

A. Test Results: Trouble Analysis Facilitation Interface (TAFI) Functional Test (M&R-1)

1.0 Description

The objective of the TAFI Functional Test was to validate the existence of TAFI trouble reporting and screening functionality for telephone number (TN)-assigned unbundled network element (UNE) customers, in accordance with the *CLEC TAFI User Guide (User Guide)*. This test cycle was executed in BellSouth's production environment by exercising a defined set of TAFI functions associated with trouble management activities against test bed accounts¹. Scenarios designed to test these functions were executed via a LAN-to-LAN connection and via dial-up access in order to evaluate differences in system response times associated with the method of access.

The functional elements specifically targeted by this test include the entry and resolution of trouble reports, query and receipt of status reports, access to test capabilities, access to trouble history, and error conditions. TAFI functionality was evaluated in conjunction with the documentation provided addressing its use. In addition, TAFI usability was considered as part of this test.

2.0 Methodology

This section summarizes the test methodology.

2.1 Business Process Description

See Section VII, "Overview" for a description of BellSouth's TAFI interface.

2.2 Scenarios

TAFI functionality was tested by manually processing Maintenance and Repair (M&R)-related scenarios in TAFI via both dial-up and LAN-to-LAN connections. The transactions used in this evaluation were chosen to test the applicable TAFI functions across the line types specified in Table VII-1.1 and were not intended to demonstrate statistical significance. The following table lists the scenarios used to test each of the functions included in the TAFI functionality test. Of the scenarios listed below, ten included timeliness components and were therefore tested using both connectivity methods. No timeliness components were included for scenarios 15 through 21; thus, these were tested using solely a LAN-to-LAN connection.

¹ See Section VII, "M&R Overview" for a description of the M&R test bed.

Table VII-1.1: TAFI Functional Scenarios

Scenario Number	Scenario Description	Dial-Up	LAN-to-LAN
1	Residential customer with loop/port plain old telephone service (POTS) line is having problems with a vertical feature.	√	√
2	Business customer with loop/port combination POTS line is having problems with a vertical feature.	√	√
3	Residential customers with a UNE port POTS line and a loop/port combination POTS line are having problems with a vertical feature.	√	√
4	Residential customers with a loop/port combination POTS line and a UNE port POTS line are having transmission problems.	√	√
5	Business customers with a loop/port combination POTS line and a UNE port POTS line are having transmission problems.	√	√
6	Residential customer with UNE port POTS line has a problem with the area-calling plan.	√	√
7	Business customer with a UNE port POTS line is having problems with outgoing calls.	√	√
8	Residential customer with loop/port combination POTS line has a problem with incoming calls.	√	√
9	Residential customer with loop/port POTS line is having problems with a vertical feature.	√	√
10	Residential customer with loop/port combination POTS line is experiencing physical trouble with the line.	√	√
11	Business customer with UNE loop integrated services digital network (ISDN-BRI) line has a dial tone problem.	√ ²	
12	Business customer with UNE loop ISDN BRI line is having problems making outgoing calls.	√ ²	
13	Residential customer with a UNE loop ISDN BRI line is having problems with long distance.	√ ²	
14	Business customer with UNE loop ISDN BRI line is having problems making outgoing calls.	√ ²	
15	Residential customer with two UNE port POTS lines has a dial tone problem on both lines.	Not Tested	√

² The information collected by KCI for test planning indicated that a TAFI user can select an override feature to submit a trouble ticket for an ISDN line. However, KCI's functional testing indicated that a trouble ticket could not be entered for an ISDN line provisioned as a UNE loop. Thus, scenarios 11-14 were not fully executed. See Exception 14 for additional information on this issue.

Scenario Number	Scenario Description	Dial-Up	LAN-to-LAN
16	Business customer with multiple loop/port combination lines is having problems with incoming calls on two lines.	Not Tested	√
17	Business customer with multiple loop/port combination lines is experiencing transmission problems on two lines.	Not Tested	√
18	Business customer with multiple loop/port combination lines is experiencing troubles making outgoing calls on two lines.	Not Tested	√
19	Business customer with multiple loop/port combination lines is experiencing physical problems with two lines.	Not Tested	√
20	Business customer with multiple loop/port combination lines is experiencing dial tone problems with two lines.	Not Tested	√
21	Business customer with multiple loop/port combination lines is having problems with incoming calls on two lines.	Not Tested	√

2.3 Test Targets & Measures

The test targets were TAFI, the *CLEC TAFI End-User Training and User Guide* (Issue 6, September 1998 version), and the *CLEC TAFI User Guide* (Issue 2, April 2000 version). The *CLEC TAFI User Guide* is provided to CLEC employees attending BellSouth's CLEC TAFI training class. It is also available online at the BellSouth Interconnection site at http://www.interconnection.bellsouth.com/guides/guides_p.html. This manual is both a training tool and a reference tool. The TAFI training provided to the CLECs is a two-day course with a standard charge for each participant.

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 VII-1.2: Test Target Cross-Reference

Sub-Process	Function	Evaluation Criteria	Test Cross-Reference
Trouble reports	Create trouble report	Presence of Functionality Accuracy of Response TAFI Usability	M&R-1-1-1 M&R-1-1-1 M&R-1-3-1
	Modify trouble report	Presence of Functionality Accuracy of Response TAFI Usability	M&R-1-1-2 M&R-1-1-2 M&R-1-3-2

Sub-Process	Function	Evaluation Criteria	Test Cross-Reference
	Create repeat report	Presence of Functionality Accuracy of Response TAFI Usability	M&R-1-1-3 M&R-1-1-3 M&R-1-3-3
	Create subsequent report	Presence of Functionality Accuracy of Response TAFI Usability	M&R-1-1-4 M&R-1-1-4 M&R-1-3-4
	Enter Multiple Trouble Reports (MTRs)	Presence of Functionality Accuracy of Response TAFI Usability	M&R-1-1-5 M&R-1-1-5 M&R-1-3-5
	Enter and Retrieve Trouble Reports from Queues	Presence of Functionality Accuracy of Response Timeliness of Response TAFI Usability	M&R-1-1-6 M&R-1-1-6 M&R-1-2-1 M&R-1-3-6
	Execute Supervisor Functions	Presence of Functionality Accuracy of Response Timeliness of Response TAFI Usability	M&R-1-1-7 M&R-1-1-7 M&R-1-2-2 M&R-1-3-7
	Close Trouble Report	Presence of Functionality Accuracy of Response TAFI Usability	M&R-1-1-8 M&R-1-1-8 M&R-1-3-8
	Cancel Trouble Report	Presence of Functionality Accuracy of Response TAFI Usability	M&R-1-1-9 M&R-1-1-9 M&R-1-3-9
Access to test capability	Initiate port and loop-port test	Presence of Functionality Accuracy of Response Timeliness of Response TAFI Usability	M&R-1-1-10 M&R-1-1-10 M&R-1-2-3 M&R-1-3-10
	View port and loop-port test results	Presence of Functionality Accuracy of Response Timeliness of Response TAFI Usability	M&R-1-1-11 M&R-1-1-11 M&R-1-2-3 M&R-1-3-11

Sub-Process	Function	Evaluation Criteria	Test Cross-Reference
Downstream System Reports	Retrieve LMOS recent status report	Presence of Functionality Accuracy of Response Timeliness of Response TAFI Usability	M&R-1-1-12 M&R-1-1-12 M&R-1-2-4 M&R-1-3-12
	Obtain customer line record (BOCRIS)	Presence of Functionality Accuracy of Response Timeliness of Response TAFI Usability	M&R-1-1-13 M&R-1-1-13 M&R-1-2-5 M&R-1-3-13
	Obtain Predictor results	Presence of Functionality Accuracy of Response Timeliness of Response TAFI Usability	M&R-1-1-14 M&R-1-1-14 M&R-1-2-6 M&R-1-3-14
	View DLR (Display Line Record)	Presence of Functionality Accuracy of Response Timeliness of Response TAFI Usability	M&R-1-1-15 M&R-1-1-15 M&R-1-2-7 M&R-1-3-15
	View SOCS pending order.	Presence of Functionality Accuracy of Response Timeliness of Response TAFI Usability	M&R-1-1-16 M&R-1-1-16 M&R-1-2-8 M&R-1-3-16
Access error reports	Host request errors	Presence of Functionality Accuracy of Response TAFI Usability	M&R-1-1-17 M&R-1-1-17 M&R-1-3-17
Trouble history	Retrieve Trouble History	Presence of Functionality Accuracy of Response Timeliness of Response TAFI Usability	M&R-1-1-18 M&R-1-1-18 M&R-1-2-9 M&R-1-3-18
General	TAFI Usability	TAFI Usability	M&R-1-3-19

2.4 Data Sources

The data for Trouble Analysis Facilitation Interface Functional Test were collected during participation in a TAFI training course, through interviews with BellSouth personnel, and through reviews of BellSouth documentation. The data collected are summarized in the table below.

TableVII-1.3: Data Sources for TAFI Functional Test

Document	File Name	Location in Work Papers	Source
<i>CLEC TAFI End-User Training and User Guide (Issue 6)</i>	No Electronic Copy	M&R-8-B	BLS
BellSouth Residential Repair Center Interview Summaries and Approvals	No Electronic Copy	M&R-1-A-2	BLS/KCI
BellSouth Business Repair Center Interview Summaries and Approvals	No Electronic Copy	M&R-1-A-3	BLS/KCI
TAFI Online Help	No Electronic Copy	M&R-1-A-4	BLS
Excerpts of TAFI Architecture from the CLEC TAFI Specifications document	No Electronic Copy	M&R-1-A-5	BLS
Functional Test Approach Statements	No Electronic Copy	M&R-1-A-6	KCI
Functional Test Logs: LAN-to-LAN	No Electronic Copy	M&R-1-A-7	KCI
Functional Test Logs: Dial-Up	No Electronic Copy	M&R-1-A-8	KCI
Screen Prints: LAN-to-LAN	No Electronic Copy	M&R-1-A-9	KCI
Screen Prints: Dial-Up	No Electronic Copy	M&R-1-A-10	KCI
Screen Prints: Other	No Electronic Copy	M&R-1-A-11	KCI
Screen Prints: Multiple Trouble Reports	No Electronic Copy	M&R-1-A-12	KCI
Incident Report (Access Database)	No Electronic Copy	M&R-1-A-13	KCI
Legacy Access Times for CLEC TAFI and BLS TAFI Report	No Electronic Copy	M&R-1-A-14	BLS
<i>CLEC TAFI User Guide (Issue 2)</i>	clec_trn.pdf	M&R-8-A-16	BLS
<i>CLEC TAFI User Guide (Issue 3)</i>	Gtaff001.pdf	M&R-8-A-16	BLS

2.4.1 Data Generation/Volumes

This test relied on the submission of trouble-related transactions through the TAFI interface and the results expected as a result of the examination of the *User Guide*. This test did not rely on volume testing.

2.5 Evaluation Methods

In preparation for functional testing, interviews with BellSouth Customer Service Associates (CSAs), Maintenance Administrators (MAs), and management personnel from the Residential Repair Center (RRC) and Business Repair Center (BRC) were conducted. Interview Guides focusing on functionality in terms of usability and documentation served as the basis for initial questioning. Follow-up questions designed to expand the scope of some responses were also included.

This test cycle was executed by exercising a defined set of TAFI functions associated with trouble management activities against test bed accounts¹. The *User Guide* and M&R test bed data were used to manually process 17 of the 21 M&R test scenarios, using TAFI, as documented in Section 2.2. Four of the 21 scenarios were not executed, as they were designed for processing troubles on ISDN lines². During testing, other functionality such as edit rules, and designed errors such as invalid entries, cancels, and repeat troubles were checked. These 17 scenarios comprised the input used to test the 19 functions outlined in Table VII-1.1 on either loop/port combination POTS lines or UNE port POTS lines.

The following steps outline the test approach.

1. The *User Guide* was reviewed to determine how to process each of the functional tests associated with the 17 M&R scenarios defined in Section 2.2.
2. Paper-based Functional Test Approach Statements including expected results for each scenario were completed using the *User Guide*. As part of this process, KCI considered the usability of the *User Guide*, commenting on attributes such as ease of use and clarity. As each M&R scenario was used to test multiple functions, multiple Approach Statements were created for each scenario.

3. The statements created in Step 2 were used to provide the key data entered in the TAFI system during test execution. However, due to the decision tree logic embedded in TAFI, the exact data required to perform some of the functions could not be predetermined for the Functional Test Approach Statements by referencing the user manual. Therefore, the user manual was actively utilized in conjunction with the data from the paper forms during test execution.
4. In order to prevent technicians from being unnecessarily dispatched and inappropriately interrupting BellSouth operations, KCI, with BellSouth's concurrence, took the following steps for each trouble report created:
 - The phrase *TST TCKT DN DISP / PLS IGNR* was placed in the narrative section of each trouble report.
 - The commitment time was set at a date one month out.
 - The CLEC contact number posted on each report was 404-979-2250, a working number that connected to KCI's testing room. This line was equipped with a voice mail system and recorded message directing the technician to leave the TN and his/her contact number, and to consider the ticket closed.
5. During test execution, Functional Test Logs were utilized to document steps taken by KCI, and system responses. Four categories of evaluation criteria were considered as these system responses and comments were recorded.
6. As part of the data entry process in Step (3), TAFI fields were validated to ensure that invalid data were flagged, and that required fields were populated.

2.6 Analysis Methods

The M&R-1 TAFI Functional Test 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 TAFI Functional Test.

3.0 Results Summary

This section identifies the evaluation criteria and test results.

3.1 Results & Analysis

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

Table VII-1.4: M&R-1 Evaluation Criteria and Results - Presence of Functionality

Test Cross-Reference	Evaluation Criteria	Result	Comments
M&R-1-1-1	The user is able to enter a trouble report using TAFI and receive a satisfactory response.	Satisfied	TAFI was used to create 33 trouble tickets and responded as expected 33 times.
M&R-1-1-2	The user is able to modify a trouble report using TAFI and receive a satisfactory response.	Satisfied	"Modify" is not a formal function available in TAFI. Rather, modifications to a trouble ticket are performed through the creation of a subsequent report or through edit functions in the trouble report screen during initial trouble report creation. Edit rules, in terms of required fields, were specifically tested in eight scenarios and eight satisfactory responses were received. In order to test this function, KCI entered data into fields incorrectly. In these instances, TAFI automatically flagged the field tested with the cursor and provided an instructive comment in the status field. Similarly, KCI left some required fields blank in order to test TAFI. As described above, TAFI flagged the required field with the cursor and provided instructive commentary in the status field. In all instances where modifications were made, TAFI responded as expected.
M&R-1-1-3	The user is able to create a repeat report using TAFI and receive a satisfactory response.	Satisfied	TAFI was used to create 14 repeat reports and responded as expected in 12 instances. In two instances, slight discrepancies relative to the expected results were noted due to special circumstances. According to the TAFI <i>CLEC Training and End-User Guide</i> , TAFI automatically denotes a report as a repeat if there has been another trouble reported on the line within the last 30 days. However, in both instances, a trouble was entered and closed, yet in follow-up entries of the

Test Cross-Reference	Evaluation Criteria	Result	Comments
			same telephone number (TN), the reports were not recognized as repeat reports. This occurred because the tickets had been closed by the user, as prompted by TAFI, prior to trouble report creation. As an actual trouble ticket was never created in the LMOS system, no record of a prior trouble existed to denote the 'new' reports as repeat reports.
M&R-1-1-4	The user is able to create a subsequent report using TAFI and receive a satisfactory response.	Satisfied	TAFI was used to create 11 subsequent reports and responded as expected 11 times.
M&R-1-1-5	The user is able to enter multiple trouble reports (MTRs) using TAFI and receive a satisfactory response.	Satisfied	<p>TAFI was used to enter seven multiple trouble reports for accounts experiencing problems on multiple lines. Six of the seven multiple trouble reports were submitted successfully.</p> <p>One of the six successful reports was created using the method described in the <i>CLEC TAFI End-User Training and User Guide</i> (Issue 6, September 1998). This method has since been revised. A new method, detailed in the <i>CLEC TAFI User Guide</i> (Issue 2, April 2000) was used to create six additional MTRs. Five of the six MTRs were successfully created. For the MTR that was unsuccessful, KCI was able to create the "parent" ticket but unable to link the "child" report to the parent. LMOS errors and other messaging indicating that no links existed were received. As a result, KCI issued Exception 50.</p> <p>In response to this exception, BLS included additional information in Issue 3 of the <i>CLEC TAFI User Guide</i>, dated May 1, 2000.</p> <p>A review of the <i>CLEC TAFI User Guide</i> (Issue 3, May 2000) revealed that additional language explaining these points to the TAFI user has been incorporated as indicated by BLS.</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
			See Exception 50 for additional information on this issue. This exception is closed.
M&R-1-1-6	The user is able to enter and retrieve trouble reports from the queue in TAFI and receive a satisfactory response.	Satisfied	TAFI was used to enter eight trouble reports into the queue, seven manually and one automatically. Eight reports were successfully removed from the queue, seven manually and one automatically.
M&R-1-1-7	The user is able to execute supervisor functions within TAFI and receive a satisfactory response.	Satisfied	TAFI was used to execute supervisor functions such as reviewing and reassigning queued reports on six lines and responded as expected for each line.
M&R-1-1-8	The user is able to close a trouble report using TAFI and receive a satisfactory response.	Satisfied	<p>TAFI was used to close 27 trouble tickets and responded as expected 22 times. Of the five unexpected responses, three were related to the closure of subsequent reports and two were related to subsequent reports resulting from the creation of multiple trouble reports. Based on the five unexpected results, KCI issued Exception 10. In response to the exception, BLS explained that TAFI would not allow a subsequent report that was in a dispatched status to be closed. Instead, a user can update the existing report by providing additional narrative info (i.e., OK now) for the field technician to see. BLS stated that the next version of the TAFI user guide would discuss this capability.</p> <p>Additionally, the MTRs could not be closed or cancelled through TAFI as the downstream system LMOS had been reconfigured in a manner that would not properly recognize the MTRs for closure. KCI reevaluated the three subsequent report transactions and noted that each transaction had indeed been in a dispatched status. KCI resubmitted five MTRs, which contained two trouble reports each, using the current</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
			<p>MTR method. All transactions were closed/ cancelled successfully. Additionally, a review of the <i>CLEC TAFI User Guide (Issue 3, May 2000)</i> revealed new verbiage regarding a user's inability to cancel a subsequent report that was in "dispatch" status. This language is sufficiently descriptive to enable a TAFI user to understand when this situation will occur and how to address it.</p> <p>See Exception 10 for additional information on this issue. This exception is closed.</p>
M&R-1-1-9	The user is able to cancel a trouble report using TAFI and receive a satisfactory response.	Satisfied	<p>TAFI was used to cancel 39 trouble tickets and responded as expected 34 times. Of the five unexpected responses, three were related to the cancellation of subsequent reports and two were related to subsequent reports resulting from the creation of multiple trouble reports.</p> <p>A description of the unexpected responses and the subsequent actions is provided under M&R-1-1-8.</p>
M&R-1-1-10	The user is able to conduct a port and loop-port test (Mechanized Loop Tests (MLT)) using TAFI and receive a satisfactory response.	Satisfied	<p>TAFI was used to conduct five Mechanized Loop Tests (MLT) and responded as expected five times. During testing, there were some lines that had been queued for which TAFI did not deliver MLT results. For these lines, KCI re-entered the TN in order to re-run the MLT to process the trouble report.</p> <p>MLTs are not run for subsequent reports. This is not stated in the <i>User Guide</i>.</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
M&R-1-1-11	The user is able to view port and loop-port test (MLT) results using TAFI and receive a satisfactory response.	Satisfied	TAFI was used to view four MLT test results and responded as expected four times.
M&R-1-1-12	The user is able to retrieve a LMOS recent status report and receive a satisfactory response.	Satisfied	TAFI was used to retrieve eight LMOS recent status reports and retrieved eight reports as expected.
M&R-1-1-13	The user is able to obtain customer line record information (BOCRIS CSR) using TAFI and receive a satisfactory response.	Satisfied	TAFI was used to view 12 BOCRIS CSR reports and responded as expected 12 times.
M&R-1-1-14	The user is able to obtain Predictor results using TAFI and receive a satisfactory response.	Satisfied	TAFI was used to obtain Predictor results for seven lines and responded as expected seven times. Predictor is not run for subsequent reports. This is not stated in the <i>User Guide</i> .
M&R-1-1-15	The user is able to view Display Line Record (DLR) information using TAFI and receive a satisfactory response.	Satisfied	TAFI was used to view six DLR reports and responded as expected six times.
M&R-1-1-16	The user is able to view SOCS pending order information using TAFI and receive a satisfactory response.	Satisfied	Initially, the retrieval of SOCS pending service order information using TAFI produced inconsistent results. As a result of these inconsistencies, KCI issued Exception 36. BLS provided a variety of responses addressing each anomaly. KCI was unable to validate the BLS responses because the pending service orders used for KCI's initial testing were completed, and, thus, were no longer available for viewing. Because all orders for UNE lines had been completed, KCI used resale lines for retest activities. ³ KCI was able to

³ TAFI does not differentiate between UNE Loop/Port combination lines and resale lines in trouble report processing functionality

Test Cross-Reference	Evaluation Criteria	Result	Comments
			<p>successfully view 18 SOCS pending service orders during retest transactions.</p> <p>See Exception 36 for additional information on this issue. This exception is closed.</p>
M&R-1-1-17	The user is able to view and resend transactions that incurred host request errors using TAFI and receive a satisfactory response.	Satisfied	<p>TAFI was used to resend three transactions that had incurred host request errors and received three satisfactory responses.</p> <p>While processing these three transactions using the instructions in the <i>User Guide</i> (Issue 6), KCI received error messages and was automatically returned to the initial trouble report screen each time after receiving the error message. Based on these events, KCI issued Exception 11. BLS's response to the exception stated that additional information on the resolution of this issue would be included in subsequent versions of the documentation.</p> <p>A review of the <i>CLEC TAFI User Guide</i> (Issue 2, April 2000) showed that a more complete explanation surrounding host request errors, along with user options for resolving them, is now provided.</p> <p>See Exception 11 for additional information on this issue. This exception is closed.</p>
M&R-1-1-18	The user is able to retrieve trouble history using TAFI and receive a satisfactory response.	Satisfied	TAFI was used to retrieve the trouble history on nine lines and responded as expected nine times.

Table VII-1.5: M&R-1 Evaluation Criteria and Results - Timeliness Evaluation⁴

Test Cross Reference	Evaluation Criteria	Result		Comments
		LAN-to-LAN	Dial-Up	
M&R-1-2-1	The user receives timely responses when entering and retrieving trouble reports from the queue in TAFI.	Satisfied	Satisfied	Trouble reports were placed in queue virtually instantaneously. Trouble reports were removed from queue virtually instantaneously. There was no material time difference between a LAN-to-LAN and dial-up connection.
M&R-1-2-2	The user receives timely responses when executing TAFI supervisor functions.	Satisfied	Satisfied	The supervisor was able to reassign trouble reports from the queue virtually instantaneously. Trouble reports were transferred to the new user in 38-60 seconds. There was no material time difference between a LAN-to-LAN and dial-up connection.
M&R-1-2-3	The user receives timely responses from the MLT test.	Satisfied	Satisfied	MLT results were received in a period ranging from 51 seconds to 1:17 for LAN-to-LAN access, and from 52 seconds to 1:15 for Dial-Up access. There was no material time difference between a LAN-to-LAN and dial-up connection. MLT results were received in less than the 2-3 minutes stated in the <i>User Guide</i> .

⁴ BellSouth does not report standard service quality measurements (SQMs) that are applicable to the functions evaluated. However, although BellSouth does not report a standard SQM for any of the functions listed above, they do monitor legacy access times for both CLEC and BellSouth Retail TAFI users on a monthly basis. KCI compared the response times recorded during functional testing for DLETH, DLR, Predictor, CRIS, LMOS, and SOCS to the November and December 1999 Legacy Access Times Reports provided by BellSouth in order to provide a baseline. KCI did not, however, validate the BellSouth retail numbers provided. KCI's response times experienced for these specific functions were consistent with the BLS reported timeliness responses recorded for both CLEC and BellSouth Retail TAFI users for November and December 1999, which is the time period during which TAFI functional testing took place. BellSouth does state in the *CLEC TAFI End-User Training and User Guide* that an MLT test will take two to three minutes. This statement was used as a benchmark for timeliness assessment of MLTs.

Test Cross Reference	Evaluation Criteria	Result		Comments
		LAN-to-LAN	Dial-Up	
M&R-1-2-4	The user receives timely responses when retrieving a LMOS recent status report using TAFI.	Satis-fied	Satis-fied	LMOS recent status reports were retrieved almost instantaneously. There was no material time difference between a LAN-to-LAN and dial-up connection.
M&R-1-2-5	The user receives timely responses when obtaining customer line record information using TAFI.	Satis-fied	Satis-fied	BOCRIS customer line information was retrieved almost instantaneously. There was no material time difference between a LAN-to-LAN and dial-up connection.
M&R-1-2-6	The user receives timely responses when obtaining Predictor results using TAFI.	Satis-fied	Satis-fied	Predictor results were available in a time period ranging from 28 seconds to 2:20 for LAN-to-LAN access, and within 38 seconds for dial-up access. Because it is not necessary for a customer to remain on the phone while Predictor is being run, the results above are not considered productivity impacting.
M&R-1-2-7	The user receives timely responses when retrieving DLR information using TAFI.	Satis-fied	Satis-fied	DLR information was retrieved within 16 seconds. There was no material time difference between a LAN-to-LAN and dial-up connection.
M&R-1-2-8	The user receives timely responses when retrieving SOCS pending order information using TAFI.	Satis-fied	Satis-fied	SOCS pending service order information was retrieved almost instantaneously. There was no material time difference between a LAN-to-LAN and dial-up connection.
M&R-1-2-9	The user receives timely responses when retrieving trouble history using TAFI.	Satis-fied	Satis-fied	DATH trouble history reports were retrieved virtually instantaneously. DLETH trouble history reports were retrieved within 12 seconds. There was no material time difference between a LAN-to-LAN and dial-up connection.

Table VII-1.6: M&R-1 Evaluation Criteria and Results - Usability

Test Cross Reference	Evaluation Criteria	Result	Comments
M&R-1-3-1	TAFI is a user-friendly system for creating trouble reports.	Satisfied	<p>Overall, TAFI is an easy-to-use system for creating trouble reports. TAFI has a pick and choose design using a logical, guided menu referred to as "flows." In addition, TAFI will not allow a trouble report to be submitted until all required fields are completed. However, KCI noted minor issues that impact TAFI's usability in trouble report creation. These include the lack of a "miscellaneous" flow to follow for unusual calls and inconsistent communication of prompts during the creation of some trouble reports,</p> <p>Also, while entering some trouble reports, the user is unable to access the Access and Commitments window using F9 until the end of the flow, when TAFI presents a message stating, "Advise customer to hang-up." Without the ability to access F9 at the logical time, there is a high likelihood of trouble call completion before key information is obtained.</p>
M&R-1-3-2	TAFI is a user-friendly system for modifying trouble reports.	Satisfied	<p>Modifying a trouble report in TAFI is relatively straightforward.</p> <p>However, the edit rules for modifying fields are inconsistent. For example, the Commitment field requires the user to first delete the contents in order to replace a character, while the narrative field allows the user to overwrite the contents or insert text.</p>
M&R-1-3-3	TAFI is a user-friendly system for creating repeat reports.	Satisfied	TAFI automatically creates a repeat trouble report if a trouble ticket is entered for a TN for which a trouble report has been created and closed within the last 30 days.

Test Cross Reference	Evaluation Criteria	Result	Comments
M&R-1-3-4	TAFI is a user-friendly system for creating subsequent reports.	Satisfied	TAFI automatically creates a subsequent trouble report when the TAFI user enters a TN for which a pending trouble ticket exists.
M&R-1-3-5	TAFI is a user-friendly system for entering multiple trouble reports (MTR).	Satisfied	The method for entering a MTR consists of entering a Parent (P) or Child (C) in the MTR field of the Access and Commitments window and a TN in the link field of the trouble report screen. With the use of instructions provided in the <i>CLEC TAFI User Guide</i> (Issue 2, April 2000), the process is logical and straightforward to perform.
M&R-1-3-6	TAFI is a user-friendly system for entering and retrieving trouble reports from the queue.	Satisfied	Trouble reports are queued using the F8 function key, and are retrieved by highlighting and selecting the report in the user's queue. While the instructions to retrieve items from the queue are available as a prompt on the TAFI screen, the system provides no information regarding how to queue the report. This information is, however, clearly provided in the <i>User Guide</i> , and the function is easy to perform.
M&R-1-3-7	TAFI is a user-friendly system for executing supervisor functions.	Satisfied	<p>Supervisor functions are executed through the use of function keys. Details regarding the function keys and their associated tasks are provided on the TAFI screen, as well as in the <i>User Guide</i>.</p> <p>During testing, the supervisor attempted to reassign queued reports to another user. TAFI responded with an unfiltered list of all in-session TAFI users from whom to select, rather than with a filtered list of internal CLEC users. As a result, KCI issued Exception 37.</p> <p>BLS responded that this was the result of a system error, and would be addressed in TAFI R2000.3, which was scheduled for release on June 1, 2000.</p>

Test Cross Reference	Evaluation Criteria	Result	Comments
			Retest activities conducted in TAFI R2000.3.1.1 in July of 2000 indicated that this issue has been successfully addressed. See Exception 37 for additional information on this issue. This exception is closed.
M&R-1-3-8	TAFI is a user-friendly system for closing trouble reports.	Satisfied	Trouble reports are closed using a Front End Close Out option or an override option, both accessed via the F12 key. In addition, because TAFI is a logic-driven system, it can automatically offer a close recommendation, which the user can easily accept.
M&R-1-3-9	TAFI is a user-friendly system for canceling trouble reports.	Satisfied	Trouble reports can be cancelled by using the F12 key override option.
M&R-1-3-10	TAFI is a user-friendly system for initiating port and loop-port (MLT) tests.	Satisfied	TAFI automatically initiates MLT tests when appropriate.
M&R-1-3-11	TAFI is a user-friendly system for viewing port and loop-port (MLT) test results.	Satisfied	MLT test results are available using the F11 key.
M&R-1-3-12	TAFI is a user-friendly system for retrieving a LMOS recent status report.	Satisfied	The report is available using the F11 key.
M&R-1-3-13	TAFI is a user-friendly system for obtaining customer line record information.	Satisfied	BOCRIS information is available using the F11 key.
M&R-1-3-14	TAFI is a user-friendly system for obtaining Predictor results.	Satisfied	Predictor test results are available using the F11 key.
M&R-1-3-15	TAFI is a user-friendly system for viewing DLR information.	Satisfied	DLR information is available using the F11 key.
M&R-1-3-16	TAFI is a user-friendly system for viewing SOCS pending order information.	Satisfied	SOCS pending order information is available using the F11 key.
M&R-1-3-17	TAFI is a user-friendly	Satisfied	Trouble reports are viewed and resent

Test Cross Reference	Evaluation Criteria	Result	Comments
	system for viewing and resending trouble reports that incurred host request errors.		using function keys. Prompts describing the tasks associated with relevant function keys are available on the TAFI screen.

Test Cross Reference	Evaluation Criteria	Result	Comments
M&R-1-3-18	TAFI is a user-friendly system for retrieving trouble history.	Satisfied	Trouble history reports are available using the F11 key.
M&R-1-3-19	TAFI is a user-friendly system for handling non-designed UNE M&R issues.	Satisfied	<p>TAFI is a logical interface for administering trouble reports for non-designed UNEs. It also acts as a central repository of useful information for users, such as status reports, test results, and trouble history. TAFI provides hot keys and utilizes function keys in order to provide information with a minimal number of keystrokes.</p> <p>However, TAFI contains numerous undocumented messages as well as BellSouth specific messages. These messages can cause a CLEC to misdirect its customer or report a trouble incorrectly. Based on these messages, KCI issued Exception 13, which focused on six specific messages. In response to the exception, BLS committed to modify TAFI to address some of these issues in the 2000.2 and 2000.3 TAFI releases, which were scheduled for April 15, 2000 and September 2000 respectively. In addition, BLS stated that the CPNI messaging errors had been fixed in TAFI 2000.1, released in January 2000.</p> <p>KCI's retesting activities revealed that while only one of the two CPNI messages has been addressed, an explanation of the other message is provided in the <i>CLEC TAFI User Guide</i> (Issue 2, April 2000.) Retesting activities have also shown that the remaining four message errors have been addressed.</p> <p>See Exception 13 for additional information on this issue. This exception is closed.</p>