. For usage testing purposes, the KCI CLEC subscribed to BellSouth Unbundled Switched Services. Process-oriented reviews of BellSouth internal procedures for creating and distributing Daily Usage Files (DUFs)² were conducted to validate the quality and timeliness of the process flows.

2.0 Methodology

This section summarizes the test methodology.

2.1 Business Process Description

Message processing of usage data begins at the telephone switch. Usage is recorded by the switch and is retrieved by BellSouth on a daily basis. This information is used to create a file of call events. Call events associated with UNE services provided to a CLEC are assembled for input into Daily Usage Files (DUFs) and delivered to CLECs electronically or on cartridge tapes, based on a schedule published by BellSouth (see Table VI-2.1).

Events are consolidated or “packed” to ensure that a CLEC receives only one DUF feed per day, rather than multiple daily feeds. Files may contain a minimum of one message and a maximum of 99,999 messages. In most instances, DUFs are sent to CLECs on the second business day after the actual recording of the message (call details). Customers may request that prior period usage be resent.

For the purposes of the DUF transactional test, only ODUF and ADUF were utilized. The Enhanced Optional Daily Usage File (EODUF) was not specified in the Georgia Public Service Commission’s (GPSC) May 20 1999 order and was not tested. ODUFs include local billable messages carried over the BellSouth

¹ ODUFs include local billable messages carried over the BellSouth network, operator handled calls, and BellSouth incoming calls. ADUFs include originating and terminating call details and minutes of use generated from IntraLATA and InterLATA calls that originate or terminate on UNE ports.

² Daily Usage Files (DUFs) include outbound and inbound local usage, IntraLATA toll usage, BLS operator-assisted calls, and IXC originating and terminating records. Non-billable records generated by the switch may or may not be charged at the operator’s discretion. This list is non-exhaustive.

network, operator handled calls, and BellSouth incoming collect calls. ADUFs include originating and terminating call details and Minutes of Use (MOU) generated from IntraLATA³ and InterLATA⁴ calls that originate or terminate on UNE ports.

KCI completed 1,017 test calls as part of the ODUF/ADUF Functional Evaluation conducted in November 1999. Due to the fact that a high number of the test lines used to place the test calls were still in pending status, BellSouth asserted that the test results reflected a disproportionate number of missing records. BellSouth requested, and KCI agreed, to conduct a re-test that included a mix of test lines in different stages of status.

During the period April 25-27, 2000, KCI conducted a re-test and completed 1,821 test calls on test lines with pending order activity on some lines and with no pending order activity on others.

During the period August 1-4, 2000, KCI conducted an additional re-test and completed 1,434 test calls on test lines, some with pending order activity and others with no pending order activity.

2.2 Scenarios

The usage-based evaluation involved test calls from both business and residential classes of service. Telephone lines used in the test were provisioned across five central offices using three switch types, including #5ESS, DMS 100/200, and 1AES. These telephone lines included UNE port and port/loop combinations. Sixty call types, shown in Table VI-2.1, were included in the DUF test.

Table VI-2.1: DUF Test Call Types

Call Types	
1.	Local Call
2.	Long Distance Call
3.	Toll Call
4.	Collect Local Call with Partial Operator Assistance
5.	Collect Toll Call with Partial Operator Assistance

³ IntraLATA calls are calls where the originating and terminating exchanges reside in different local calling regions but in the same Local Access Transport Areas. These are commonly known as "toll calls."

⁴ InterLATA calls are calls where the originating and terminating exchanges reside in different Local Access Transport Areas. These are commonly known as "long distance calls."

Call Types	
6.	Collect Long Distance Call with Partial Operator Assistance
7.	Collect Long Distance Call with Complete Operator Assistance
8.	Collect Local Call with Complete Operator Assistance
9.	Collect Toll Call with Complete Operator Assistance
10.	Third Party Local Call with Partial Operator Assistance
11.	Third Party Toll Call with Partial Operator Assistance
12.	Third Party Long Distance Call with Partial Operator Assistance
13.	Third Party Local Call with Complete Operator Assistance
14.	Third Party Long Distance Call with Complete Operator Assistance
15.	Third Party Toll Call with Complete Operator Assistance
16.	Operator Interruption of Toll Call
17.	Operator Interruption of Local Call
18.	Operator Interruption of Long Distance Call
19.	Operator Verification of Busy Toll Number
20.	Operator Verification of Busy Local Number
21.	Operator Verification of Busy Long Distance Number
22.	Operator Refund for Local Call
23.	Operator Refund for Toll Call
24.	Operator Refund for Long Distance Call
25.	Operator Assisted Toll Call without Service Charges
26.	Operator Assisted Local Toll Call without Service Charges
27.	Operator Assisted Long Distance Call without Service Charges
28.	Operator Assisted Toll Call with Charges
29.	Operator Assisted Long Distance Call with Charges
30.	Operator Assisted Local Call with Charges
31.	Call Waiting during Long Distance Call
32.	Call Waiting during Local Call
33.	Call Waiting during Toll Call
34.	Directory Assistance for Local Telephone Number
35.	Directory Assistance for Long Distance Telephone Number
36.	Directory Assistance with Local Call Completion

Call Types	
37.	Directory Assistance with Long Distance Call Completion
38.	Alternative Carrier Long Distance Call
39.	Incoming Call
40.	International Call
41.	Customer Service (611) Call
42.	Toll Free 888 Call
43.	Toll Free 877 Call
44.	Toll Free 800 Call
45.	Information Provider 900 Call
46.	Phonesmart Repeat Dial Call (*66)
47.	Phonesmart Dial Back Call (*69)
48.	Three Way Call
49.	Third Party (Out-of-Area Caller) Local Call with Partial Operator Assistance
50.	Third Party(Out-of-Area Caller) Long Distance Call with Partial Operator Assistance
51.	Third Party (Out-of-Area Caller) Toll Call with Partial Operator Assistance
52.	Collect (Out-of-Area Caller) call with Partial Operator Assistance
53.	UNE Outgoing Local Call (Inter-switch)
54.	UNE Outgoing Local Call (Intra-switch)
55.	UNE Outgoing Toll Call (Inter-switch)
56.	UNE Incoming Toll Call (Inter-switch)
57.	UNE Incoming Local Call (Inter-switch)
58.	UNE Incoming Local Call (Intra-switch)
59.	Calling Card Calls
60.	Directory Assistance with Call Completion

2.3 Test Targets & Measures

For the DUF activity test, the test target was the recording, assembly, and delivery of relevant usage data. For the process test, the test target was BellSouth’s production and distribution of daily usage files.

Sub-processes, functions, and evaluation criteria are summarized in the following table. The last column “Test Cross- Reference” indicates where the particular measures are addressed in section 3.1 “Results & Analysis.”

Table VI-2.2: BLG-2 Test Target Cross-Reference

Sub-Process	Function	Evaluation Criteria	Test Cross-Reference
Receipt of Usage	Verify DUF data	Presence of Functionality	BLG-2-1-1 BLG-2-1-2 BLG-2-1-3
	Receive switch records at data center	Process Validation Presence of Functionality	BLG-2-1-5 BLG-2-1-6 BLG-2-1-9
	Verify DUF Data	Presence of Functionality	BLG-2-1-5 BLG-2-1-6 BLG-2-1-9
Daily Usage Feed	Create usage feed	Process Validation Presence of Functionality	BLG-2-1-5 BLG-2-1-6 BLG-2-1-9
	Define balancing and reconciliation procedures	Clarity of Information Accuracy of Document (s)	BLG-2-1-8 BLG-2-1-9
	Route usage	Presence of Functionality	BLG-2-1-9 BLG-2-1-10 BLG-2-1-11 BLG-2-1-12
Deliver usage to CLECs	Send CONNECT: Direct	Presence of Functionality	BLG-2-1-7 BLG-2-1-13
	Acknowledge arrival	Presence of Functionality Timeliness of response	BLG-2-1-7 BLG-2-1-13
Maintain usage history	Create usage backup	Process Validation Presence of Functionality	BLG-2-1-7 BLG-2-1-14
	Request backup data	Presence of Functionality	BLG-2-1-14
Status tracking and reporting	Track valid usage	Presence of Functionality Accuracy of response	BLG-2-1-1 BLG-2-1-2 BLG-2-1-3
	Account for all usage	Presence of Functionality Accuracy of response	BLG-2-1-4
	Report missing usage (gaps)	Presence of Functionality Timeliness of response	BLG-2-1-1 BLG-2-1-2 BLG-2-1-3
	Track valid usage	Presence of Functionality Accuracy of Response	BLG-2-1-15 BLG-2-1-16 BLG-2-1-17
	Account for no usage	Presence of Functionality Accuracy of Response	BLG-2-1-15 BLG-2-1-16 BLG-2-1-17
	Account for missing usage (gaps)	Presence of Functionality Accuracy of Response	BLG-2-1-15 BLG-2-1-16 BLG-2-1-17

2.4 Data Sources

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

Table VI-2.3: Data Sources for the ODUF/ADUF Usage Functional Test

Document	File Name	Location in Work Papers	Source
DUF Files Transmitted to KCI CLEC	No Electronic Copy	BLG-2-A-5	BLS
Exchange Message Interface/Ordering and Billing Forum (EMI/OBF)	EMI16r2.pdf Version 16r2, July 1999	BLG-2-A-5	Alliance for Telecommunications Industry Solutions (ATIS)
BLS Access Daily Usage File (ADUF), December 1999	No Electronic Copy	BLG-2-A-6	BLS http://www.interconnection.bellsouth.com/products/billing/aduf.html
BLS Optional Daily Usage File (ODUF), December 1999	No Electronic Copy	BLG-2-A-7	BLS http://www.interconnection.bellsouth.com/products/billing/oduf.html
BLS Enhanced Optional Daily Usage File (EODUF), December 1999	No Electronic Copy	BLG-2-A-8	BLS http://www.interconnection.bellsouth.com/products/billing/eoduf.html
Facility-Based CLEC Starter Kit – Daily Usage File, Issue 2, December 31, 1997	No Electronic Copy	BLG-2-A-15	BLS
ADUF Setup and Testing, Issue Date August 1, 1998 Revision Date: August 17, 1998	No Electronic Copy	BLG-2-A-18	BLS
Usage Processing: Overview of ADUF, Issue Date August 1, 1998 Revision Date: July 12, 1999	No Electronic Copy	BLG-2-A-11	BLS
Usage Processing: ADUF Problems/Issues, Issue Date August 1, 1998 Revision Date: July 12, 1999	No Electronic Copy	BLG-2-A-12	BLS

Document	File Name	Location in Work Papers	Source
Usage Processing: Timing of ADUF Messages, Issue Date February 17, 1998 Revision Date: July 12, 1998	No Electronic Copy	BLG-2-A-13	BLS
Usage Processing: ADUF Recreations/Re-sends, Issue Date August 1, 1998 Revision Date: July 12, 1998	No Electronic Copy	BLG-2-A-14	BLS
CLEC Advisory Training	No Electronic Copy	BLG-2-A-15	BLS
Electronic Interface – Billing Optional Daily Usage Files	No Electronic Copy	BLG-2-B-1	BLS
Access Daily Usage File – ADUF Overview	No Electronic Copy	BLG-2-A-13	BLS
Chapter 3.0 Billing Format Options	No Electronic Copy	BLG-2-A-14	BLS http://www.interconnection.bellsouth.com/guides/actreq2_fac/c3_4.htm
BLS Optional Daily Usage File (ODUF)	No Electronic Copy	BLG-2-B-1	BLS
KCI CLEC UNE Loop & Facilities Diagrams and Photographs	No Electronic Copy	BLG-2-B-2	KCI
Communications from BLS (including supporting documentation)	No Electronic Copy	BLG-2-B-6	BLS
Communications to BLS (including supporting documentation)	No Electronic Copy	BLG-2-B-7	BLS
Interview Summary/Report: 3	No Electronic Copy	BLG-1-J-5	KCI
BLS Response to Interview Summary/Report: 3	No Electronic Copy	BLG-1-J-6	BLS
Interview Summary/Report: 4	No Electronic Copy	BLG-1-J-7	KCI
BLS Response to Interview Summary/Report:4	No Electronic Copy	BLG-1-J-8	BLS
Interview Summary/Report: 5 & 6	No Electronic Copy	BLG-2-C-1	KCI
BLS Response to Interview Summary/Report:5 & 6	No Electronic Copy	BLG-2-C-2	BLS
Interview Summary/Report: 5 & 6 Follow-On	No Electronic Copy	BLG-2-C-3	KCI

Document	File Name	Location in Work Papers	Source
Interview Summary/Report: 8	No Electronic Copy	BLG-1-J-9	KCI
BLS Response to Interview Summary/Report:8	No Electronic Copy	BLG-1-J-10	BLS
Interview Summary/Report: 10	No Electronic Copy	BLG-2-C-4	KCI
Interview Summary/Report: 11	No Electronic Copy	BLG-1-J-12	BLS
Sample Trouble Ticket (TTS) With Summary of Actions Taken	No Electronic Copy	BLG-1-K-3	BLS
Sample Report Card from Recent CRIS / CABS Release	No Electronic Copy	BLG-1-K-4	BLS
Sample Daily MAPPS Report (e-mail Version)	No Electronic Copy	BLG-1-K-5	BLS
Process Flow Description of Tracking Group Processes	No Electronic Copy	BLG-1-K-6	BLS
Sample Flex Report	No Electronic Copy	BLG-1-K-7	BLS
Sample ODUF / ADUF UNITECH Reports	No Electronic Copy	BLG-2-C-5	BLS
Sample Balancing Spreadsheet for 01 / 02 Jobs	No Electronic Copy	BLG-2-C-6	BLS
Sample Access Database Reports (ADUF)	No Electronic Copy	BLG-2-C-7	BLS
Sample IBIS Case (One when initiated, one when completed)	No Electronic Copy	BLG-2-C-8	BLS
Sample Form 8182 Showing MIC Case Inventory	No Electronic Copy	BLG-2-C-9	BLS
Sample Form 2052 Showing Case Activity	No Electronic Copy	BLG-2-C-10	BLS
Samples of on-line MIC Documentation (an LNP error code and a generic error code)	No Electronic Copy	BLG-2-C-11	BLS
Process Flow of MIC Process	No Electronic Copy	BLG-2-C-12	BLS
Process Flow Overview for Data Collection/Distribution	No Electronic Copy	BLG-2-C-13	BLS
Sample of RVV Task Procedures for Resolving Anomalies	No Electronic Copy	BLG-2-C-15	BLS

Document	File Name	Location in Work Papers	Source
Sample of Metrics Used for Review of CPU Utilization and Other Resources (Package reviewed during interview)	No Electronic Copy	BLG-1-K-20	BLS
Sample Off-Site Pull List (From EDS Data Center Ops)	No Electronic Copy	BLG-1-K-21	BLS
Sample Software Control Management (SCM) Plan	No Electronic Copy	BLG-1-K-22	BLS
Sample STS Batch Process Report Private & Confidential	No Electronic Copy	BLG-1-K-25	BLS
Sample SCCB Form	No Electronic Copy	BLG-1-K-23	BLS
Sample MAPS Document for Implementing Software Changes Private & Confidential	No Electronic Copy	BLG-1-K-27	BLS
Examples of Completed DCR Private & Confidential	No Electronic Copy	BLG-1-K-28	BLS
Examples of Incident Report Private & Confidential	No Electronic Copy	BLG-1-K-29	BLS
Sample of Escalation Procedures Private & Confidential	No Electronic Copy	BLG-1-K-30	BLS
Sample Summary of Failures for Billing / Corporate Finance Jobs Private & Confidential	No Electronic Copy	BLG-1-K-31	BLS

2.4.1 Data Generation/Volumes

The process component of the evaluation did not rely on data generation or volume testing.

The ODUF/ADUF usage-based component of the evaluation required data generation. Each tester received instructions and training for placing and recording calls. Testers recorded actual call information in the test call log and submitted both written and electronic copies of the logs. Testers were instructed to place calls to particular telephone numbers in specific ways. Testers were required to log all attempted and completed calls. A total of 1,017 originating and terminating calls were included in the initial evaluation; a total of 1,821 originating and terminating calls were included in the first retest evaluation; a

total of 1,434 originating and terminating calls were included in the second retest evaluation. To generate test calls of sufficient variety, testers were dispatched to five locations within the BellSouth calling region. These locations are listed in Table VI-2.4.

Table VI-2.4: Test Call Sites (BellSouth Central Offices)

Central Office	Address
Augusta	937 Green Street, Augusta, GA 30910
Macon	787 Cherry Street, Macon, GA 31201
Powers Ferry	1732 Powers Ferry Road SE, Marietta, GA 30067
Rome	708 East First Street, Rome, GA 30161
Toco Hills	2204 La Vista Road NE, Atlanta, GA 30320
Floater	Outside BellSouth jurisdiction

One additional tester, located outside of the BellSouth jurisdiction, placed third party billing and collect calls from non-test phones to test phones and received test calls from testers in the BellSouth calling region.

The testers were given a spreadsheet containing the telephone numbers to be called and any special instructions needed to ensure that a wide variety of call types and call lengths were placed. Testers recorded actual call information on the spreadsheets.

Calls were grouped in five categories: Local, Toll, Long Distance, Operator Services and Other. ‘Local’ calls are defined as calls made to destinations within the local calling area, and are charged by standard measured service or a monthly flat fee. ‘Toll’ calls are calls made to destinations outside of the local calling region, but within the same Local Access Transport Area (LATA). Long Distance calls, including international calls, are made to destinations outside the LATA. Operator Services calls include credit calls, directory assistance calls, and special service calls. ‘Other’ calls consist of information provider calls and casual calls (10-10-XXX).

2.5 Evaluation Methods

Execution of the DUF Usage Functional Transaction Test required BellSouth to establish a test bed of accounts⁵, against which test calls were placed. The test calls consisted of commonly placed incoming and outgoing call types that were

⁵ Test Bed requirements can be found in the Georgia OSS Evaluation *Master Test Plan*, Version 4.0, Appendix B.

generated over multiple switch types over a three-day period. The test included validation of expected usage results based on test calls placed by KCI, against DUF records received by the KCI CLEC. Throughout this report, usage of the acronym DUF includes both ODUF and ADUF.

Evaluation of the accuracy and completeness of the DUF files was based on a comparison of the call details logged by KCI when the test calls were placed, and the DUF records delivered to KCI by BellSouth.

During the process evaluation, the BellSouth internal procedures associated with the production and distribution of daily usage files were examined. The objective of the process evaluation was to examine the processes by which the Daily Usage Files (ODUF for local usage and ADUF for access usage) are produced and distributed in order to determine whether internal BellSouth procedures are sufficiently complete, robust and managed to ensure timely and correct distribution of usage.

ODUF/ADUF Usage Test

Test calls originated and terminated in five BellSouth central office locations using three switch types. Sixty incoming and outgoing commonly used call types were employed to create scripted test calls. Calls were made from within and outside of the BellSouth service area. The basis for this Functional Usage Evaluation was the call records compiled by the testers and the DUFs generated by BellSouth resulting from the placement of test calls.

The following methodology was employed for both the initial evaluation and the retest evaluation to evaluate the accuracy, completeness, and timeliness of DUFs:

1. The Testers placed scripted test calls across all 60 call categories.
2. Test log records for the completed test calls and DUF records received were compiled in a database. Each test call was examined to determine if the specific call should result in the generation of a DUF record.

Individual call records on the DUF were matched against call details from the test call logs. All call types were reviewed for accuracy, validation of the date and time of placement, origination and termination Telephone Numbers (TN), call duration, method of recording, rate class, indicators and message type. If a unique record could not be determined as a match to the call log, the expected DUF record was designated as missing. KCI also examined the database to identify any unexpected DUF records.

3. The record layout and content of DUF headers and trailers, as defined by Exchange Message Interface-Ordering and Billing Forum (EMI-OBF) guidelines⁶, were examined to verify that the DUFs actually contained the number of records indicated in the header and trailer. DUFs were examined to verify that no empty files were transmitted, and that the volume of records contained in the DUFs were within BellSouth’s published specifications.
4. The transmission date and time of DUFs were recorded, and the number of calendar days between the message creation date and the DUF transmission date was noted. This number was used in the determination of timeliness of usage data delivery. Although BellSouth offers a variety of DUF delivery methods to CLECs, this test involved only the CONNECT:Direct® delivery method. Therefore, all delivery time analysis was completed from files transmitted via CONNECT:Direct and over a 10-day period starting on August 1, 2000.

The timeliness of delivery of DUFs was evaluated based on the following message transmission timing factors as published by BellSouth, “Usage Processing, Timing of ADUF Messages.”⁷

Table VI-2.5: BellSouth Schedule of Message Recording and Delivery to CLECs

Message Recorded	BiBs Sends (Processing Ctr. 1) ⁸	MD03B01 Receives (Processing Ctr. 2) ⁹	MD03B02 Consolidator in Mississippi Receives (BLS Processing Ctr. 3) ¹⁰	CLEC Receives
Mon	Tues 1:00pm	Tues between 1:00pm and 12:00am	Wed 7:00am	Wed 9:00am
Tues	Wed 1:00pm	Wed between 1:00pm and 12:00am	Thurs 7:00am	Thurs 9:00am
Wed	Thurs 1:00pm	Thurs between 1:00pm and 12:00am	Fri 7:00am	Fri 9:00am
Thurs	Fri 1:00pm	Fri between 1:00pm and 12:00am	Mon 7:00am	Mon 9:00am
Fri	Mon 1:00pm	Mon between 1:00pm and 12:00am	Tues 7:00am	Tues 9:00am
Sat	Mon 1:00pm	Mon between 1:00pm	Tues 7:00am	Tues 9:00am

⁶ Exchange Message Interface-Ordering and Billing Forum (EMI-OBF) EMI16r2.pdf Version 16r2, July 1999

⁷ BellSouth ADUF document entitled Data Delivery HP24:25 Chapter 6 p.vi.6.1

⁸ BellSouth Industrial Billing System (BiBs) processes and feeds ODUF and ADUF.

⁹ MD03B01 processes Jobs in each of the Revenue Accounting Offices (RAO). Performs system edits and EMI conversion.

¹⁰ MD03B02 Consolidator processes all files from RAO and packs data into Header and Trailer records.

Message Recorded	BiBs Sends (Processing Ctr. 1) ⁸	MD03B01 Receives (Processing Ctr. 2) ⁹	MD03B02 Consolidator in Mississippi Receives (BLS Processing Ctr. 3) ¹⁰	CLEC Receives
		and 12:00am		
Sun	Mon 1:00pm	Mon between 1:00pm and 12:00am	Tues 7:00am	Tues 9:00am

DUF Processing Test

For the process evaluation component of the ODUF/ADUF Usage Functional Test (BLG-2), KCI conducted interviews with BellSouth subject matter experts, observed BellSouth work operations, and reviewed BellSouth documentation pertaining to the production and distribution of DUFs. Using the information gathered, KCI evaluated the processes in place which support the timely and accurate production and distribution of DUFs.

Processes evaluated included collection of usage data, creation of usage feeds and backups, and the delivery of the DUFs. KCI examined the collection of usage data for functionality. The creation of DUFs was also reviewed for accuracy, clarity of documentation and functionality. The processes associated with production of usage feed backups were evaluated for functionality. In addition, KCI reviewed DUF delivery for functionality and timeliness.

2.6 Analysis Methods

The ODUF/ADUF Usage Functional Test (BLG-2) included a checklist of evaluation criteria developed by KCI during the initial phase of the BellSouth-Georgia OSS Evaluation. These evaluation criteria, detailed in the *Master Test Plan*, provided the framework of norms, standards, and guidelines for the ODUF/ADUF Usage Functional Test.

The data collected from transaction processing, inspections and interviews were analyzed employing the evaluation criteria referenced above.

3.0 Results Summary

This section identifies the evaluation criteria and test results.

3.1 Results & Analysis

The results listed below reflect the retest evaluation of calls placed by KCI from August 1-4, 2000, as well as any noteworthy items from both the initial evaluation of calls placed by KCI from November 18-20, 1999 and the retest evaluation conducted April 25-27, 2000. Definitions of evaluation criteria, possible results, and exceptions are provided in Section II.

Table VI-2.6: BLG-2 Evaluation Criteria and Results

Test Cross Reference	Evaluation Criteria	Result	Comments
BLG-2-1-1	For all scripted and completed test calls that should generate a DUF record, appropriate DUF records are contained in the electronically delivered Daily Usage Files.	Satisfied	<p>During the period November 18-20, 1999 KCI completed 846 test calls for which DUF files were expected. BLS provided DUF records for these calls. After examining these DUF records, KCI determined that BLS provided the incorrect type of DUF records for certain test calls. As a result, KCI issued Exception 27.</p> <p>KCI conducted retesting during the period April 25-27, 2000. KCI determined that the issue identified in the original test was still outstanding.</p> <p>BLS updated ODUF documentation to clarify both the BLS policy and the resulting CLEC expectation regarding the generation and receipt of toll records. This update also solidifies the BLS position that all operator handling originating from a UNE switch port is subject to billing whether or not the action being attempted by the operator was successful.</p> <p>KCI reviewed the updated documentation and believes that the updated information provides adequate information regarding local vs. toll calls expected on the DUF.</p> <p>See Exception 27 for additional information on this issue. Exception 27 is closed.</p>
BLG-2-1-2	For all scripted and completed test calls that should generate a DUF record, all expected DUF records are contained in the electronically delivered Daily Usage Files.	Satisfied	<p>KCI completed 1,017 test calls during the initial ODUF / ADUF Functional Usage Evaluation. BLS failed to deliver DUF records for 46% of the test calls for which records were expected.</p> <p>KCI conducted retesting during the period April 25-27, 2000, and completed 1,821 test calls during the</p>

Test Cross Reference	Evaluation Criteria	Result	Comments
			<p>course of the retest. BLS failed to deliver DUF records for 27% of the test calls for which records were expected.</p> <p>KCI conducted additional retesting during the period August 1-4, 2000, and completed 1,434 test calls during the course of the retest. BLS failed to deliver DUF record for 6% of the test calls for which records were expected.</p> <p>BLS updated its billing documentation to state that service order errors or other processing issues may delay the updating of an account and, therefore, delay usage delivery and billing of same account. KCI understands that a CLEC will not be billed for any usage not delivered during this period of time.</p> <p>See Exception 28 for additional information on this issue. Exception 28 is closed.</p>
BLG-2-1-3	For all scripted and completed test calls that should generate a DUF record, 95% are delivered within 6 calendar days.	Satisfied	For calls made during both the initial and retest evaluations, BLG delivered 99% of the DUF records within six calendar days.
BLG-2-1-4	DUF records transmitted to KCI Test CLEC contained billable information.	Satisfied	All of the DUF file transmissions that BLS provided to KCI as a result of both the initial and retest evaluations contained billable information.

Test Cross Reference	Evaluation Criteria	Result	Comments
BLG-2-1-5	Scope and objectives of the DUF production and distribution services covers all key customer requirements.	Satisfied	The interview indicates that scope and objectives of BLS's activities address all key customer requirements, from usage collection through final distribution.
BLG-2-1-6	DUF production and distribution responsibilities and activities are clearly defined.	Satisfied	Responsibilities are vested in a number of different BLS organizations. Interviews with BLS personnel responsible for performing these functions revealed that responsibilities are clearly defined, but documentation for these responsibilities was not available.
BLG-2-1-7	Customer is provided sufficient understanding of the DUF production and processes.	Satisfied	KCI's DUF functional testing experience indicates that the customer is provided with adequate understanding of DUF production and distribution process to conduct its business, as such needs are minimal. Detail of the qualifications can be found in the BLG-7 ODUF/ADUF Documentation Evaluation test report.
BLG-2-1-8	Customer has ready and convenient access to assistance with DUF production and distribution problems.	Satisfied	Interviews indicate that customer access to needed assistance is provided, but characteristics of this support (such as scope and expected response intervals) are not well defined. See also the BLG-6 ODUF/ADUF Documentation Evaluation test report.
BLG-2-1-9	Internal change management procedures are in place to document and manage process changes (e.g., code, tables).	Satisfied	Interviews indicates that formal change management procedures for introducing system changes are in effect from initial requirements definition through introduction into production. Change management procedures are also in place for development and introduction of problem fixes.
BLG-2-1-10	Process includes procedures to ensure all relevant usage is received, validated and	Satisfied	Interviews indicate that sufficient capacity and redundancy is in place to ensure that usage can be collected from network elements. Extensive

Test Cross Reference	Evaluation Criteria	Result	Comments
	processed.		<p>data edits are performed and erred usage data is routed for investigation and correction.</p> <p>Automated run-to-run controls and statistical profiling have been implemented to ensure that all received usage records are accounted for, and that changes in usage patterns that may be indicative of errors or problems are detected. Control totals are also maintained and tracked by RAO and Operating Company Number (OCN). Final checks for duplicate records and correct record counts are made just prior to transmission.</p> <p>BLS updated its billing documentation to state that service order errors or other processing issues may delay the updating of an account and, therefore, delay usage delivery and billing of same account. KCI understands that a CLEC will not be billed for any usage not delivered during this period of time. See Exception 28 for additional information on this issue. KCI has recommended closure of Exception 28 to the GPSC.</p>
BLG-2-1-11	Process includes procedures to ensure all usage is correctly routed.	Satisfied	<p>Daily look-ups against the routing guide that allow detection of carrier changes (i.e., the end user moves to another reseller) are performed. In such cases, “killer” records voiding previously sent DUF records and new corrected DUF records can be created for the prior and current resellers, respectively.</p> <p>Actual forwarding of the DUF records is governed by the customer service subscription. The DUF transactional initial and retest evaluations identified that the guide was not properly routing DUF records in all cases.</p> <p>BLS implemented system changes to</p>

Test Cross Reference	Evaluation Criteria	Result	Comments
			<p>increase sensitivity to pending migration service orders. BLS has also updated billing documentation to state that service order errors or other processing issues may delay the guide updates and, therefore, delay the intended routing of the usage. KCI understands that a CLEC will not be billed for any usage not delivered during this period of time.</p> <p>See Exception 28 for additional information on this issue. KCI has recommended closure of Exception 28 to the GPSC.</p>
BLG-2-1-12	Process includes adequate error detection procedures and reasonability checks to catch errors not susceptible to pre-determined balancing procedures.	Satisfied	<p>Interviews indicate that error detection occurs on a number of levels, ranging from initial collection and edits of the Automatic Message Accounting (AMA) data through detection and tracking of errors during all processing stages to “back-end” monitoring of usage generated revenues. Error detection is highly automated, and addresses both usage record content (there are approximately 1300 possible error codes) and the controls to ensure that all usage records are correctly accounted for.</p> <p>Procedures exist to facilitate operational recovery and restart of the usage processing systems and to escalate operational problems as required.</p> <p>Error correction procedures are, for certain error types, highly automated. Error correction activities are monitored to ensure timely fixes. Errors are grouped and prioritized by “cases” to ensure timely and efficient resolution. “Referrals” may be initiated to enlist additional support for problem resolution.</p>

Test Cross Reference	Evaluation Criteria	Result	Comments
BLG-2-1-13	Process includes procedures to ensure accurate preparation and timely delivery of DUF data.	Satisfied	Interviews indicate that in final processing stages, DUF records are consolidated, checked to ensure that no duplicates have been sent in the prior 35 days, “packed” by Revenue Accounting Office (RAO) and Operating Company Number (OCN), balanced by record count, formatted, and placed on the appropriate medium for transmission. CONNECT:Direct jobs are initiated. Delivery is monitored. Procedures, as defined, should be adequate to ensure timely and accurate transmission of DUF records. The procedures have been validated based on the results reported for BLG-2-1-3.
BLG-2-1-14	Process includes procedures for retaining, archiving and accessing prior period data.	Satisfied	Interviews indicates that at present, ODUF records can be re-created and sent for up to 90 days (CONNECT: Direct) and one year (dial-in). ADUF records are on indefinite retention. In general, retroactive creation of ODUF records is not supported after a certain timeframe. Operational procedures exist to support these policies.
BLG-2-1-15	Process includes complete and consistent procedures for status tracking, management reporting and management intervention.	Satisfied	The interview identified procedures for status tracking and process management. No documented problem escalation procedures were provided. However, this issue is not significant enough to affect the outcome of this criterion.
BLG-2-1-16	Process performance measures are defined, measured and reviewed.	Satisfied	Interviews indicate that the overall measures of accuracy and timeliness are defined and tracked. In addition to published Service Quality Measurements (SQMs), internal measures (e.g., revenue value of erred usage that was corrected and returned to processing, intervals to resolve erred usage) exist within individual BLS

Test Cross Reference	Evaluation Criteria	Result	Comments
			organizations that contribute to the accurate and timely production of the DUF. Performance measures are also associated with individual activities that contribute to overall DUF timeliness and accuracy.
BLG-2-1-17	Process improvement responsibilities are assigned and executed.	Satisfied	Performance improvement responsibilities lie within a number of BLS organizations and mechanisms to bring multi-disciplinary efforts to bear on performance issues exist. Prior to closure, “cases” that have been “referred” require root cause analysis to help resolve persistent or pervasive performance problems. There is, however, no apparent single point of overall “ownership” of DUF production performance and performance improvement efforts.

DUF Accuracy and Completeness Analysis

Table VI-2.7 illustrates timeliness results for the BellSouth DUF Usage test. DUF files received after six calendar days are considered to be untimely according to the interconnection agreement.

Table VI-2.7: DUF Timeliness

Timeliness Criterion	Percent Received	Cumulative Percent Received
% DUF in 1 calendar day	0	0
% DUF in 2 calendar days	16%	16%
% DUF in 3 calendar days	9%	25%
% DUF in 4 calendar days	43%	68%
% DUF in 5 calendar days	16%	84%
% DUF in 6 calendar days	15%	99%
% DUF in > 6 calendar days	1%	100%

Table VI-2.8 displays results by location from KCI's analysis of DUFs for accuracy and completeness.

Table VI-2.8: Results by Location

Note: Totals may not sum due to rounding

Evaluation Criteria	Augusta	Macon	Powers Ferry	Rome	Toco Hills	Floater	Total
1) Total number of test calls	0	360	358	358	358	0	1434
2) Number of Calls for which no DUF was Expected	0	65	117	111	79	0	372
3) Total number of calls for which a DUF record was expected	0	295	241	247	279	0	1062
4) Total number of calls for which an expected DUF record wasn't found	0	29	23	15	8	0	75
5) Percentage expected DUFs that were not found vs total number calls for which a DUF was expected(4/3)	0%	10%	10%	6%	3%	0%	7%
6) Total number of scripted test calls for which an unexpected DUF record was found	0	0	0	0	0	0	0
7) Percentage of total test calls for which an unexpected DUF record was found (6/1)	0%	0%	0%	0%	0%	0%	0%

Table VI-2.9 illustrates the results of analysis done to validate transmitted file completeness.

Table VI-2.9: DUF Transmission Completeness Validation¹¹

Create Date	DUF File	File Count	Actual Count	Discrepancies
08/03/2000	dsodufga.zxc.113222.D2000216.T091132.20000803120007005	56	56	0
08/08/2000	dsodufga.zxc.501259.D2000220.T075012.20000807090046257	50	50	0
08/04/2000	dsodufga.zxc.282230.D2000217.T122822.20000804150007381	40	40	0
08/08/2000	dsodufga.zxc.594015.D2000221.T075940.20000808090015740	188	188	0
08/07/2000	dsodufga.zxc.501755.D2000220.T075017.20000807090130452	126	126	0
08/14/2000	dsodufga.zxc.281703.D2000217.T122817.20000804150005750	120	120	0
08/08/2000	dsodufga.zxc.593500.D2000221.T075935.20000808090010002	73	73	0
08/04/2000	dsodufga.zxc.283292.D2000217.T122832.20000804150010976	66	66	0
08/09/2000	dsodufga.zxc.055516.D2000222.T080555.20000809120011217	21	21	0
08/07/2000	dsodufga.zxc.501070.D2000220.T075010.20000807090025887	116	116	0
08/09/2000	dsodufga.zxc.054911.D2000222.T080549.20000809120006163	24	24	0

¹¹ The records in this table include some DUF records that are outside of the test dates, TNs that were not part of the test, and calls that were not part of the validation test.

Create Date	DUF File	File Count	Actual Count	Discrepancies
08/03/2000	dsodufga.zxc.112889.D20002 16.T091128.20000803120005 194	4	4	0
08/08/2000	dsodufga.zxc.593665.D20002 21.T075936.20000808090011 900	11	11	0
08/04/2000	dsadufga.zxc.354427.D20002 17.T083544.20000804120008 773	49	49	0
08/08/2000	dsadufga.zxc.222815.D20002 21.T082228.20000808120008 354	78	78	0
08/09/2000	dsadufga.zxc.140703.D20002 22.T081407.20000809120015 698	40	40	0
07/07/2000	dsadufga.zxc.173414.D20002 20.T081734.20000807120008 393	73	73	0
08/09/2000	dsadufga.zxc.222456.D20002 21.T082224.20000808120005 970	36	36	0
08/10/2000	dsadufga.zxc.155400.D20002 23.T081554.20000810120007 614	24	24	0
08/04/2000	dsadufga.zxc.354239.D20002 17.T083542.20000804120006 423	76	76	0
08/08/2000	dsadufga.zxc.222638.D20002 21.T082226.20000808120006 308	70	70	0
08/10/2000	dsadufga.zxc.155184.D20002 23.T081551.20000810120005 830	11	11	0
08/07/2000	dsadufga.zxc.173132.D20002 20.T081731.20000807120007 316	18	18	0
08/07/2000	dsodufga.zxc.501574.D20002 20.T075015.20000807090108 696	72	72	0

Create Date	DUF File	File Count	Actual Count	Discrepancies
08/07/2000	dsodufga.zxc.500795.D20002 20.T075007.20000807090003 957	97	97	0
08/04/2000	dsodufga.zxc.282797.D20002 17.T122827.20000804150008 734	28	28	0
08/08/2000	dsodufga.zxc.593319.D20002 21.T075933.20000808090008 409	44	44	0
08/04/2000	dsodufga.zxc.281160.D20002 17.T122811.20000804150003 599	30	30	0
08/19/2000	dsadufga.zxc.140346.D20002 22.T081403.20000809120012 397	6	6	0
08/07/2000	dsadufga.zxc.172870.D20002 20.T081728.20000807120005 458	25	25	0
08/10/2000	dsadufga.zxc.154880.D20002 23.T081548.20000810120003 231	11	11	0
08/14/2000	dsadufga.zxc.354058.D20002 17.T083540.20000804120004 150	101	101	0
08/09/2000	dsodufga.zxc.054679.D20002 22.T080546.20000809120004 447	16	16	0
08/10/2000	dsodufga.zxc.560484.D20002 23.T075604.20000810090010 893	9	9	0
08/10/2000	dsodufga.zxc.555956.D20002 23.T075559.20000810090004 397	10	10	0
08/03/2000	dsodufga.zxc.113564.D20002 16.T091135.20000803120009 382	1	1	0