

BellSouth Telecommunications, Inc. OSS Evaluation – Georgia

Flow-Through Evaluation Final Report

VERSION 1.0

Submitted by:



March 20, 2001

I. Document Control

A. Distribution

Table I-1.1: Distribution List for Document

Person	Organization
David Burgess	Georgia Public Service Commission
Leon Bowles	Georgia Public Service Commission
William Stacy	BellSouth Telecommunications, Inc.
Milton McElroy	BellSouth Telecommunications, Inc.
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Table I-2.2: Version Control

Version	Date	Reason
1.0	March 20, 2001	Initial release

B. Statement of Limiting Conditions

The following conditions, limitations, and assumptions relate to this draft report:

This report is provided pursuant to the terms and conditions of the consulting services contract among KPMG Consulting, Inc. (“KCI”), Bell South – Georgia, and the State of Georgia Public Service Commission (GPSC).

The information and conclusions presented in this report are based on the information provided to KCI or obtained by KCI in the course of the evaluation. All results and conclusions contained herein are subject to change based on additional work or additional information that is provided to KCI.

The original *Master Test Plan (MTP)* governing much of the testing work at BellSouth – Georgia was not authored or developed by KCI. On September 9, 1999, KCI inherited a *MTP* and certain associated work-in-progress that had been performed by two third parties. Therefore, KCI makes no representations or warranties as to the contents of this *MTP* or the testing work that had been done prior to September 9, 1999. Furthermore, KCI has not independently verified the accuracy or completeness of the information and work product provided by these third parties; accordingly KCI expresses no opinion on nor bear any responsibility for this information and work product.

The results contained within this report are made up of a significant number of tests and evaluation criteria and are presented without weighting considerations; as such, none of the individual test results can be considered independently. To draw conclusions based on individual test measures or a limited number of test measures would be inappropriate.

This report assumes that the reader possesses a general understanding of the telecommunication industry and related systems, documentation, and processes, consequently KCI assumes no responsibility for the misuse, misunderstanding, or misinterpretation of the content of the report.

This report has been prepared solely for the purpose stated and should not be used for any other purpose. Except as specifically stated in the report, neither KCI's report nor its contents is to be referred to or quoted, in whole or in part, in any registration statement, prospectus, public filing, loan agreement, or other agreement or document without KCI's prior written approval.

Certain information and assumptions (oral and written) have been provided to KCI by the management of BellSouth and other third parties. KCI has relied on this information in our analysis and in the preparation of the report, and has not independently verified to the accuracy or completeness of the information provided; accordingly KCI expresses no opinion on such data.

KCI has not conducted an audit or review of the historical data provided to us in accordance with generally accepted auditing procedures and/or standards promulgated by the American Institute of Certified Public Accountants (“AICPA”).

II. Test Overview

A. Introduction

1.0 Background

The Georgia Public Service Commission (GPSC) is considering the matter of BellSouth – Georgia's (BellSouth or BLS) compliance with the requirements of Section 271 of The Telecommunications Act of 1996 (the Act) in the context of Docket No. 8354-U. The Act, together with Federal Communications Commission (FCC) interpretations, requires BellSouth to:

- Provide non-discriminatory access to its Operations Support Systems (OSS) on appropriate terms and conditions;
- Provide the documentation and support necessary for Competitive Local Exchange Carriers (CLECs) to access and use these systems; and
- Demonstrate that BellSouth's systems are operationally ready and provide an appropriate level of performance.

In its *Order on Petition for Third Party Testing (Order)*, dated May 20, 1999, the GPSC ordered BellSouth to demonstrate its compliance with these requirements by conducting an independent, third-party test of the readiness of specific aspects of BellSouth's OSS and related interfaces, documentation, and processes supporting local market entry by the CLECs.

A key aspect of BellSouth's readiness to support CLEC entry into the local telecommunications market is the ability of the CLEC's Local Service Requests (LSRs) to "flow-through" BellSouth's OSS, where flow-through is defined as electronic transmission through a gateway and acceptance into the BellSouth's back-office ordering systems without manual intervention. At the GPSC's order, BellSouth produces two Service Quality Metrics (SQM), Percent Flow Through Service Requests - Summary and Detailed (Flow-Through Reporting) to assess the degree to which LSRs submitted to BellSouth flow through. These reports are described in more detail in Section IV 2.1, "Business Process Description" in this report.

Because of the importance of Flow-Through Reporting for CLEC entrance into the local market, the GPSC ordered a separate, complete evaluation of Flow-Through Reporting as part of the third-party testing requirements.

2.0 Objective

The objectives of this report are to provide:

- A summary of the business processes and supporting functions and interfaces identified for testing by the GPSC and outlined in the *Flow-Through Evaluation* section of the *Master Test Plan (MTP)* ¹;
- A high-level description of the processes KCI followed in evaluating BellSouth's policies, procedures, documentation, interfaces and systems; and
- A summary of the interim results of our testing activities.

3.0 Audience

We anticipate that the audience for this document will fall into two main categories:

- Readers who will utilize this document during an evaluation process (i.e., the GPSC; the FCC and Department of Justice); and
- Other interested parties who have some stake in the result of BellSouth's Flow-Through Reporting evaluation and wish to have insight into the test results (e.g., BellSouth, CLECs, and other ILECs).

While many of the above parties have stated an interest in the test and its results, only the GPSC and BellSouth have rights to this document. Third-party reliance on this report is not intended and is explicitly prohibited. It is expected that the GPSC will review this report in forming its own assessment of BellSouth's compliance with the requirements of the Act.

4.0 Flow-Through Evaluation Scope

The scope of the Flow-Through Evaluation includes the evaluation of:

- Calculations used by BellSouth for Flow-Through Reporting according to the definitions, exclusions, business rules, and calculation documented in the applicable version of the SQM guidelines;
- Documentation of systems, processes and procedures, and work papers used to calculate detailed and summary flow-through percentages including updates on an as-needed basis to relevant enhancements or modifications;
- Accuracy of the reported values of published Flow-Through Reports for all CLECs using raw data provided and documentation by BellSouth;

¹ Georgia OSS Evaluation *Master Test Plan*, version 4.0, Dated December 15, 1999, Section III-5

- Documentation and training of the process and business used to determine the cause (CLEC versus BellSouth) of relevant errors resulting in fallout;
- Assistance provided by BellSouth to CLECs in understanding the flow-through process and its reports and verifying the monthly percentage Flow-Through Reports;
- Flow-Through Reporting categorization of LSRs submitted during the EDI and TAG Functional tests (O&P-1 and O&P-2); and
- Accuracy of the reported values of BellSouth Flow-Through Reports using data collected from the EDI and TAG Functional tests (O&P-1 and O&P-2) and documentation provided by BellSouth.

5.0 Approach

5.1 Test Types

In developing the test of Bell Atlantic – New York’s OSS, KCI identified two fundamental types of tests useful in an evaluation of an ILEC’s provision of wholesale services to CLECs: transaction-driven and operational. These test types have since been used in OSS evaluations in multiple jurisdictions.

5.1.1 Transaction-based Tests

One of the goals of transaction-based testing was to live the CLEC experience. The fundamental idea was to establish a pseudo-CLEC, and to submit both pre-order and order transactions using BellSouth’s electronic interfaces² -- much like a real CLEC would do. These tests are “non-invasive” in that they depend on arms-length interactions (e.g., order submissions, receipt of bills) using publicly available interfaces and documentation.

While no transactions were prepared specifically for the Flow-Through Evaluation, transaction-driven system testing was utilized extensively in the O&P domain, including transactions designed to test basic flow-through and fallout business rules. The transaction-based portion of the Flow-Through Evaluation was limited to reviewing the flow-through status of transactions submitted by O&P in testing the Telecommunications Access Gateway (TAG) and Electronic Data Interchange (EDI) interfaces and comparing their status to KCI expectations.

5.1.2 Operational Tests

Operational tests focused on the form, structure, and content of the business process under study. This test method was used to evaluate BellSouth’s day-to-day operations and operational management practices, including procedural

² Interface development was not part of the scope of the test called for in the GPSC’s *Order*.

development and procedural change management. These tests are “invasive,” in that KCI receives access to documentation, personnel, and procedural descriptions that are not necessarily publicly available.

Operational analysis evaluated the results of a process to determine if the process appeared to function correctly, in accordance with documentation and expectations.

Another portion of the operational testing involved interviewing selected CLECs to gain an understanding of their experience with BellSouth’s Flow-Through Reporting. Participants were asked to provide documentation of attempts to gain access to the Flow-Through Reports and to reconcile their actual flow-through with that reported by BellSouth and any issues observed.

5.2 Military-style Test Philosophy

In conducting the evaluation, KCI employed a “military-style” test philosophy. In a military-style test, a mindset of “test until you pass” was generally adopted so that a baseline set of working components would be available to the CLECs by the end of the test period. This was believed to be in the best interest of all parties seeking an open, competitive market for local services in Georgia.

The military-style test process works as follows:

- KCI tests a component;
- KCI informs BellSouth of any problems encountered by creating a written exception³ describing the failed component and the potential impact on a CLEC;
- BellSouth prepares a written response to the exception describing any intended fix;
- After BellSouth fixes are complete, KCI retests the component as required; and
- If the exception is cleared, then the process is considered complete, and KCI prepares a written closure statement for consideration by the GPSC. Otherwise, KCI continues to iterate through the cycle until exception closure is reached.

³ Note that KCI first issues a “Draft Exception” to BellSouth to substantiate the accuracy of the test data and preliminary analysis

5.3 Blindness and Limitations

See Section II of the *BellSouth - Georgia OSS Evaluation Interim Report*, November 22, 2000 for more information relating to the TAG and EDI Functionality Tests (O&P-1 and O&P-2) performed in conjunction with the Flow-Through Evaluation.

6.0 Results

The results presented herein pertain only to the Flow-Through Evaluation as described in the *Flow-Through Evaluation* section of the *MTP*.

6.1 Evaluation Criteria and Results

Test targets and their corresponding evaluation criteria provided the basis for conducting tests. Evaluation criteria are the norms, benchmarks, standards, and guidelines used to evaluate items identified for testing. Evaluation criteria also provided a framework for identification of the scope of tests, the types of measures that must be made during testing, and the approach necessary to analyze results.

In cases where a test evaluation criterion mapped to a BellSouth Service Quality Measures (SQM), the test results were compared against the proposed standards. In cases where a standard does not exist, results were evaluated using explicit evaluation criteria established by KCI, based on its professional judgment.

Each evaluation criterion was analyzed individually and has its own associated result and comment. The results fell into the following categories:

- Satisfied — KCI's analysis demonstrated that the evaluation criterion was satisfied through existing business operations components (e.g., procedure, system, or document). A criterion was satisfied by meeting a quantitative, qualitative, parity, or existence parameter established for purposes of the test.
- Not Satisfied — KCI's analysis demonstrated that the evaluation criterion was not satisfied through existing business operations components (e.g., procedure, system, or document). A criterion was not satisfied by failing to meet a quantitative, qualitative, parity, or existence parameter established for purposes of the test.

In cases where failure to satisfy the criterion might, in our judgment, present a significant business impact to CLECs, KCI issued an exception. Exceptions were a means of identifying to BellSouth defects in its OSS components. Where applicable to an evaluation criterion, the significant details of an exception are documented in the comments column of *Section 3.0 Results Summary* for the Flow-Through Evaluation. Other items worthy of mention that might not

present a significant business impact to CLECs are also described in the comments column.

For information on all exceptions, please access the GPSC Web site at:

<http://www.psc.state.ga.us/telecom/Third%20Party.htm>

KCI must point out that the criteria are not all of equal importance. Some are less important as stand-alone measures, but are important when considered in a group. Other criteria are significant in their own right. A simple numerical counting or averaging of results by result category is misleading and should be avoided.

III. Test Summary

The following sections provide summary information on the Flow-Through Evaluation (FT). The summary provides a description of the tests conducted in the domain, including test objective, evaluation methods, analysis methods, and summary results.

A. Flow-Through Reporting Evaluation (FT)

This section provides a summary of the Flow-Through Reporting Evaluation (FT) domain testing. For more information on planned testing, refer to *Flow-Through Evaluation* section of the *Master Test Plan*. This evaluation also supports EDI and TAG Functional Testing (O&P-1 and O&P-2) of the Ordering and Provisioning Test. For more information on Ordering and Provisioning testing, refer to Section V, *Ordering and Provisioning* of the *Master Test Plan*. For more detailed information on the test design, analysis, and results from the execution of the tests, refer to Section IV: *Test Results: Flow-Through Evaluation (FT-1)* in this document and to Section IV: *POP Domain Results and Analysis* of the *BellSouth - Georgia OSS Evaluation Interim Report*, January 15, 2001.

1.0 Flow-Through Evaluation Test Results

This section provides a summary for the FT-1: Flow-Through Evaluation.

1.1 Objective

The objective of this test was to provide a complete evaluation of the Percent Flow Through Service Request (summary and detail) reports in accordance with the Service Quality Measurements (SQM) Regional Performance Reports. The test methodology used in evaluating BellSouth's flow-through percentage calculation consists of both operational and transactional test procedures.

1.2 Evaluation Methods

In order to evaluate BellSouth's Flow-Through Reporting, KCI executed a test cycle consisting of both operational and transactional test procedures. KCI conducted the operational test by evaluating the mechanics of the monthly *Percent Flow Through Service Request Report* (summary and detailed) and assessing the accuracy of BellSouth's performance measurement system by replicating the Flow-Through Reports for September, October, and November using KCI created programs and raw data from the Barney database, an Informix based, monthly snapshot of Local Exchange Ordering (LEO), the primary data store for BellSouth's OSS. To carry out the Flow-Through Evaluation for transactional testing, KCI monitored flow-through transactions, including manual fallout, BellSouth-caused and CLEC-caused fallout, generated and submitted for Resale

and UNE services by the Order testing team.

1.3 Analysis Methods

The data collected from the Flow-Through Evaluation were analyzed, and the results were assessed employing the evaluation criteria developed by KCI during the initial phase of the BellSouth - Georgia OSS Evaluation.

1.4 Summary Results

The following tables present the summary results for the evaluation criteria. Definitions of evaluation criteria and possible results (Satisfied, Not Satisfied or Not Complete) are provided in Section II, *Evaluation Overview*.

Table 1: Flow-Through Evaluation – Summary Results

Evaluation Criteria – Satisfied	
FT-1-1-1	Computational procedure used by BLS for Flow-Through Reporting matches the definition, exclusions, business rules and calculation documented in the applicable version of the SQM guidelines.
FT-1-1-2	Documentation of systems, processes and procedures used to calculate detailed and summary flow-through percentages is available, clearly described and updated on an as-needed basis to include any enhancements and modifications.
FT-1-1-3	Values of BLS generated flow-through percentages for the target months are accurate and can be independently verified by KCI.
FT-1-1-4	BLS personnel can explain and resolve any discrepancies between values reported by BLS and values calculated by KCI.
FT-1-1-5	Workpapers used in creating the monthly Flow-Through Reports are available and maintained.
FT-1-2-6	Using the raw data provided by BLS and the documented instructions, the values calculated by KCI match the reported values of the Flow-Through Reports.
FT-1-2-7	BLS personnel can explain and resolve any discrepancies between raw data provided by BLS and the data collected by KCI.
FT-1-3-8	Documentation and/or comprehensive descriptions of the process and business rules used to determine the cause (CLEC versus BLS) of relevant errors resulting in fallout are available and clearly described.
FT-1-3-9	BLS personnel responsible for determining fallout error causation have adequate training in the handling of fallout LSRs.
FT-1-3-10	The samples of BLS and CLEC caused fallout LSRs reviewed are properly categorized.
FT-1-4-11	The CLECs have adequate tools and resources, including knowledgeable BLS personnel, to assist in understanding the Flow-Through process and its reports.

FT-1-4-12	The CLECs have sufficient information to verify the monthly percentage Flow-Through Reports.
FT-1-5-13	LSRs submitted during the testing process are properly categorized for Flow-Through Reporting.
FT-1-5-14	Values calculated by KCI using data collected from the testing process and the documented instructions match the reported values of the BLS Flow-Through Reports.

IV. Flow-Through Evaluation Section

A. Test Results: Flow-Through Evaluation (FT-1)

1.0 Description

The Flow-Through Evaluation is an operational and transactional review of *the Percent Flow-Through Service Request* (summary and detail) reports calculated and reported by BellSouth on a monthly basis. Flow-Through is defined in the Service Quality Measurements (SQM) Regional Performance Reports as an electronic transmission through a gateway and acceptance into BellSouth's back-office ordering systems without manual intervention by a customer service representative at BellSouth's Local Carrier Service Center [LCSC]. The reports produced by BellSouth contain the calculated values of the flow-through percentage in aggregate (i.e., summary) and for each Competitive Local Exchange Carrier (CLEC) by input interface (Local Exchange Navigation System [LENS], Electronic Data Interchange [EDI] and Telecommunications Access Gateway [TAG]). The identities of individual CLECs in the detailed report are masked to protect confidentiality. The reports are produced from the Barney database. Barney is an Informix-based, monthly snapshot of Local Exchange Ordering (LEO), the primary data store for BellSouth's Operations Support System (OSS).

The test evaluates the calculation of the flow-through percentages produced by BellSouth for CLEC activities for the months of September, October, and November 1999, and for the transactions of the test CLEC established by KCI. The test uses raw CLEC data and flow-through business rules to calculate the different flow-through and fallout statistics. It also compares the raw data used in those calculations to the data collected by KCI during the test. The test evaluates both the summary and detailed flow-through calculations.

2.0 Methodology

This section summarizes the test methodology.

2.1 Business Process Description

The flow-through percentage is published by BellSouth on a monthly basis to allow participants an opportunity to evaluate aggregate and CLEC flow-through ratios. The flow-through percentage is calculated based on a compilation of data retrieved from a database (data warehouse) and measures the percentage of Local Service Requests (LSRs) submitted electronically that passed through BellSouth's ordering OSS without manual intervention.

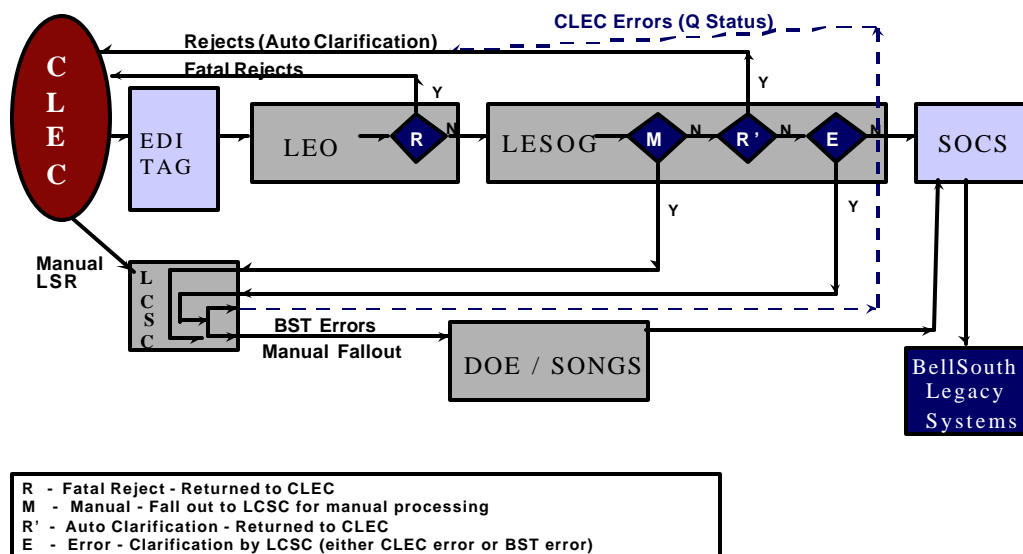
The database is compiled from data extracted from the Service Order Control System (SOCS) and other systems. The extracted data is used to calculate the percentage of flow-through LSRs including every mechanized service request submitted to the

gateway systems (EDI, LENS and TAG) that are Local Exchange Service Order Gateway [LESOG] eligible. BellSouth *excludes* certain mechanized orders from the flow-through percentage including: 1) all orders that require manual handling by the BellSouth LCSC (such as complex services including Integrated Services Digital Network [ISDN], hunting, Private Branch Exchange [PBX] trunks, Synchronet®, and services with special pricing), and 2) service requests containing CLEC errors. The final number of service requests that reached LEO and flowed through to SOCS is the numerator in the calculation of the aggregate percentage of service requests that successfully flow-through the ordering OSS. The total number of service requests that were truly LESOG eligible (as defined by BellSouth and discussed in detail below in the section entitled “Flow-Through Percent Calculation”) is the denominator.

BellSouth Order Flow-Through Process

The following represents the CLEC ordering process flow, which outlines LSR transmission by the CLEC to SOCS and the order flow-through process through BellSouth’s OSS.

Figure 1: Order Flow-Through Process



Source: BellSouth

The flow-through percentages are calculated as follows⁴:

Base Flow-Through % = $\frac{\text{Issued Service Orders (LESOG Flow-Through)}}{\text{Valid Service Requests}}$

Error Excluded Flow-Through % = $\frac{\text{Issued Service Orders (LESOG Flow-Through)}}{\text{Valid Service Requests} - \text{CLEC caused fallout}}$

Where:

Issued Service Orders = The total number of service requests that flow through to BellSouth's back-office systems (SOCS).

Valid service requests = Total mechanized LSRs (including resubmissions)⁵
LESS EXCLUSIONS: fatal rejects, manual fallout, and auto clarification.

CLEC caused fallout = Errors that require manual review by the LCSC and are determined by the LCSC to have been caused by the CLEC. If an error is determined to be caused by a CLEC, the LSR will be sent back to the CLEC for clarification.

And where:

Fatal rejects = Errors that prevent an LSR, submitted by the CLEC, from being processed further than LEO. These types of errors will be detected by LEO, which performs edit checks to ensure that the data received is formatted correctly and completely.

Manual fallout = Certain orders which are sent to BellSouth via an electronic interface are designed to fallout of the mechanized order process due to their complexity. These order types include ISDN, hunting, PBX trunks, Synchronet, etc.

Auto clarification = Errors that occur due to invalid data within the LSR. These types of errors will be detected by LESOG, which performs data validity checks to ensure that the data within the LSR is correct and valid.

Pending status = LSRs for which the CLEC submits a supplemental LSR without canceling the original. Processing stops for the original LSR (which is given a "Z" status) in favor of the supplemental LSR. In this case, the original LSR is not in error, but the CLEC's action prevents it from flowing through.

⁴ The calculation as well as the definitions described below were obtained from Appendix D-2 Service Quality Measurements Regional Performance Reports 10/15/1999 to the "BellSouth – Georgia OSS Evaluation Master Test Plan" version 4.1.

⁵ LSRs that do not enter LEO due to system or network errors or failures are not included in the Flow-Through Reporting calculations. In addition, fully manual orders, i.e., Faxes, are not considered in the calculations.

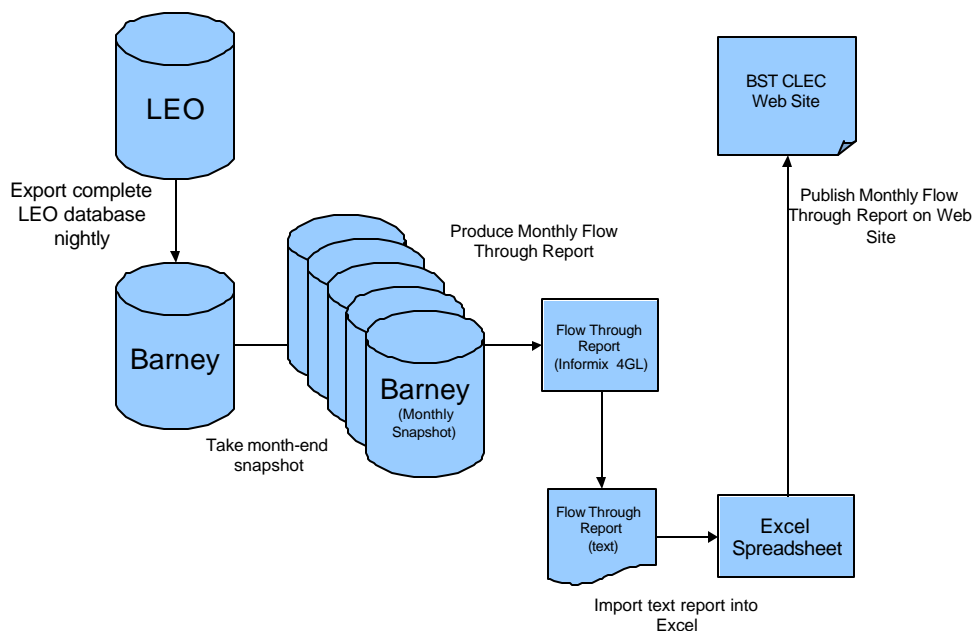
Monthly Flow-Through Data Flow

Preparation of the Flow-Through Reports is a multi-step process. LSR data are received on a daily basis from the LEO database copied to the Barney database. At month-end, a snapshot is taken and filed, and a Flow-Through Report is produced by a program (written in Informix's 4GL) using transaction data in the snapshot of the Barney database and selected tables in LEO. A text image of the report is then imported into an Excel spreadsheet where a series of steps are performed manually:

- Report headings are removed
- Potential double counting of fatal rejects are eliminated
- Individual CLEC flow-through percentages are recalculated for verification and format consistency
- CLEC identities are masked to preserve confidentiality
- Headings and totals are added
- The error analysis report is created.

The spreadsheet containing the summary and detail reports is typically created on the 5th day of the following month and published on BellSouth's Performance Measurement Reports Web site on the 15th day of the month.

Figure 2: Monthly Flow-Through Report Data Flow



2.2 Scenarios

Scenarios were not applicable to this test.

2.3 Test Targets & Measures

The test target was the Flow-Through Reporting process for Resale and UNEs via EDI, LENS, and TAG interfaces. 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 2: Test Target Cross-Reference

Sub-Process	Function	Evaluation Criteria	Test Cross-Reference
Percent Flow Through Service Request Calculation	Flow-Through and fallout category definitions per most recent SQM guidelines	Computational procedure used by BLS for Flow-Through Reporting exactly matches the definition, exclusions, business rules, and calculation documented in the applicable version of the SQM guidelines.	FT-1-1-1
	Documentation and/or comprehensive descriptions of systems, processes and procedures used to calculate detailed and summary flow-through percentages.	Documentation of systems, processes, and procedures used to calculate detailed and summary flow-through percentages is available, clearly described, and updated on an as-needed basis to include any enhancements or modifications.	FT-1-1-2
	Values of BLS-generated flow-through percentages for all CLECs for the target months.	Values of BLS generated flow-through percentages for the target months are accurate and can be independently validated by KCI.	FT-1-1-3
	Input from BLS experts, as needed, to help explain any discrepancies between values reported by BLS and values calculated by KCI	BLS personnel can explain and resolve any discrepancies between values reported by BLS and values calculated by KCI.	FT-1-1-4
	Workpapers used in creating the monthly Flow-Through Reports	Workpapers used in creating the monthly Flow-Through Reports are available and maintained.	FT-1-1-5

Sub-Process	Function	Evaluation Criteria	Test Cross-Reference
Raw Data Reported and Used in Calculations	Raw data used to calculate the values of the BLS-generated flow-through percentages for all CLECs for the target months	Using the raw data provided by BLS and the documented instructions, the values calculated by KCI match the reported values of the Flow-Through Reports.	FT-1-2-6
	Raw data used to calculate the values of the BLS-generated flow-through percentages for the KCI test CLEC	Using the raw data provided by BLS and the documented instructions, the values calculated by KCI match the reported values of the Flow-Through Reports.	FT-1-2-6
	Input from BLS experts, as needed, to help explain any discrepancies between the raw data provided by BLS and the data collected by KCI	BLS personnel can explain and resolve any discrepancies between raw data provided by BLS and the data collected by KCI.	FT-1-2-7
Fallout Error Cause Determination	Documentation and/or comprehensive descriptions of the process and business rules used to determine the cause (CLEC versus BLS) of relevant errors resulting in fallout	Documentation and/or comprehensive descriptions of the process and business rules used to determine the cause (CLEC versus BLS) of relevant errors resulting in fallout are available and clearly described.	FT-1-3-8
	Interviews and observations of personnel responsible for determining fallout error causation	BLS personnel responsible for determining fallout error causation have adequate training in the handling of fallout LSRs.	FT-1-3-9
	Review samples of BLS and CLEC-caused fallout LSRs	The samples of BLS and CLEC-caused fallout LSRs reviewed are properly categorized.	FT-1-3-10
CLEC Flow-Through Reporting Experience	Interviews with personnel responsible for reconciling BLS percentage Flow-Through Reporting with CLEC experience	The CLECs have adequate tools and resources, including knowledgeable BLS personnel, to assist in understanding the flow-through process and its reports.	FT-1-4-11
	Interviews with personnel responsible for reconciling BLS percentage Flow-Through Reporting with CLEC experience	The CLECs have sufficient information to verify the monthly percentage Flow-Through Reports.	FT-1-4-12

Sub-Process	Function	Evaluation Criteria	Test Cross-Reference
Transaction Testing	Monitor flow-through and fallout transactions for resale and UNE.	LSRs submitted during the testing process are properly categorized for Flow-Through Reporting.	FT-1-5-13
	Compare tested flow-through order categories to BLS Flow-Through Reports.	Using data collected from the testing process and the documented instructions, the values calculated by KCI match the reported values of the BLS Flow-Through Reports.	FT-1-5-14

2.4 Data Sources

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

Table 3: Data Sources for Flow-Through Evaluation

Document	File Name	Location in Work Papers	Source
<i>Percent Flow Through Service Requests Document (Summary and Detail) Process Overview</i>	No Electronic Copy	FT-1-A-1	BLS
<i>Percent Flow Through Service Request Report (Summary and Detail) for September, October and November 1999</i>	September (SEPTFL~1.xls) October (2FLOWT~.xls) November (November Flowthrough.xls)	FT-1-A-1	BLS
<i>BLS Service Quality Measurements Regional Performance Reports (dated 9/15/99)</i>	sqm_09211999.zip	FT-1-A-1	BLS
<i>Flow Through Report Logic</i>	No Electronic Copy	FT-1-A-1	BLS
September, October, November Flow-Through Reports workpapers	September (SEPTEM~1.xls) October (OCTOBER.xls) November (11-99_~1.xls)	FT-1-A-1	BLS
LEO Process Document	No Electronic Copy	FT-1-A-1	BLS (LCSC)
OSS '99 Overview Document	No Electronic Copy	FT-1-A-1	BLS
LEO Status Report	No Electronic Copy	FT-1-A-1	BLS (LCSC)
<i>Fatal Edits and Clarifications Table</i>	Errorc~1.xls	FT-1-A-1	BLS (LCSC)
LCSC Training document	No Electronic Copy	FT-1-A-1	BLS (LCSC)
BLS Affidavit (Partial copy)	No Electronic Copy	FT-1-A-1	BLS

Document	File Name	Location in Work Papers	Source
<i>Initial Training/ Fundamentals - Clarifications</i> (LCSC training materials)	No Electronic Copy	FT-1-A-1	BLS (LCSC)
CSM Meeting (March 9, 2000) Flow-Through Training Handout	No Electronic Copy	FT-1-A-1	BLS
Interview Report: Flow-Through Process/Monthly Report	Abbott-McDonald Interview Report 991102.doc	FT-1-A-1	KCI
Interview Summary: Flow-Through Process/Monthly Report	Abbott-McDonald Interview Summary 991102.doc	FT-1-A-1	KCI
Interview Report: Observing the Preparation of the October 1999 Flow-Through Report	FT Report Preparation Interview Report 991110.doc	FT-1-A-1	KCI
Interview Report: Flow-Through Business Rules	Pate Interview Report 991117.doc	FT-1-A-1	KCI
Interview Summary: Flow-Through Business Rules	Pate Interview Summary 991117.doc	FT-1-A-1	KCI
Interview Report: LCSC visit 12/07/99	LCSC Interview Report 991207.doc	FT-1-A-2	KCI
Interview Summary: LCSC visit 12/07/99	LCSC Interview Summary 991207.doc	FT-1-A-2	KCI
Interview Report: CLEC visit-AT&T	AT&T Interview Report 000125.doc	FT-1-A-2	KCI
Interview Report: CLEC visit-AmeriMex	AmeriMex Interview Report 000127.doc	FT-1-A-2	KCI
Interview Report: CLEC visit-Access Integrated Networks	Access Integrated Network Interview Report 000202.doc	FT-1-A-2	KCI
Interview Report: Phone interview-DeltaCom	DeltaCom Interview Report 000126.doc	FT-1-A-2	KCI
Interview Summary: AT&T	AT&T Interview Summary.doc	FT-1-A-2	KCI
Interview Summary: AmeriMex	AmeriMex Interview Summary.doc	FT-1-A-2	KCI
Interview Summary: Access Integrated Networks	Access Integrated Network Interview Summary.doc	FT-1-A-2	KCI
AT&T ADL Raw Data Comparison to BLS Raw Data	No Electronic Copy	FT-1-A-2	CLEC

Document	File Name	Location in Work Papers	Source
Flow-Through Discussion Scenarios Document & Aggregate Box Score All Scenarios Document	No Electronic Copy	FT-1-A-2	CLEC
Flow-Through Calculation spreadsheet for EDI, TAG and LENS interface	No Electronic Copy	FT-1-A-2	CLEC
EDI, TAG and LENS Graphs	No Electronic Copy	FT-1-A-2	CLEC
<i>Essential Concepts of Process Measurement</i> (Completeness-Continuity-Consistency) document	No Electronic Copy	FT-1-A-2	CLEC
Replication of <i>Percent Flow Through Service Requests</i> (Summary and Detail) for September, October and November	September FT Verification.zip October FT Verification.zip November FT Verification.zip	FT-1-A-3	KCI
Fallout sample analysis	Fallout Samples.mdb	FT-1-A-2	KCI
Fallout sample data	Fallout Samples.zip	FT-1-A-2	KCI
KCI CLEC LSR analysis	KCI CLEC.mdb	FT-1-A-2	KCI
KCI CLEC data	KCI CLEC.zip	FT-1-A-2	KCI

2.4.1 Data Generation/Volumes

This test relied on data extracts from BellSouth data stores, interviews with BellSouth and CLEC personnel, documentation reviews, and transaction submission.

2.5 Evaluation Methods

The test methodology used in evaluating BellSouth's flow-through percentage calculation consisted of both operational and transactional test procedures.

KCI conducted the operational test by evaluating the mechanics of the monthly *Percent Flow-Through Service Request* report and assessing the accuracy of BellSouth's performance measurement system by comparing transaction data to the raw data generated by the Barney databases. To carry out the Flow-Through Evaluation for the operational test, KCI:

- Reviewed BellSouth's summary and detail *Percent Flow-Through Service Requests* reports for the months of September, October, and November 1999. In addition to the monthly reports, KCI reviewed other relevant documentation, such as the *BellSouth Service Quality Measurement Regional Performance Report*, *Flow-Through Report Logic*, BellSouth's flow-through work papers for the months of September, October, and November 1999, and the LEO Process Documentation.
- Interviewed BellSouth personnel responsible for preparing the flow-through procedures as well as LCSC individuals responsible for processing CLEC local service requests.
- Interviewed BellSouth personnel to understand the business rules for fatal rejects, auto clarification, manual fallout, CLEC-caused fallout, and BellSouth-caused fallout.
- Reviewed program documentation and source code used in the production of the Flow-Through Report.
- Replicated summary results for Flow-Through Reports published for September, October, and November 1999 using independently developed programs and raw data from the original source. Retests also required the replication of summary results for the months of February and October 2000.
- Replicated detailed results for the three most active CLECS for Flow-Through Reports published for September, October, and November 1999 using independently developed programs and raw data from the original source.
- Reviewed and validated Flow-Through Reporting results for September, October, and November 1999 for consistency with the business rules for fatal rejects, auto clarification, manual fallout, CLEC-caused fallout, and BellSouth-caused fallout using independently developed programs and raw data from the original source.
- Reviewed random samples of individual LSRs for consistent application of the business rules for identifying CLEC-caused versus BellSouth-caused fallout. Reviews were conducted by KCI SMEs familiar with BellSouth's ordering processes.
- Interviewed four CLECs about their experiences with the flow-through process as well as any issues with the monthly summary and *Detail Percent Flow-Through Service Request* reports.

KCI conducted the transactional test by generating, submitting, and logging test orders with the use of test tools required by the Georgia Public Service Commission. To execute the Flow-Through Evaluation for transactional test, KCI:

- Monitored test transactions, including flow-through transactions, manual fallout, and BellSouth- and CLEC-caused fallout, for Resale and UNE services.
 - Compared tested flow-through categories to categories reported by BellSouth.

- Monitored KCI's assessment of fallout validity and its impact on documented business rules.
- Monitored KCI instituted challenges to BellSouth error determination and business rules.
- Reported flow-through and fallouts by category based on documented business rules.
- Reported order cycle performance for flow-through and fallout orders.
- Tested BellSouth determination of error causation.
 - Identified suspect manual/error orders.
 - Reviewed selected orders to determine which orders fell out and validated BellSouth assigned error cause determination.

2.6 Analysis Methods

The Flow-Through Evaluation included a checklist of evaluation criteria developed by KCI during the initial phase of the BellSouth - Georgia OSS Evaluation. These evaluation criteria provided the framework of norms, standards, and guidelines for the Flow-Through Evaluation.

3.0 Results Summary

This section identifies the evaluation criteria and test results.

3.1 Results & Analysis

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

Table 4: Evaluation Criteria and Results

Test Cross-Reference	Evaluation Criteria	Result	Comments
FT-1-1-1	Computational procedure used by BLS for Flow-Through Reporting matches the definition, exclusions, business rules and calculation documented in the	Satisfied	The computational procedure used by BLS for Flow-Through Reporting matches the Flow-Through SQM guidelines except for details of two definitions: LSRs that fall out for CLEC causes, and LSRs that flow-through. These exceptions resulted in improper categorization of

⁶ Rates of improper categorization by month evaluated were:

- September: 2.17%
- October: 1.5%
- November: 1.18%.

Test Cross-Reference	Evaluation Criteria	Result	Comments
	applicable version of the SQM guidelines.		<p>between one and two percent⁶ of all LSRs reported on the <i>Percent Flow-Through Service Request</i> reports in the months evaluated.</p> <p>As a result, KCI issued Exception 21. BLS responded by modifying Flow-Through Reporting to make their computational procedures consistent with the definitions for CLEC caused fallout and LSRs that flow-through.</p> <p>KCI retested Flow-Through Reporting for the month of February and confirmed that BLS's changes were effective.</p> <p>Based on these retesting activities, KCI recommended closure of Exception 21 to the GPSC.</p> <p>During subsequent testing, however, KCI determined that, while the changes described above were made as described in KCI's re-test, LSRs may receive a "Z" status for other reasons than a supplemental submission, and that their final disposition is not made at the time the status is changed but at a later time.</p> <p>As a result, KCI re-opened Exception 21. In the re-test, KCI identified discrepancies in the number of LSRs excluded due to a "Z" processing status. The discrepancy appears be complemented by a discrepancy in other exclusions, LSRs automatically returned for clarification and LSRs requiring manual processing by design. Since the discrepancy is between exclusions, there is no apparent impact on the overall Flow Through percentage calculations.</p> <p>KCI has recommended closure of Exception 21 to the GPSC.</p> <p>See Exception 21 for additional information on this issue.</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
FT-1-1-2	Documentation of systems, processes and procedures used to calculate detailed and summary flow-through percentages is available, clearly described and updated on an as-needed basis to include any enhancements and modifications.	Satisfied	KCI reviewed documentation of systems, processes and procedures (<i>Percent Flow-Through Service Requests Document [Summary and Detail] Process Overview and Flow-Through Report Logic</i>) used to calculate detailed and summary flow-through percentages and compared them with the SQM and program source code. Updates for modifications completed and in progress were also reviewed.
FT-1-1-3	Values of BLS generated flow-through percentages for the target months are accurate and can be independently verified by KCI.	Satisfied	KCI verified the Flow-Through Reports for the months evaluated. Minor differences and errors were noted but they were not significant ⁷ .
FT-1-1-4	BLS personnel can explain and resolve any discrepancies between values reported by BLS and values calculated by KCI.	Satisfied	KCI verified the Flow-Through Reports for the months evaluated. Minor differences ⁸ identified by KCI in the Flow-Through Report were noted and either reconciled or explained.
FT-1-1-5	Workpapers used in creating the monthly Flow-Through Reports are available and maintained.	Satisfied	Workpapers supporting the preparation of the Flow-Through Reports for the months evaluated were reviewed and found consistent with observed processes and published Flow-Through Reports.

⁷ The following errors were identified:

- The Flow-Through - CLEC Error Excluded Calculation for October was shown as 92.56% instead of 92.76% (calculation: $(95,615 - 6,918) / 95,615$). The same calculation for November was 93.11% instead of 93.28% (calculation: $(102,676 - 6,896) / 102,676$).
- Error Message Number 1000 errors were reported in two separate lines on the Error Analysis Report section of the November Flow-Through report.

⁸ See above.

Test Cross-Reference	Evaluation Criteria	Result	Comments
FT-1-2-6	Using the raw data provided by BLS and the documented instructions, the values calculated by KCI match the reported values of the Flow-Through Reports.	Satisfied	<p>KCI replicated the values of BLS generated flow-through calculations using raw data from Barney and independently developed programs. Minor differences and errors were noted⁹. While the differences found in this were not significant, certain differences suggest that future, otherwise unrelated programming errors could materially affect the accuracy of the flow-through calculation.</p> <p>As a result KCI issued Exception 48. BLS responded that no alternatives to the programming techniques used were available and that extensive modifications to order processing systems would be required to effect any change. KCI reviewed relevant data and data structures and agreed that changes would require extensive order processing system modifications that would not be justified by the result. Based on these retesting activities, See Exception 48 for more information on this issue. Exception 48 is closed.</p>
FT-1-2-7	BLS personnel can explain and resolve any discrepancies between raw data provided by BLS and the data collected by KCI.	Satisfied	<p>KCI's calculations matched the reported values of the Flow-Through Reports. Minor differences¹⁰ in the values calculated by KCI and those reported by BLS on the Flow-Through Report were noted and either reconciled or explained.</p>

⁹ A small number of LSRs (58 of the approximately 335,000 total LSRs in the months evaluated) were misclassified on the Flow-Through report due to corruption of the text strings used for classification purposes or because text entered by service representatives was misinterpreted by the Flow-Through reporting program. In addition, KCI's replication was adjusted for test CLEC activities.

¹⁰ See above.

Test Cross-Reference	Evaluation Criteria	Result	Comments
FT-1-3-8	Documentation and/or comprehensive descriptions of the process and business rules used to determine the cause (CLEC versus BLS) of relevant errors resulting in fallout are available and clearly described.	Satisfied	<p>No documentation exists that explicitly addresses and describes the process and business rules used to determine BLS and CLEC - caused fallout errors.</p> <p>Flow-Through Reporting infers determination of BLS versus CLEC caused fallout based on whether a service representative clarified an error back to the CLEC and assumes all errors not clarified back to a CLEC are assumed to be BLS-caused. The process for determining when to clarify an error to the CLEC was also not explicitly documented.</p> <p>KCI reviewed on-line documentation available to LCSC representatives to determine if the documentation is adequate for the representatives to make a sound decision on the handling of fallout LSRs. KCI has determined that using a combination of the following documents, as opposed to one, is effective in determining if the LSR can be corrected or needs further clarification from the CLEC.</p> <p>KCI reviewed the following documentation: Service Order Error Resolution (SOER) Search Results document, Corporate Document and Information Access (CDIA) Electronic Error Message Job Aid and LEO Process Document, and the On-line Reference By Intranet Technology (ORBIT) Uniform Service Order Code Search Results document.</p> <p>Based on KCI's review, BLS has adequate resources/documentation available to assist the LCSC representatives in the handling of fallout LSRs. SOER, CDIA and ORBIT documentation are covered in the LCSC training curriculum. However, no additional observations of the LCSC</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
			representatives occurred to validate that the LCSC representatives are aware of and typically use the documentation being made available.
FT-1-3-9	BLS personnel responsible for determining fallout error causation have adequate training in the handling of fallout LSRs.	Satisfied	LCSC training addresses whether a service representative should clarify an error back to the CLEC (which implies a CLEC-caused fallout – see FT-1-3-8 above). In addition, the SOER, CDIA and ORBIT documentation used to support error cause determination (see FT-1-3-8 above) are covered in the LCSC training curriculum. While, BLS does not provide flow-through specific training for LSCS personnel responsible for determining whether a fallout was caused by the CLEC or BLS, KCI's review found the training provided, including mentoring and special follow up after training, to be adequate.
FT-1-3-10	The samples of BLS and CLEC caused fallout LSRs reviewed are properly categorized.	Satisfied	KCI's evaluation found that of a random sample of 100 LSRs in each category, the following number of LSRs were properly categorized: - 100 Auto Clarifications; - 98 CLEC caused fallout; - 100 BLS caused fallout. The correctness of errors identified was based on data within individual sample LSRs. Customer Service Records (CSRs) or other databases such as Regional Street Address Guide (RSAG) that might bear on whether an error(s) was correctly identified were not considered.
FT-1-4-11	The CLECs have adequate tools and resources, including knowledgeable BLS personnel, to assist in understanding the flow-through process and its reports.	Satisfied	CLECs were unsuccessful in attempting to gain a password and information on accessing the Performance Measurement Reports Web page. CLECs also met with substantial delays due Customer Service Representatives' lacking information on the process for providing CLEC access.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			As a result of inquiries from KCI, BLS initiated additional training for account managers and customer service managers on Flow-Through Reporting. KCI reviewed the training and documentation provided to account managers and customer service managers to support CLEC access and found them adequate. In addition, BLS added a link to the Performance Measurement Reports security Web page through which CLECs could request assistance. This is intended to support CLECs that might not otherwise be aware of the process or are too small to have formal account representation. The Performance Measurement Reports Web page is accessible through a link on the BLS Interconnection Services Web site and is available to all CLECs.
FT-1-4-12	The CLECs have sufficient information to verify the monthly percentage Flow-Through Reports.	Satisfied	<p>Initially, documentation provided in the SQM for Flow-Through Reporting did not describe the reports or reporting process adequately enough to support CLEC verification of Flow-Through Reporting. In addition, BLS did not provide data on the disposition of individual LSRs that would allow CLEC verification.</p> <p>As a result KCI issued Exception 41. BLS responded by providing a description, available by request to all CLECS, of the techniques used to identify the different dispositions of individual LSRs with raw data for each individual CLEC taken from the Flow-Through Reporting process on a monthly basis. (see FT-1-5-13 below)</p> <p>KCI analyzed the instructions and data prepared by BLS for the KCI test CLEC and determined the flow through dispositions for April LSRs. Those results were found to match results that KCI produced</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
			independently using BLS internal instructions and data, and with dispositions identified by BLS both received during previous testing. Exception 41 is closed. See Exception 41 for additional information on this issue.
FT-1-5-13	LSRs submitted during the testing process are properly categorized for Flow-Through Reporting.	Satisfied	<p>The <i>BellSouth Flow-Through Analysis For CLECs LSRs placed via EDI or TAG</i> attachment to <i>Percent Flow-Through Service Requests (Detail)</i> in the SQM describes whether products are eligible or not for flow-through but does not indicate the impact of the Requisition/Activity types on an LSR. KCI was unable to accurately predict which LSRs should flow-through.</p> <p>As a result KCI issued Exception 41. BLS responded by adding a table identifying “req” types, activity types and any other parameters that can flow through to the LEO-IG. KCI reviewed the documentation indicated in BLS’s response to Exception 41 and found that it was an adequate description of the impact of Requisition/ Activity types on the flow through eligibility of LSRs.</p> <p>See Exception 41 for additional information on this issue. Exception 41 is now closed.</p>
FT-1-5-14	Values calculated by KCI using data collected from the testing process and the documented instructions match the reported values of the BLS Flow-Through Reports.	Satisfied	<p>Initially, KCI’s evaluation revealed that BLS provided no data on the disposition of individual LSRs that would allow CLEC verification. As a result, KCI issued Exception 41. BLS responded by making available to CLECs their individual raw data used for the Flow-Through Reporting process, along with instructions for its use (see FT-1-5-12 above), on a monthly basis.</p> <p>See Exception 41 for additional information on this issue. Exception 41 is now closed.</p>