SATE New Release Test Summary Report

9.0 Transaction Test

For Qwest IMA EDI SATE

Arizona Corporation Commission

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Proprietary Notice

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1.0 Overview

1.1 Background

As an extension to the Arizona 271 testing effort, Qwest commissioned HP to evaluate its IMA EDI Stand Alone Test Environment (SATE). HP's primary objective was to provide the Arizona Corporation Commission (ACC), Qwest and the CLEC community with an evaluation of SATE that is unbiased, factual and representative of the experience that a CLEC would face in using SATE for Interoperability testing to establish an IMA EDI interface with Qwest. In addition, HP's objective was to determine whether the SATE provides an adequate means of testing and support to CLECs seeking to compete in the Arizona marketplace.

HP completed this assessment of the adequacy of Qwest's IMA EDI SATE to facilitate the efforts of Co-Providers to test their OSS EDI interfaces. This evaluation was concluded and the Final version of the Evaluation Report was delivered on December 21, 2001. This report included HP's assessment of "adequacy" based on reviewing and testing eight underpinnings of SATE upon which the CLECs are reliant. One of those eight underpinnings was the accommodation of New Release Testing within the SATE. The Adequacy criteria was documented as follows:

> *"Accommodation of New Release testing: HP will evaluate Qwest's documentation and observe Qwest's compliance to their stated expectation to provide Co-Providers with an updated SATE at least one month prior to the corresponding production release of IMA."*

HP conducted this evaluation and concluded that the evaluation of the implementation of the SATE Release 8.1 did not provide an indication of the results of an implementation of a typical major release of IMA EDI. The implementation of the point release did not allow HP to consider all characteristics of a SATE implementation as it comes available one month in advance of a production implementation of a new IMA EDI release.

Upon the conclusion of the January 28, 2002 workshop covering HP's SATE Summary Evaluation Report, Version 3, Release Date 12/21/2001 (Summary Report), the ACC Staff, and its consultant, DCI, directed HP to conduct an evaluation of a new SATE Release, using Version 9.0 of Qwest's IMA Release as the test object. This body of work was in line with Recommendation 7 of the Summary Report, and also driven by comments provided by CLECs during the workshop. In determining the scope and approach for this evaluation of a new release, HP relied on the PID PO-19 (Draft Version October 5, 2001) as a guide and evaluation criteria.

In accomplishing its objective and developing this report, HP performed the following general steps:

- Developed a Release 9.0 Documentation distribution timeline
- Performed an assessment of the changes to IMA EDI for 9.0 as it compares to 8.1
- Developed a Question Log that details any HP questions / concerns
- Developed and Implemented HP EDI mapping and LSR Order Entry changes
- Established a Transaction Test Scenario Summary
- Established Connectivity with a new Trading Partner Relationship specifically for New Release Testing
- Executed the Transaction Test cases
- Documented Test Case Outcomes
- Provided rate of accuracy when actual outcomes are compared to the expected results
- Provided an overall evaluation of SATE New Release Testing for 9.0

Hewlett-Packard (HP), as part of its scope of responsibility to evaluate the Qwest IMA SATE, provided Preliminary and Final Summary Evaluation Report detailing its findings with respect to the adequacy of the current IMA EDI SATE.

Per HP's Summary Evaluation Report, released on 12/21/01, HP submitted its findings related to criteria that would establish the level of SATE adequacy. These criteria included Process, Documentation, Accuracy and Consistency of Test Responses, Use of CLEC Input, Mirroring the Production Environment, Accommodation of New Release Testing, and the overall CLEC Acceptance and Meeting CLEC Needs.

1.2 Purpose of the Document

The purpose of the SATE New Release Test Summary Report is to provide a description of the processes that HP used in conducting the SATE New Release evaluation, and to communicate the findings and recommendations to the ACC, Qwest, and the CLEC community.

1.3 Scope

The scope of this document is to report the results that HP discovered during the course of this evaluation. These results are from the findings that were uncovered as a result of executing the SATE New Release Test Approach (9.0).

The scope of this document includes the New Release Testing transaction-testing details that support the SATE Additional Services proposal. It covers the EDI Pre-Order, Order and Post-Order functions that are required to test the most current release of the SATE Data Document and the IMA EDI Disclosure Document for IMA EDI Release 9.0. This document does not define the approach for, or attempt to evaluate any of the processes or documentation that are specific to SATE as provided by Qwest.

1.4 Audience

This document is intended for use by the ACC, Qwest, CLEC members of the TAG and other interested third parties to understand HP's evaluation of Qwest's SATE for New Release Testing.

1.5 Document Structure

The structure of this document is based in part on the Institute of Electrical and Electronics Engineers (IEEE) Standard for Software Test Documentation (IEEE std 829-1983) ©1983.

The following table shows the different sections of this document and the information contained within that section. In addition it will serve as a guide to reading this document.

Table 1 – Document Structure

Section	Title	Description
1.0	**Overview**	General background information, and general information concerning this report.
2.0	**Executive Summary**	Contains the Executive Summary.
3.0	**Transaction Testing Evaluation**	Contains the results from the execution of the SATE New Release Test Approach 9.0 Transaction Test, and overall assessment of the SATE in meeting testing needs for CLECs in Arizona for New IMA EDI Releases.
4.0	**Issues**	Contains a description of the Issues Management process used, and the results of logging issues for this New Release Testing evaluation.

Section	Title	Description
Appendix A	Issues Tracking Log	List of issues that have been formally presented to Qwest and the community in compliance with the formal issues management process.
Appendix B	Issues Summary	Table of Issues by New Release Testing Phase Each issue is categorised by type of issue along with the issue status at the time this report is delivered.
Appendix C	New Release Transaction Test Results Reporting Summary	Results from the New Release Transaction Test.
Appendix D	Phase I - SATE 9.0 HP9 Transaction Scenario Summary – Regression Testing	This is an EXCEL spreadsheet that includes a row for each LSR that was processed through the SATE during the Regression Test. Each row tracks the date sent and the response date received. Additionally if an error occurred the error date is indicated. The HP EDI team updated this spreadsheet as the EDI LSR's were sent and the EDI responses were received on HP's Test Harness.
Appendix E	Phase I - SATE 9.0 HP9 Transaction Scenario Summary – Progression Testing	This is an EXCEL spreadsheet that includes a row for each LSR that was processed through the SATE during the Progression Test. Each row tracks the date sent and the response date received. Additionally if an error occurred the error date is indicated. The HP EDI team updated this spreadsheet as the EDI LSR's were sent and the EDI responses were received on HP's Test Harness.
Appendix F	Phase I - SATE 9.0 HP9 Scenario Testing Comments – Regression	This is an EXCEL spreadsheet that includes a row for each Regression Test Scenario. This document records an entry for each activity that occurred as the transaction was processed in the Interoperability environment. The conversation and explanations received from Qwest are noted in this log. Each scenario is assigned the appropriate status as follows: • Blank=Not executed • 1=Scenario Completed • 2=Scenario in Process • 3=HP Researching • 4=Qwest Researching

Section	Title	Description
Appendix G	Phase I - SATE 9.0 HP9 Scenario Testing Comments – Progression	This is an EXCEL spreadsheet that includes a row for each Progression Test Scenario. This document records an entry for each activity that occurred as the transaction was processed in the Interoperability environment. The Conversation and explanations received from Qwest are noted in this log. Each scenario is assigned the appropriate status as follows: • Blank=Not executed • 1=Scenario Completed • 2=Scenario in Process • 3=HP Researching • 4=Qwest Researching
Appendix H	The SATE New Release Testing Open Question Log	Questions that are the result of documentation and process reviews as well as anything that came about during the execution of the transaction test itself. This Question Log was maintained each week with updates made according to input provided by both Qwest and HP.
Appendix I	The SATE New Release Testing Closed Question Log	Question that were resolved by Qwest and HP over the elapsed time of the New Release Testing.
Appendix J	SATE Negotiated Project Schedule for Progression Testing	As part of the Qwest established process a project schedule is negotiated with the co-provider. This appendix is the HP/Qwest Negotiated Project Schedule for the initial New Release SATE Transaction Test - Phase I
Appendix K	SATE 9.0 Regression Testing Usage Plan	HP's projection for SATE usage in the Regression Testing mode.
Appendix L	SATE 9.0 Trading Partner Relationship worksheet	HP' s updated Trading Partner worksheet required specifying IMA EDI Release 9.0 EDI envelope set up.
Appendix M	Phase II - Business Rules Testing Scenario Summary	This is an Excel spreadsheet that lists the scenarios utilized to test for business rule changes and/or additions for Release 9.0 as the business rule changes are documented in Appendix F, Appendix E and the Disclosure Documentation.
Appendix N	Business Rules Testing Working Papers: Part 1 - Appendix F of IMA Disclosure Documentation Part 2 - Appendix E of IMA Disclosure Documentation	This is HP' s working paper used to determine what changes made to business rules for IMA EDI 9.0 apply to the SATE. This analysis document was used to prepare the business rules testing scenarios.
Appendix O	Phase II - Business Rules Testing	This is an Excel spreadsheet that includes a row for each Progression Test Scenario. This

Section	Title	Description
	Progression Testing Comments Log	document records an entry for each activity that occurred as the transaction was processed in the Interoperability environment. Conversation and explanations received from Qwest are noted in this log. Each scenario is assigned the appropriate status as follows: • Blank=Not executed • 1=Scenario Completed • 2=Scenario in Process • 3=HP Researching • 4=Qwest Researching
Appendix P	Phase II - Business Rules Testing Regression Testing Comments Log	This is an Excel spreadsheet that includes a row for each Regression Test Scenario. This document records an entry for each activity that occurred as the transaction was processed in the Interoperability environment. Conversation/ explanations received from Qwest are noted in this log. Each scenario is assigned the appropriate status as follows: • Blank=Not executed • 1=Scenario Completed • 2=Scenario in Process • 3=HP Researching • 4=Qwest Researching
Appendix Q	Phase III Expected Results Verification for Stability and Regression Testing Scenario Summary and Comments Logs. This Appendix will include 4 documents: • Part 1 Regression Scenario Summary, • Part 2 Progression Scenario Summary, • Part 3 Regression Comments and • Part 4 Progression Comments.	These spreadsheets are formatted identical to those of Phase I for scenario summary and comments log activity. Phase III was conducted as a Stability test and full regression of Phase I to determine the level of change in the environment between the beginning and end of the New Release testing period.
Appendix R	SATE 9.0 Errors Lists	These are the Business Process Layer Errors Lists published for the new IMA Release 9.0 that were used to build the Phase II business rules test and provide validation of those test results.
Appendix S	SATE 9.0 IMA EDI Disclosure Publications	This is a link to the IMA EDI Release 9.0 Disclosure documentation that HP used to determine EDI mapping changes and Business rules edit changes required for New Release Testing.

Section	Title	Description
		http://www.qwest.com/disclosures/netdisclosure409.html.
Appendix T	SATE 9.0 Production Mirror Impasse Response	This is HP's response to the Production Mirror Impasse issue.
Appendix U	SATE 9.0 Scenarios that utilized VICKI Paths	This is a spreadsheet that details the Phase I and Phase III scenarios that were executed using VICKI response paths.
Appendix V	SATE 9.0 Functionality Tested	Products and activities tested in SATE New Release Test for SATE 9.0 IMA EDI Release
Appendix W	Release 9.0 Documentation distribution timeline	This is the history of all documents released to the community for 9.0 during the life of the SATE New Release Test. These documents were utilized as part of this testing.
Appendix X	PO-19 SATE New PID 03Oct01 - Final Draft	Performance measurement document used as the basis for establishing the benchmark for this test.
Appendix Y	SATE Data	SATE Data
Appendix Z	Data Request	Data Request made by HP for Qwest's CLEC usage.

1.6 References

The following documents are referenced as part of this New Release Testing, 9.0 Transaction Test Summary Report:

Table 2 – References

Document	Release Date	Version
HP's Draft Proposal to the ACC for SATE Testing - Additional Services	February 13, 2002	
Qwest IMA EDI Implementation Guidelines	January 21, 2002	9.0
Qwest IMA EDI 9.0 Data Document for SATE	January 28, 2002	2
Qwest IMA EDI 9.0 Data Document for SATE	January 29, 2002	3
Qwest IMA EDI 9.0 Data Document for SATE	February 4, 2002	4
Qwest IMA EDI 9.0 Data Document for SATE	February 20, 2002	4a
Qwest IMA EDI 9.0 Developer Worksheets	January 21, 2002	
Qwest IMA EDI 9.0 Network Disclosure Documentation	January 21, 2002	
Qwest IMA EDI 9.0 Error List - BPL Errors	January 30, 2002	2
Qwest IMA EDI 9.0 Error List - Legacy System Errors	February 4, 2002	2
Qwest IMA EDI 9.0 Error List - BPL Errors	February 25, 2002	3
Production Mirror Impasse Statement	March 14, 2002	
PO-19 SATE New PID 03Oct01Final Draft	October 03 2001	Final Draft
IMA–EDI Stand Alone Test Environment White Paper	May 25, 2001	1.0

2.0 Executive Summary

As explained in the background (Section 1.1), HP issued its Summary Evaluation Report on December 21, 2001. In section 2.1.6 of that document, HP reported the following finding for the SATE accommodation of new release testing for the implementation of new IMA EDI releases:

> *"HP evaluated the SATE's adequacy for new release testing by evaluating pre-release testing for IMA 8.01. Qwest's process for SATE new release testing appeared to be an exception to Qwest's normal point release implementation. Point releases normally do not affect the EDI or BPL layer, however, release 8.01 did provide the implementation of new BPL edits. This evaluation is* ***inconclusive*** *because HP was not able to fully verify that the SATE is adequate for* ***new release testing.****"*

HP included in its Summary Evaluation Report the following recommendation that was aimed at ensuring that the SATE adequately supports CLEC new release testing.

> *"Recommendation 7 - To ensure that the SATE is adequate for full release testing, HP recommends that IMA SATE release 9.0 be tested. This release is expected to take place February 2002."*

Upon the conclusion of the January 28, 2002 workshop covering HP's SATE Summary Evaluation Report, Version 3, Release Date 12/21/2001 (Summary Report), the ACC Staff, and its consultant, DCI, directed HP to conduct an evaluation of a new SATE Release, using Version 9.0 of Qwest's IMA Release as the test object. This body of work was in line with Recommendation 7 of the Summary Report, and also driven by comments provided by CLECs during the workshop.

In response to the ACC directive, HP developed a test plan that relied on the PID PO-19 (Draft Version October 5, 2001) as a guide and evaluation criteria. Based upon its initial evaluation of PO-19, HP divided the Sate New Release Test into 4 Phases:

- Phase I - Expected Results Verification
- Phase II - Business Rules Testing
- Phase III - Expected Results Verification for Stability and Regression Testing
- Phase IV - Production mirror Testing

The wording in the PID, as agreed to by the community, specifically defines the scope used to measure the level of accuracy, expected of a New Release test of SATE as follows: *'Includes one test transaction for each scenario published in the IMA EDI Data Document – for the Stand Alone Test Environment (SATE)'*.

HP performed this test in **Phase I** of the HP New Release Test of SATE 9.0. Phase I provides the information necessary to meet the requirements of the PID formula calculation which results in the percentage unit of measure. This percentage is compared to the benchmark established by HP for the purpose of this evaluation as a level of accuracy. Refer to Section 3.3.4 on page 17 for the benchmark rationale.

HP performed **Phase II** - Business Rules testing - per the interpretation of the PID language that suggests there be strict adherence to business rules published in the most current IMA EDI Disclosure Documentation for each release and the associated Addenda. Although no benchmark has been established in PID PO-19 for this measurement, HP believes that that this measure is important in establishing the level of accuracy in business rule implementation of SATE for new releases as indicated in the PID language "*strict adherence to business rules*". Refer to Section 3.3.4 on page 17 for the benchmark rationale.

Phase III - Expected Results Verification of Stability and Regression Testing - of the HP New Release Test of SATE 9.0 was a re-test of Phase I and was performed to show stability in the environment during the month that SATE was available to the community prior to the new IMA Release being introduced into production. Although no benchmark has been established in PID PO-19 for this measurement, HP believes that that this measure is important in establishing the stability and

accuracy of SATE for new releases to fulfill the spirit of this PID as stated in its purpose "*Evaluates Qwest's ability to provide accurate production-like tests to CLECs*". Refer to Section 3.3.4 on page 17 for the benchmark rationale.

Phase IV - Production Mirror Testing - was originally included in the scope of the HP New Release Test Approach, based upon HP's initial understanding of PO-19. However, further analysis of the definition and record associated with PO-19 caused HP to determine that the PID is not intended to assess production likeness and, in fact, the PID did not support Production Mirror Testing. Therefore, HP did not perform this test. (Please refer to Section 3.6.2 for a more detailed discussion).

2.1 Findings

HP has completed the New Release Test of the most current IMA EDI implementation that was brought to SATE on January 28, 2002. HP has determined that the Qwest SATE is adequate to support New Release Testing by a CLEC. HP's conclusion is based upon the following results:

- The SATE provides the CLEC with data and functionality to test its interface for all products being used by CLECs on Qwest's IMA EDI environment. The data provided in the available scenarios represent transactions that would result in a successfully completed LSR in production, as specified in the IMA EDI Disclosure Document.
- The SATE provides the CLEC with the ability to test its interface up to 30 days in advance of the production release of the corresponding Qwest IMA EDI Release.
- Although the SATE processes and documentation continue to be enhanced through Qwest's internal process and input from the CLECs in the SATE User Group, the Qwest EDI Implementation team continues to provide the support required to aid a CLEC in developing it's interface to a new IMA EDI Release.
- CLECs appear to be successful in using SATE and many CLECs appear to be migrating to using the SATE rather than Qwest's Interoperability environment as indicated by the Data Request Returned by Qwest on March 27, 2002. See Appendix Z for this Data Request.

HP employed a phased approach to this testing as documented in the HP SATE New Release Testing Approach document (9.0).

Each Phase of this test was developed per HP's interpretation of the PID PO-19 SATE measurement. The PID-PO19 served as a guide to the level of testing that was conducted to ensure an objective and impartial result was achieved.

- Phase I testing focused on the verification of the expected results for all scenarios made available within the SATE Data Document approximately 30 days in advance of a new IMA EDI release being deployed into production.
- Phase II testing focused on the validation of business rules changes that came about with the new IMA EDI 9.0 release.
- Phase III testing focused on the validation of consistency in results for all scenarios available within the SATE Data Document over the 30-day testing period for a new release.

PHASE I

The Phase I testing outcome produced a 93% level of accuracy in expected results. While this result does not meet the PO-19 benchmark of 95% the margin of shortfall is small. In addition, HP has observed a clear trend across release 7, 8 and 9.0 testing is showing that Qwest should achieve the 95% accuracy rate with the next implementation of IMA EDI changes into SATE.

Therefore, HP concludes that overall for Phase I test result is Adequate, as no re-test necessary.

PHASE II
HP conducted this phase of testing to determine if the new business rules that were documented in the IMA EDI Disclosure Document for Release 9.0 in Appendix E and Appendix F were made available in the SATE approximately 30 days in advance of those new or updated business rules were rolled into the production IMA EDI environment. In conducting this analysis, HP categorized unexpected responses into two categories – those measured by PO-19, and those that are not measured by PO-19.

Phase II performance, as measured by PO-19, indicates that 97% (96.6) of transactions yielded expected results in terms of EDI Mapping, Data Attributes, and Workflow. HP believes that this level of performance is adequate to support CLEC new release testing.

Table 3 – Results Summary

Category		Total	Fail	% Success
EDI Mapping		122	2	98%
Data Attributes		122	2	98%
Workflow		122	9	93%
Environment Constraints	N/A			

PHASE III
HP conducted this phase of testing to assist in verifying the stability in the SATE for the period of time that would allow a CLEC to prepare for the new release production implementation. HP was looking for consistency in the outcomes of each scenario available in the SATE while comparing the test results for each scenario from PHASE I to the outcome of the same scenario when executed in Phase III. Phase I took place approximately 28 days prior to the production availability of the new release; and Phase III took place just 5 days before production implementation of this 9.0 release. This comparison of Phase I to Phase III outcomes provides the understanding of how reliable the testing environment is approximately 30 days in advance of the production deployment.

Additionally, Phase III allowed HP to evaluate the results as a full regression test to ensure that any Data Document changes, made by Qwest as corrective actions based on Phase I results, were implemented successfully with no impact to the overall outcome of all scenarios available in the SATE.

HP has observed a positive result when evaluating the stability and the consistency of results for the period of approximately 30 days. The Phase III testing found a 95% accuracy rate overall which meets the diagnostic benchmark established by HP for the purpose of evaluating this phase of the new release test.

During this engagement, HP identified issues associated with documentation, test account data, EDI mapping and business rules implementation. HP followed the Formal Issues Management process and documented these issues accordingly. Qwest has initiated corrective actions for most of the issues identified to date. Additionally, HP only realized minor schedule impacts to its overall transaction evaluation as a result of the problems identified.

2.2 Recommendations

HP has developed recommendations aimed at ensuring that the SATE remains adequate for supporting new releases of the IMA EDI interface. This will ensure that Qwest provides an environment that supports certification and new release testing to serve Arizona CLEC's needs on an ongoing basis. The specific issues and recommendations are as follows:

1. All issues that have a status of "Closed-Unresolved" or "Open" as of the distribution of this document be incorporated into the SATE User Group and CMP process.
2. Supporting documentation be provided to more clearly clarify the calculations and measurement process of PID PO-19.
3. Qwest should consider asking CLECs to submit data requests for negative scenarios and BPL edits for key transactions. Qwest provide a clearly defined process to ensure timely resolution of production mirror issues encountered by CLECs during post SATE certification.
4. Qwest include scenarios in data document reflecting all business rule changes identified in the New Release change summary documentation.

3.0 Transaction Testing Evaluation

3.1 Overview

HP evaluated the ability of Qwest's IMA EDI SATE to support IMA EDI Release of V9.0 as a new release. HP relied on its understanding of the Performance Indicator Definition (PID) PO-19 to guide the criteria and approach for evaluating this release. The transaction test evaluation provided the data used to assess the adequacy of Qwest's IMA EDI SATE to facilitate CLECs in testing its EDI interfaces.

The evaluation of Qwest's SATE for a new release focuses on several aspects:

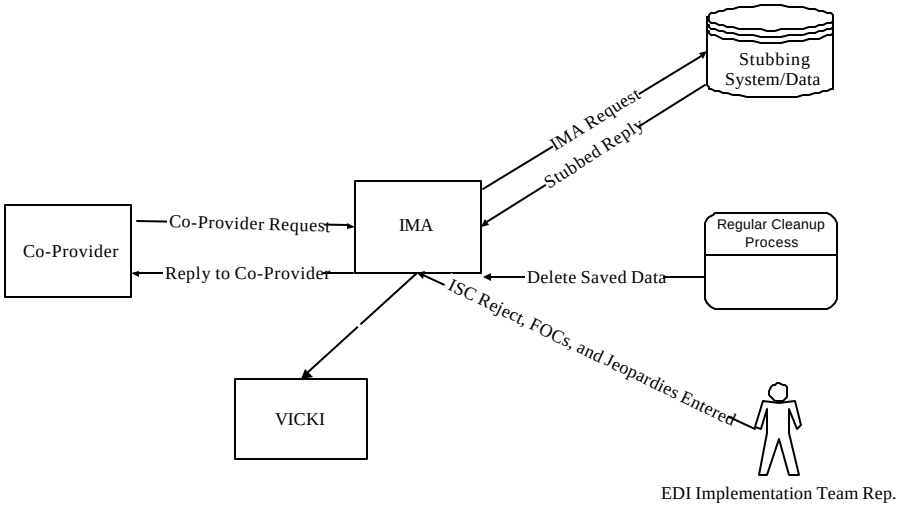
- **Availability of Test Environment** - The testing environment has to be made available to the CLECs in advance of the new release going into production on the OSS systems. Qwest has stated that this availability is made approximately 30 days in advance of the new release going into production.
- **Stability of the Testing Environment** - Does the documentation and systems remain stable from the introduction of the new release in the testing environment to the date the new IMA release becomes available in the production IMA-EDI environment.
- **Performance of New Release** - Does SATE support a New Release of IMA EDI in terms of EDI Mapping and documented Expected results, as measured by the conditions of PO-19.

3.2 Architecture

This New Release Testing approach is focused on verification of Qwest's documented EDI and business rules changes for IMA EDI Release 9.0. More precisely this transaction test focuses on only those changes as a result of the Qwest implementation of Release 9.0 that affect the available scenarios within the current SATE release 9.0 data document.

The following diagram, taken from Qwest's White Paper on "The IMA EDI Stand-Alone Test Environment", dated May 25, 2001, Version 1.0, has been modified by HP to show the interaction of VICKI in the SATE. The original diagram was presented in Qwest's SATE White Paper to describe the logical components that are part of the SATE architecture. These same components will be included in this New Release testing event.

NOTE: This approach does not include a comprehensive evaluation of the VICKI enhancement. HP has used the VICKI response technique to accelerate the transaction testing.



The following modules were tested by HP during the transaction test evaluation:

- The IMA Module (including an EDI Translator)
- Stubbing System Module

Below is a description of each module as it is documented in the Qwest White Paper[1].

IMA Module (including an EDI Translator) - This is an actual version of IMA configured to direct requests to the Stubbing System instead of the back-end systems it normally calls. It runs all the edits to determine whether the detailed fields within a transaction are valid. The only modifications made especially for this version are listed below:

- Certain edits are turned off. These edits in no way affect acceptance of a function performed by a CLEC. These edits are most often used to determine whether an LSR requires Manual Handling before service orders are sent.
- The SATE uses generic CLECs that can be used by different actual CLECs over time. The SATE version of IMA is therefore configured to hold identification information for these generic CLECs.
- Other minor changes determined during detailed design.

Stubbing System Module - IMA will be accessing this system using the same Application Programming Interfaces (APIs) that the Production version of IMA uses when calling back-end systems.

The system, in most cases, returns responses to IMA using data-driven stubs. For example, CLECs send requests to IMA to find the address associated with a given telephone number. In production, IMA sends a request to the Fetch 'n' Stuff system, which in turn sends a request to PREMIS to gather such information. In the SATE however, the request is sent from IMA to the Stubbing System. There, the request is parsed and the telephone number is looked up in a database. If the number is found, the preset response specified for that number is sent back to IMA. If it is not, a generic "No Match " response is sent to IMA.

[1] NOTE: the Qwest White Paper is no longer supported as it has been incorporated into the EDI Implementation Guidelines – for Interconnect Mediated Access (IMA) and Facility Based Directory Listings (FBDL); however this specific architecture information was not carried forward.

This basic stub process is replicated for calls to most of the stubbed back-end systems. In some cases, however, an external system is not called, but instead a database is accessed. For instance, in Production, calls to the Loop Qualification Database (one of the systems that is stubbed) are made via SQL Query. Therefore, for this case, the Stubbing System simply has a database view which matches the view called in production and the underlying tables are populated with SATE specific data.

Regular Cleanup Process - Since Co-Provider IDs can be passed from one Co-Provider to another in the SATE; the environment is flushed of all transactional data on a monthly basis. This data includes reserved appointments, telephone numbers, and the LSRs entered by Co-Providers.

VICKI (Virtual Interconnect Center Knowledge Initiator) - With VICKI, Qwest will automate transactions that are automated in production, and leave manual processes that are currently manual in production. Events will be technically created in the following manner:

- **FOCs** - VICKI then uses a Flow Through Service emulator to create an FOC based on production FOC examples for that Product, Activity, and Supp Type Combination.
- **All Status Updates and Completions** - VICKI sends CRM like messages. In the case of Completions, these are based on production Completions examples for that Product, Activity, and Supp Type Combination.
- **Second FOCs for a specific LSR, Manual Rejects, Non-Fatals, and LSR Level Jeopardies** - These are still manually created from the FOM in the exact same manner as in production.

3.3 Purpose of Evaluation Methods

Transaction tests were performed to validate that the SATE can provide CLECs with a stable environment to test new release changes as prescribed by the Arizona PO-19 SATE Performance Measurement. HP analyzed the information provided in the Qwest Release 9.0 documentation to establish an assessment of the EDI and Business Rules changes, and determine the extent of testing necessary to verify the IMA EDI 9.0 release is available within SATE. Additionally HP performed an evaluation of the accuracy of the outcomes generated by SATE per Qwest's implementation of the expected release changes in the SATE for use by the CLEC community and independent vendors for New Release Testing. This includes the competence of SATE to react to LSR's providing results that are consistent with those scenarios and their expected results as they are provided in the 9.0 Data Document.

HP conducted a three-phase test that is correlated to the SATE Performance Measurement PO-19 specifications. The three phases address language provided by PO-19. These transaction test phases are:

- **Phase I** - Expected Results Verification
- **Phase II** - Business Rules Testing
- **Phase III** - Expected Results Verification for Stability and Regression Testing

The outcome of the three phases of transaction testing provided the percentage of accuracy in transaction outcomes when compared to the Release 9.0 Data Document and the percentage of successfully implemented business rules changes identified that affect SATE scenarios.

Each testing phase is described below.

3.3.1 Phase I - Expected Results Verification

HP executed every test bed scenario that is represented in the Stand - Alone Test Environment as the PID PO-19 has guided for the SATE New Release of IMA EDI.

"Includes one test transaction for each scenario published in the IMA EDI Data Document – for the Stand Alone Test Environment (SATE)."

As documented in the PID this set of transactions were executed:

"when a full or point release of IMA is installed in SATE. These transactions will be executed within five business days of the numbered release being originally installed in SATE. This five business-day period will be referred to as the "Testing Window."

Pass / Fail Criteria
HP determined the success or failure of each of the Phase I test scenarios based on the expectations described in the PID.

"*The successful execution of a transaction is determined by the Qwest Test Engineer according to:*

- *The expected results of the test scenario as described in the IMA EDI Data Document – for the Stand Alone Test Environment (SATE) and the EDI disclosure document.*
- *The transactions strict adherence to business rules published in Qwest's most current IMA EDI Disclosure Documentation for each release and the associated Addenda"*

A scenario **"Passed"** the Phase I test if the actual results received were the same as the expected results documented in the most current SATE 9.0 Data Document.

A scenario **"Failed"** the Phase I test if the actual results received were different to the expected results documented in the most current SATE 9.0 Data Document.

3.3.2 Phase II - Business Rules Testing

This test evaluated those business rules that have changed in SATE due to the new IMA-EDI Release 9.0. HP derived a list of test scenarios based on Appendix F - Release 9.0 Change Summary; Appendix E updated Additional IMA edits for 9.0 to Qwest's IMA EDI 9.0 Disclosure Documentation, and the Qwest IMA-EDI 9.0 Disclosure Documentation.

These scenarios were executed in SATE to determine if the business rules documented in the most current IMA-EDI Network Disclosure documentation have been implemented successfully into the SATE test bed.

This test made use of the current IMA EDI Business Process Layer Error List and the current IMA EDI Legacy Systems error list as a comparison to the response provided for the each transaction submitted.

The following PID language was the basis of this testing phase:

"The transactions strict adherence to business rules published in Qwest's most current IMA EDI Disclosure Documentation for each release and the associated Addenda."

Pass/Fail Criteria
HP determined the success or failure of each of the Phase II test scenarios based on the expectations described in the PID.

A scenario **"Passed"** the Phase II test if the actual results received were the same as the expected results documented by HP in the Business Rules Scenario Summary Worksheet.

A scenario **"Failed"** the Phase II test if the actual results received were different from the expected results documented by HP in the Business Rules Scenario Summary Worksheet.

3.3.3 Phase III - Expected Results Verification for Stability and Regression Testing

HP executed a second transaction test to demonstrate the stability of the SATE from the point the new release is implemented in the test environment, 30 days in advance of the IMA production implementation, until the time the release is deployed to production.

This Phase of testing was executed 5 days prior to the production release was deployed. The same transactions and the same pass/fail criteria for Phase I apply to this phase of testing.

Additionally this test phase addressed those transactions that failed the Phase I testing. HP anticipated that any failures captured in the Phase I testing would be corrected by the time Phase III was executed. This Phase served as a Full Regression test, to ensure that any corrective actions taken by Qwest would not have any adverse affects to any other test scenario outcomes.

Pass/Fail Criteria
HP determined the success or failure of each of the Phase III test scenarios based on the same criterion as Phase I.

A scenario **"Passed"** the Phase III test if the actual results received were the same as the expected results documented in the most current SATE 9.0 Data Document.

A scenario **"Failed"** the Phase III test if the actual results received were different to the expected results documented in the most current SATE 9.0 Data Document.

3.3.4 Benchmark

HP established its benchmark using PID PO-19 for guidance. As of the date of this report, no consensus has been reached in Arizona on a performance benchmark. HP recommended a benchmark of 95% in December 2001, and in its SATE New Release Test Approach 9.0 Transaction Test document. HP also considered the discussions in the Regional Oversight Committee (ROC) test for Qwest. The ROC Executive Steering Committee ruled on an impasse resolution and adopted the benchmark of 95 percent for the states under the ROC jurisdiction.

3.3.4.1 Community's Perceptive on the ROC's Benchmark

January 28/2002 ROC Steering Committee Resolution

> *"By a unanimous vote of nine (9) to zero (0), with one abstention, the Steering Committee (SC) determined that the benchmark to be used for the ROC PO-19 PID should be 95% beginning in March 2002 and should be revisited within six months of that time.*
>
> *The SC considered the following key aspects in its determination:*
> - *A benchmark of 95% does not seem unreasonable based on current results*
> - *Implementation of this interim benchmark starting in March 2002 coupled with a 6-month review allows time for enhancements to the SATE platform to reach maturity and stability before a final benchmark is established*
> - *A 95% benchmark in the interim should encourage Qwest to not release future upgrades of SATE until such time as the release is performing at least to a 95% level of accuracy, thus furnishing the CLECs with reasonable assurance of a stable platform*

Voting on the issue: All states in attendance except Minnesota that abstained. North Dakota, New Mexico and Wyoming were not represented on the call."

3.3.4.2 HP's Perspective on the PO-19 Benchmark

HP adopted the 95% benchmark for reporting on findings for all phases of this test, as described in the HP SATE New Release Test Approach 9.0 Transaction Test document. The rationale for this benchmark included the fact that this benchmark was passed with a unanimous vote on the ROC and thus enjoys a wide acceptance within the Qwest territory, and that it is the last proposed benchmark for Arizona.

In preparing for the execution of the new release test, HP observed several issues in applying the meaning of the PID as an absolute standard:

- There currently exists no consensus on the benchmark for PID PO-19 in Arizona. It remains at impasse.
- This benchmark for PID PO-19 will be implemented in March 2002 for the ROC.
- The PID PO-19 formula that provides a basis for computing the Phase I results, uses a cumulative value of test results from all the currently supported IMA EDI releases (IMA EDI releases 7.0, 8.0 and 9.0). The accumulation of results from multiple releases is outside the scope of this evaluation.
- PO-19 measures accuracy of expected responses from scenarios defined in the SATE Data Document. These scenarios are to be tested during the 5-day "testing window", that is within five days after the new release is introduced in SATE. PO-19, therefore, can not be used as an absolute standard for the results for Phase III of this project.
- PO-19, as currently defined, measures transaction functionality, field characteristics, and transaction format for a set of scenarios defined in the SATE Data Document. It does not provide a way to measure the consistency of scenario content and legacy messages between SATE and production.

Based on the points above, HP has applied the following interpretation for the use of a benchmark for the SATE New Release Test:

- HP has applied the 95% benchmark for all three phases of this New Release Test.
- HP has applied the 95% benchmark in February as HP was tasked to perform the SATE New Release Test based on the PID PO-19 in February and SATE 9.0 was being implemented within the January/February time frame.
- As HP was tasked to test the SATE release for the 9.0 Version of IMA EDI, it has applied the PID PO-19 formula for the new release only, and not cumulative across all the supported releases in SATE as the formula in the PID is written.
- HP believes that each new release should individually meet the 95% benchmark. In lieu of an approved benchmark for Expected Results Verification, HP looked to standards for a quality measurement that have wide acceptance in the industry. HP has determined that a large body of software development organizations pursue a quality goal between 95% or 97.5%. HP chose the 95% benchmark due to the consensus vote for the SATE measurement across the ROC community, and because it is the last proposed value for the Arizona benchmark.
- HP believes that a benchmark of 95% is reasonable for Phase II. In lieu of an approved benchmark for Business Rules Testing, HP looked to standards for a quality measurement that have wide acceptance in the industry. HP has determined that a large body of software development organizations pursue a quality goal between 95% or 97.5%. HP chose the 95% benchmark due to the consensus vote for the SATE measurement across the ROC community in relation to the Expected Results Verification, and because it is the last proposed value for the Arizona benchmark. HP sees no reason to utilize a standard greater than what has been set for Expected Results Verification when evaluating Business Rules.

- HP believes that a benchmark of 95% is reasonable for Phase III considering that the purpose is to measure the Stability in Expected Results and assurance that Qwest has successfully implemented changes that are verifiable through Regression Testing. Since this test is a repeat of Phase I – Expected Result Verification with the exception of the timing, it is justifiable to utilize the same benchmark.

3.4 Methodology

This New Release transaction testing followed the general principles established in the Qwest EDI Implementation Guide (http://www.uswest.com/wholesale/ima/edi/document.html). It did not evaluate any transactions that fall outside of the available data supported within Release 9.0 of the SATE. It considered all IMA EDI Release 9.0 documentation that had been provided by Qwest.

The HP New Release Test of SATE did not include the "CLEC Experience" as it would occur if all parties followed the processes established for a CLEC start up or any of the processes specific to the use of SATE; rather, HP executed this transaction test in the role of an objective third party and trusted advisor to all parties – Qwest, ACC and the CLEC community.

The HP Test Harness supported an order entry tool and an EDI translation tool that allowed the entry and formatting of LSR's as prescribed by the Qwest pre-order and ordering rules for IMA EDI 9.0.

Once the orders were translated into the standard EDI format according to the Qwest 9.0 release specifications, they were sent on to SATE. Responses received from Qwest provided the basis for comparison to the Qwest IMA EDI 9.0 SATE Data Document for expected responses. This data was collected using the same technology that was used for the Arizona 271 OSS Test.

An Issues Management process was utilized to identify and manage resolution of New Release Transaction test issues across Phase I, Phase II and Phase III. Details of this process are provided in the SATE Issues Management Process found under separate cover.

A public call was held weekly to review the status of the New Release Transaction testing with all parties. All documentation and assistance made available to HP by Qwest for use by HP in the development and/or establishment of the IMA EDI 9.0 interfaces to the SATE have been made available to all participants to verify that HP has not being given special treatment.

3.5 Scenarios

HP executed the scenarios as they are presented in the IMA EDI SATE 9.0 Data Document, and listed in Appendix V of this plan.

HP employed the use of VICKI for response generation. This was done to eliminate the constraint of being able to receive FOC responses for only the first 10 transactions per day. HP did not undertake a comprehensive test of VICKI. HP utilized 10% of the available VICKI paths. Although the comment logs do document the use of VICKI on applicable scenarios, there is no relevance to the outcomes of this use, as HP did not maintain statistics specific to VICKI as part of this New Release Test of 9.0.

3.6 Variances

The following items have been addressed by HP during the SATE New Release Testing, yet represent variances to what was planned in the SATE New Release Test Approach 9.0 Transaction Test document.

3.6.1 SATE Data Documents

The purpose of Phase III was intended to evaluate the status of SATE five days prior to Release 9.0 being deployed into Production. In anticipation of the roll out of SATE Flow through capabilities, Qwest released an updated SATE Data Document v9.05. This release of the Data Document presented a large number of account data changes to facilitate the Flow Through capability. This significant Data Document change impacted the purpose of the Phase III testing. HP and Qwest compromised on a "special" release of the SATE Data Document v9.04a to allow HP to move forward with Phase III testing with the same account data that was utilized in Phase I. Although HP realizes the Data Document that rolled out with the Production deployment of IMA EDI Release 9.0 was significantly different than used in Phase III testing, HP believes that the special release of 9.04a allowed HP to compare the variance in results of Phase I to those of Phase III.

3.6.2 Phase IV Production Likeness Testing

HP originally included the production mirror test in the scope of the HP New Release Test Approach. This was due to HP' s interpretation of the language in PID PO-19. However, HP did not perform the Production Mirror phase of testing for the following reasons:

- HP was made aware that it's interpretation of PID PO-19 was contrary to the decisions that had taken place at a TAG meeting on September 27, 2002 where the production mirror language was rejected[2].
- HP revisited the results of the SATE Release 7.0 Evaluation and found that the execution of Phase IV, as written in the SATE New Release Test Approach 9.0 Transaction Test document would not have provided additional detail on the overall accuracy of production mirroring because it would only be testing the new release portion of a SATE release.

3.6.2.1 Production Mirror not accepted by Community

HP proposed modification to the PID PO-19 in reference to the inclusion 'production-mirror' test. Those PID changes, as proposed by HP, were subsequently rejected by the community in December 2001[3]. The following language from PID PO-19 indicates that the CLEC community and Qwest agreed to test the mirroring between SATE and the IMA EDI Disclosure Document.

> *"The successful execution of a transaction is determined by the Qwest Test Engineer according to:*
>
> - *The expected results of the test scenario as described in the IMA EDI Data Document – for the Stand Alone Test Environment (SATE) and the EDI disclosure document.*
> - *The transactions strict adherence to business rules published in Qwest's most current IMA EDI Disclosure Documentation for each release and the associated Addenda"*

HP revisited the need to perform the Phase IV Production Likeness testing in conjunction with HP's Recommendation 7 based on comments generated after review of HP's SATE New Release Test Approach 9.0 Transaction Test document. Per the following understanding, HP removed the

[2] The production mirror test has been raised to impasse with the ACC Staff, and is still under consideration at the time of this report.

[3] HP was asked in December of 2001 to provide comments to the PID. HP did so and included the following comment to the Description of PO-19: "The identical transactions (to those used to measure accuracy of the SATE), will be executed in production when the new release is installed in production." HP provided these comments and the comments were subsequently rejected by the community.

Production Mirror test from the scope of the SATE New Release Test Approach 9.0 Transaction Test document:

- The PO-19 measurement never provided for a measurement of Production Mirror accuracy

Finally, the HP New Release Test of SATE 9.0, listed as Recommendation 7 in the SATE Summary Evaluation Report - Final Version 3.0 dated 12/21/01, does not require the completion of a production mirror test to maintain the 'adequate' rating as summarized by HP. The recommendations as provided in the by HP Final Evaluation of the Qwest IMA EDI SATE are intended to ensure that the Qwest IMA EDI SATE remains adequate for the CLEC's needs going forward, not as a contingency for adequacy.

3.6.2.2 HP's SATE 7.0 Production Mirror Test

HP conducted a production mirror test during original SATE Transaction Evaluation. This test was based on functionality that HP had been certified to order through HP's Arizona 271 Interconnection. The functionality that was tested included: Address Validation, Customer Service Record Query, Service Availability Query, Facility Availability Query, Connecting Facility Availability Query, POTS, Un-Bundled Loop and UNEP-POTS. During the test, HP reported that 32 LSR pairs were submitted to the SATE 7.0 release and IMA EDI 7.0 Production Release. The results of the LSR's submission in SATE and subsequent production submission were compared for transaction functionality, field characteristics, transaction format and content. Based on those criteria, 7 discrepancies were detected. Of the seven discrepancies, only one related to the Qwest prescribed EDI format. The remainder was inconsistent based on behavior and content. HP provided an overall rating of the 7.0 Production Mirror to be inconclusive based on the unavailability of list detailing the errors in the SATE legacy back-office systems. Due to the lack of the Legacy Systems Edit List, HP created Recommendation 4 that requested Qwest publish variances between SATE and production business edits to ensure that CLECs are fully aware of any such discrepancies so that a CLEC may effectively develop its business processes in the simulated environment.

HP has completed additional analysis on the data that has been collected for SATE 7.0 where HP performed a production mirror test. HP has synthesized the results of the Phase IV production mirror testing into the following broad categories:

- Formatting
  - EDI mapping compliance
  - Data field attributes compliance
- Behavior
  - Legacy system generated messages
  - BPL layer messages
  - Responses

Table 4 – Error Count

Category	Error Count in SATE 7.0 Production Mirror Test
EDI Mapping and Data Attributes	1
BPL Message Discrepancies	2
Legacy Message Discrepancies	2

The above table shows HP's analysis for the single occurrence of an issue with EDI mapping and Data Field Attributes. Most issues HP encountered during the SATE 7.0 production mirror test were in the area of Behavior where HP noted that there was insufficient documentation available for the Legacy and BPL messages or there was a mismatch in message content received from SATE and

Production. The execution of Phase IV, as written in the SATE New Release Test Approach 9.0 Transaction Test document would not have provided additional detail on the overall accuracy of production mirroring, as it would only have tested new functionality added in release 9.0.

Due to the results of the 7.0 Production Mirror test indicating an inconclusive result only due to lack of available SATE information, HP can identify little reason to repeat a production mirror test.

3.7 Summary of Results

This section describes the results and analysis of transaction data collected in this evaluation. The evaluation and opinion of these results are covered in the Section 3.8 Evaluation.

3.7.1 Availability of New Release in SATE

HP was able to verify the presence of Release 9.0 in SATE on January 30, 2002. This represents the release being available 28 days before the production release of IMA EDI 9.0 was deployed. HP validated this availability by performing a connectivity test. Qwest indicates that Release 9.0 was available on January 28, 2002 in SATE. HP had a kick off meeting on January the 28th as per documented process. Qwest approved all the paperwork by the 29th of January, which brought HP to the capability of testing on the 30th of January. HP did not encounter any outage related problems with SATE during this evaluation.

3.7.2 Performance Measures

Each phase provides a conclusion as to the original percent of unexpected results in relation to the total number of scenarios executed. Additionally, the percentage of re-tested transactions that initially had unexpected results which later met expected outcomes after corrective action was taken by Qwest is provided. The re-test results do not contribute to the overall evaluation of each test phase.

For Phases I through III, HP submitted a total of 667 scenarios, which represents approximately 2,500 transactions (each scenario may generate several transactions, depending on the scenario. For example, a Pre-Order query is considered as one transaction, as is the query response from SATE). For the 667 scenarios, 636 include the original scenarios developed as part of HP's test case matrix, and the other 31 are re-tests of scenarios that did not return the expected responses.

Table 5 - SATE New Release Test Report provides a summary of each transaction test evaluation method with the following details:

Phase - The column labeled *Phase* identifies the Evaluation Method utilized to generate the related transaction test information.

The phases are categorized as follows:

- Phase I - Expected Results Verification
- Phase II - Business Rules Testing
- Phase III - Expected Results Verification for Stability and Regression Testing

Total Scenarios - The total scenarios represent the sum of scenarios executed within each environment. Each scenario can account for anywhere from two to twelve transactions.

Total Unexpected Results - The total unexpected results represent the sum of scenarios that produced a "fail" or unfavorable outcome. A scenario was considered to "Fail" if the scenario produced a response that did not match the expected result in the data document or HP's expected result.

% Error - The percentage of error is calculated as the total unexpected results divided by the total scenarios executed.

Total Retest Complete - This represents the total number of scenarios that were successfully re-tested. The scenarios that were candidates for re-test are represented in the Total Unexpected Results column.

% Retest Successfully - This represents the percentage of re-tests that were successful as compared to the number of total scenarios with unexpected results. This percentage is calculated as the total retest complete divided by the total unexpected results.

Table 5 - SATE New Release Test Report

Release 9.0 Testing Phase	Total Scenarios	Total Unexpected Results	% in Error	% Successful	Total Retest Complete	% Successful after Retest
Phase I - Expected Results Verification						
Initial Transaction Execution: Began 1/31/02 - Ended 2/7/02 Re-tests Ended 2/15/02						
Trading Partner – HP9						
Regression	96	10	10.42	89.58	9	98.96
Progression	158	8	5.06	94.94	8	100.00
sub-total	254	18	7.09	92.91	17	99.61
Phase II – Business Rules Testing						
Initial Transaction Execution: Began 2/13/02 – Ended 2/15/02 Retests Ended 2/28/02						
Regression	60	4	6.67	93.33	1	95.00
Progression	62	13	20.97	79.03	0	79.03
sub-total	122	17	13.93	86.07	1	86.89
Phase III – Expected Results Verification for Stability and Regression Testing:						
Initial Transaction Execution: Began 2/18/02 – Ended 2/22/02 Re-tests Ended 2/27/02						
Regression	96	7	7.29	92.71	6	98.96
Progression	164	7	4.27	95.73	7	100.00
sub-total	260	14	5.38	94.62	13	99.62
Total Results	636	49	7.70	15.72	31	97.17

3.7.2.1 Phase I Test

For Phase I, HP submitted a total of 96 regression scenarios and 158 progression scenarios giving a total of 254 scenarios. Regression scenarios were used to verify expected results for products HP is

already certified for ordering within IMA EDI version 7.0. Progression scenarios were used to verify expected results for products that HP is not certified for ordering within IMA EDI Version 7.0.

For this test, 18 scenarios returned unexpected responses when compared to the expected results as documented in the SATE Data Document 9.0. These unexpected responses correspond to an accuracy ratio of approximately 93% when compared to the total number of scenarios executed.

In this test, HP encountered the following types of issues:

Table 6 – Test Issues

	Type of Issue	Formal Issue Tracking Number	Status
Formal Issues			
	Business Rules		
		2033	Closed Unresolved
Candidate Issues			
	Business Rules		
		9030	Closed
	EDI Mapping		
		9023	Closed
		9018	Closed
		9026	Closed
	Environment		
		9029	Closed
		9025	Closed
		9015	Closed
		9020	Closed
		9021	Closed
		9027	Closed

HP submitted one formal issue that has been closed with an unresolved status. HP was able to retest a total of 17 scenarios, which resulted in a final accuracy ratio of 99.61%.

3.7.2.2 Phase II Test

For Phase II, HP submitted a total of 60 regression scenarios and 62 progression scenarios giving a total of 122 scenarios. Regression scenarios were used to verify expected results for products HP is already certified for ordering within IMA EDI version 7.0. Progression scenarios were used to verify expected results for products that HP is not certified for ordering within IMA EDI Version 7.0.

For this test, 17 scenarios returned unexpected responses when compared to the results that HP expected based on the Appendix E and Appendix F change summaries of the IMA EDI Disclosure Documents for IMA EDI Release 9.0 changes. These unexpected responses correspond to an accuracy ratio of approximately 86% when compared to the total number of scenarios executed.

In this test, HP encountered the following types of issues:

Table 7 – Phase II Test Issues

	Type of Issue	Formal Issue Tracking Number	Status
Formal Issues			
	Business Process		
		2037	Close Unresolved
	Business Rules		
		2034	Closed Unresolved
		2039	Closed Unresolved
		2042	Closed Unresolved
	Documentation		
		2040	Closed
		2043	Closed
		2044	Closed Unresolved
	EDI Mapping		
		2036	Closed
	Environment		
		2035	Closed
		2038	Closed
		2041	Closed Unresolved
		2045	Closed Unresolved
Candidate Issues			
	EDI Mapping		
		9028	Closed

HP submitted 12 formal issues, 1 is still open, 4 are closed and 7 are closed with an unresolved status as of the publication of this report. HP was able to retest a total of 1 scenario, which resulted in an accuracy ratio of 86.89%.

HP did further analysis on those scenarios that did not return the expected response in order to determine what component of the business rules caused the error. HP considered the broad scope of business rules to be made up of multiple sub-categories. In conducting this analysis, HP categorized unexpected responses into two categories – those measured by PO-19, and those that are not measured by PO-19. Our analysis is as follows:

Performance Measured by PO-19

- **EDI Mapping**: These set of rules define the syntax and the form of information that is being exchanged between two collaborating entities. These rules dictate the type of message to be used for what purpose (e.g. 850, 855, 860, 865, 836). The components and order of the segments that each message contains and the details that would allow one to uniquely represent the type of data to be contained by a segment. (e.g. The DTM segment is used to tag data that is a date). There are rules that that dictate the literal that would be used to represent a completion date versus a jeopardy date versus a sent date.
    - **Compliance to the disclosure document**: This sub-category classifies errors caused by implementation not conforming to what has been defined in the IMA EDI disclosure documentation

  - **Compliance to TCIF guidelines:** This sub-category classifies errors caused by implementation by not conforming to TCIF and X12 standards
- **Data Attributes**: This type of business rule defines the domain of each field that is going to be used in sending and receiving information between two systems. It deals with data types, masks, length and number of occurrences.
  - **Consistency with OBF**: These rules govern data attribute exceptions in implementation to what has been defined by the OBF.
  - **Consistency with Disclosure**: These rules govern data attribute exceptions in implementation to what has been defined by Qwest in their IMA EDI Disclosure documentation.
- **Workflow**: Workflow defines the expectation of messages that are exchanged between a CLEC and Qwest during the process of order fulfillment. These messages have a cause and effect relationship as well as an expectation of turnaround time. (e.g. A 997 is received by the CLEC when they transmit an 850 the CLEC expects an 855 transaction within a certain time period dictated by the product being ordered).
  - **Pre-Order Responses**: Errors in the expected responses received during the preordering process.
  - **Functional Acknowledgement Responses**: Errors in expected responses received to acknowledge receipt and well formedness of message (e.g. 997)
  - **Post Order Responses**: Errors in expected responses received after an order has been issued

Performance Not Measured by PO-19

- **Product Consistency Edits**: These types of business rule definition deals with declaring boundary conditions, inclusion and exclusion conditions and behavior. This type of business rule interacts with what is contained in the data rather than how it has been formatted. It is this edit that usually modifies the flow of an order and causes appropriate business events. (e.g. an action of A is used for a New while an Action of W is used for an Assume. Both these orders could follow a different path during order fulfillment).
  - **Behavior**:
    - **Data Edits**: Errors caused because of invalid values that are contained within a data field. (e.g. the state specified in a service address should fall within the list of states where Qwest is tariff to do business for a particular product).
    - **Cross data edits**: Errors caused because of incompatible data contained in fields that are related. (e.g. a state is mandatory when a street address is specified).
  - **Error list implementation**: Errors caused due to lack of clarity on what errors are caused under what conditions.
  - **Legacy system simulation**: Errors caused because of inconsistent behavior by legacy systems
- **Environment Constraints**: These are rules that govern the pricing and discount models, the availability expectations as well as the special handling agreements that are negotiated between Qwest and a CLEC. These sub-categories do not apply to this analysis.
  - **Implementation Constraints**
  - **Business constraints**
    - SLA
    - Standard interval
    - Tariff rules
    - Availability
  - Capacity

Table 8 – Scenario Responses shows the breakdown of unexpected responses within these sub-categories. HP utilized the Phase II scenario summary worksheets in combination with the Phase II Comments logs to support these findings. Please note that only scenarios that have been reported in the Phase II Comments log as Original errors are included in this detailed analysis.

Phase II performance, as measured by PO-19, indicates that 97% (96.6) of transactions yielded expected results in terms of EDI Mapping, Data Attributes, and Workflow. In the area of product consistency, which is not measured by PO-19, HP observed a level of unexepected results of approximately 14% (13.9).

Table 8 – Scenario Responses

Scenarios with unexpected responses		EDI Mapping		Data Attributes		Workflow			Product Consistency Edits			
Number	Description	Compliance to Disclosure Document	Compliance to TCIF guidelines	Consistency with OBF	Consistency with Disclosure Document	Pre-Order Responses	Functional Acknowledgement Response	Post-Order Responses	Behavior-Data Edits	Behavior-Cross Data Edits	Error List Implementation	Legacy System Simulation
LQQ2b	Unbundled ADSL by Address -- Bad Response	X										
AVQ10	Address Validation by Address – Good					X			X			X
TNAQ3b	Availability Query - Bad Response	X									X	
CSR2a	CSRQ - CSR by TN and Address Good Response					X			X			
LQQ4d	Loop Level Data by Address -- Bad Response					X					X	
LQQ4e	Loop Level Data by Address -- Bad Response					X					X	
LQQ4g	Loop Level Data by Address -- Bad Response					X					X	
LQQ4u	Loop Level Data by Address -- Bad Response									X	X	
POTS1	POTS New Installation								X	X	X	
POTS2a	POTS Change Multiple Line Accounts	X								X		
UDL1b	New loop installation								X	X	X	
CEX6a	Centrex Plus Conversion of POTS Account to Centrex Common Block								X	X	X	
UNEP4b	UNE-P POTS Conversion w/ DL - Single Line	X							X	X		X
UNEP14	UNE-P POTS Outside Move										X	
DL3a	Straight Line Change LAL								X			
DL6	Straight Line Change LXL								X	X	X	
	Totals:	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**7**	**10**	**2**
		4		**0**		**0**			**24**			

3.7.2.3 Phase III Test

For Phase III, HP submitted a total of 96 regression scenarios and 164 progression scenarios giving a total of 268 scenarios. Regression scenarios were used to verify expected results for products HP is already certified for ordering within IMA EDI version 7.0. Progression scenarios were used to verify expected results for products that HP is not certified for ordering within IMA EDI Version 7.0.

For this test, 14 scenarios returned unexpected responses when compared to the expected results as documented in the SATE Data Document 9.0. These unexpected responses correspond to an accuracy ratio of approximately 95% when compared to the total number of scenarios executed.

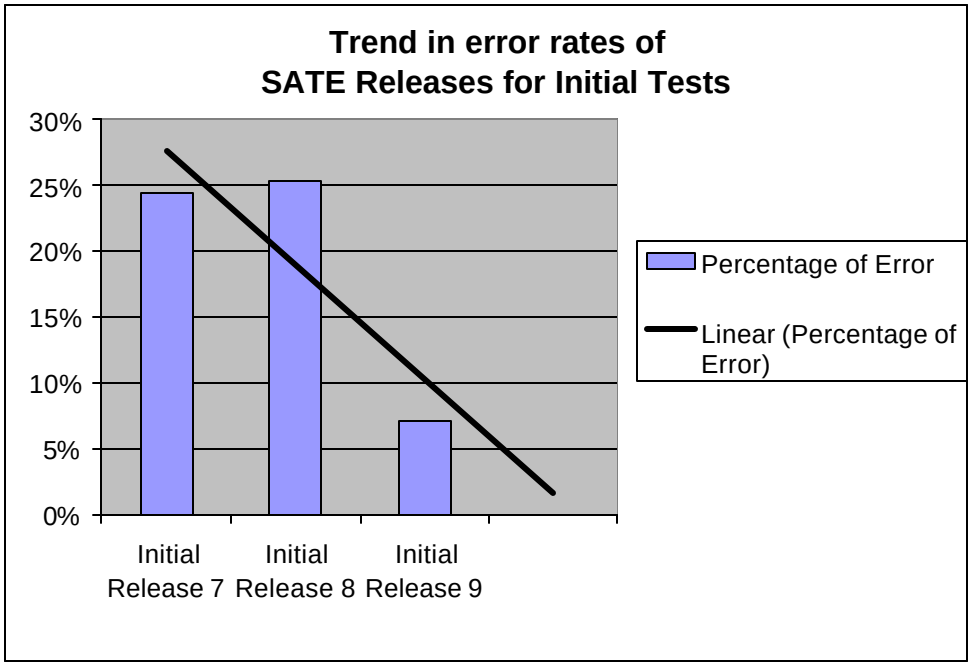
In this test, HP encountered the following types of issues:

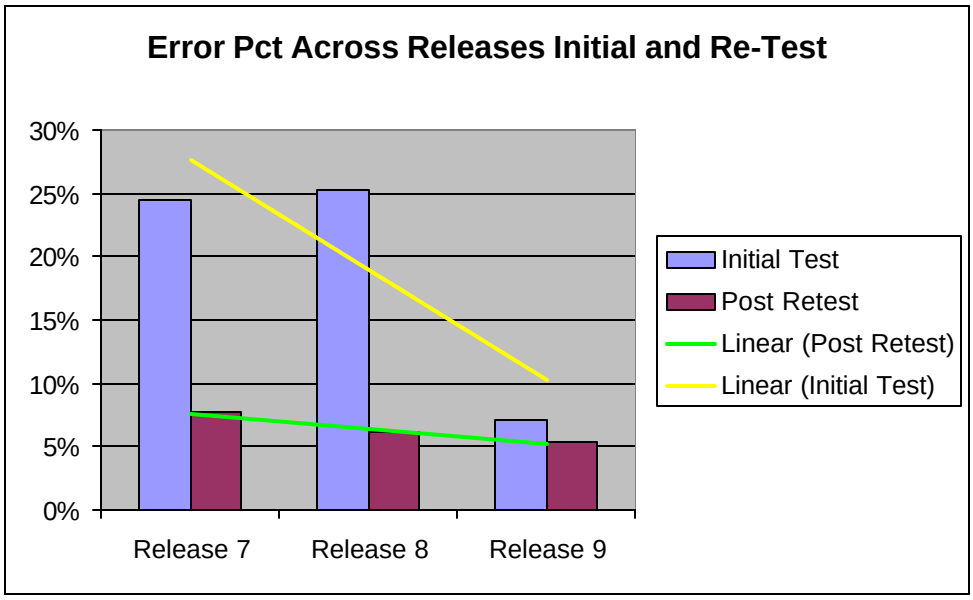
Table 9 – Phase III Issues

	Type of Issue	Formal Issue Tracking Number	Status
Candidate Issues			
	Business Rules		
		9022	Closed
	Environment		
		9016	Closed
		9024	Closed
		9014	Closed
		9017	Closed
		9019	Closed

HP submitted no formal issues for this phase. HP was able to retest a total of 13 scenarios, which resulted in a final accuracy ratio of 99.62%.

HP also analyzed the trend in the change to the accuracy percentage utilizing historical data that shows the error percentage by release for transaction testing of the scenarios available in SATE for releases 7.0, 8.0 and 9.0 (data for releases 7.0 and 8.0 taken from previous evaluation by HP, and included as part of the HP SATE Summary Evaluation Report issued on December 21, 2001). As shown below, the verification of expected results across releases shows that there is a positive trend in the level of accuracy which indicates that the implementation of future releases of IMA EDI into the SATE should provide a better than 95% level of accuracy.





3.7.3 Use Of VICKI

HP did make use of VICKI (Virtual Interconnect Center Knowledge Initiator) for portions of this evaluation. HP's intent was not to test the full functionality offered by this new feature, but to use it to accelerate the test (allows HP to receive automatic transactions from SATE that were manually generated before this feature was added). The following table summarizes the use of VICKI throughout Phase I and Phase III testing. The following defines the different headings:

- **VICKI Path Number** – The Qwest defined path used in VICKI (set of responses produced from chronological system events)
- **Remarks** – Description of the specific VICKI Path.
- **Number of times the VICKI path was used** – Represents the number of scenarios for Phase I and III that used this specific Path.

Table 10 – VICKI Paths

VICKI Path Number	Remarks	Number of times the VICKI path was used
1	Test: Non-Fatal then Reject	30
13	Test: Double FOC	1
30	Prod: FOC Jeopardy	16
31	Prod: FOC Jeopardy	1
39	Prod: Hold Jeopardy	13
40	Test: Hold Complete	15
46	Prod: Hold Complete	1

VICKI Path Number	Remarks	Number of times the VICKI path was used
Total		77

The following table summarizes the use of VICKI responses by SATE product.

Table 11 – VICKI Responses by SATE Product

Product	VICKI Path Number	Remarks	Number of times VICKI was used
CEX	1	Test: Non-Fatal then Reject	4
	30	Prod: FOC Jeopardy	4
	39	Prod: Hold Jeopardy	3
	40	Test: Hold Complete	4
DL	1	Test: Non-Fatal then Reject	3
	30	Prod: FOC Jeopardy	2
	39	Prod: Hold Jeopardy	3
	46	Prod: Hold Complete	1
LNP	1	Test: Non-Fatal then Reject	2
	13	Test: Double FOC	1
	30	Prod: FOC Jeopardy	2
	39	Prod: Hold Jeopardy	1
	40	Test: Hold Complete	2
POTS	1	Test: Non-Fatal then Reject	2
	30	Prod: FOC Jeopardy	2
	39	Prod: Hold Jeopardy	1
POTS	40	Test: Hold Complete	2
SHL	1	Test: Non-Fatal then Reject	2
	30	Prod: FOC Jeopardy	2
	39	Prod: Hold Jeopardy	1
	40	Test: Hold Complete	2
UBL	1	Test: Non-Fatal then Reject	2
	30	Prod: FOC Jeopardy	2
	39	Prod: Hold Jeopardy	1
	40	Test: Hold Complete	2
UCEX	1	Test: Non-Fatal then Reject	2
	31	Prod: FOC Jeopardy	1
	39	Prod: Hold Jeopardy	2
	40	Test: Hold Complete	1
UDL	1	Test: Non-Fatal then Reject	3
UDLNP	1	Test: Non-Fatal then Reject	7

Product	VICKI Path Number	Remarks	Number of times VICKI was used
UNEP	1	Test: Non-Fatal then Reject	3
	30	Prod: FOC Jeopardy	2
	39	Prod: Hold Jeopardy	1
UNEP	40	Test: Hold Complete	2
Total			77

HP was able to use VICKI on 77 scenarios, and encountered no issues related to VICKI.

3.7.4 Commercial Usage

During the course of this evaluation, HP submitted a data request to Qwest to determine the extent of commercial usage of SATE by CLECs in developing their EDI interfaces for new releases of IMA EDI. HP received the following information:

- Two CLECs used SATE to successfully develop to 7.0. Three CLECs have used SATE to successfully develop to 8.0; One Service Bureau has used SATE in 8.0 to test on behalf of five CLECs. Including the service bureau, eight CLECs have used SATE to successfully implement 8.0. No CLECs have yet been placed into production on 9.0.
- Four CLECs are currently using SATE to develop to 8.0. One CLEC is currently using SATE to develop to 9.0. No CLECs are currently using SATE 7.0 to develop to IMA 7.0.

3.8 Evaluation

This section addresses the evaluation of the adequacy of SATE in assisting CLECs in developing for new releases for the IMA EDI production environment. The table below was taken from the SATE New Release Test Approach 9.0 Transaction Test document, and provides a basis for evaluating the results measured in this evaluation. The overall assessment is based on the combination of the individual criteria, and the materialness of the issues when compared with HP's understanding of PID PO-19.

Table 12 – Evaluation

Criteria	Results[1]	Summary
HP will confirm the 9.0 SATE test data is valid per the results of the Phase I testing. Phase I - Expected Results Verification Is the Scenario Data supplied as documented in the Release 9.0 SATE Data document available to the community as it is intended to	U	Based on the results of Phase I testing the rating of Unsatisfactory is warranted. When using the formula of PO-19 for New Release testing of the Release 9.0 Data Document the results were 92.9%. When compared to a benchmark measure of 95% there is a variance of a negative 2.1% level of accuracy. HP realizes that this measure as defined in PO-19 is

[1] S = Satisfactory
U = Unsatisfactory
I = Inconclusive - Re- test Required
N = Not available - Test In Progress

Criteria	Results[1]	Summary
be per the specifications provided? Is the outcome of the execution of the Release 9.0 SATE provided scenarios equal to the expected results as they are documented in the Release 9.0 SATE Data Document?		this measure, as defined in PO-19, is meant to apply to all releases currently available in SATE, while this result is for the accuracy of release 9.0 scenarios only. HP was also able to verify that release 9.0 of SATE was available for use 28 days before deployment in the IMA EDI production environment. Please see HP Recommendations in Section 2.2
HP will confirm that the 9.0 SATE business rules are consistent with the rules published in the Qwest IMA EDI 9.0 Network Disclosure Documentation, Appendix F and Appendix E. This verification will be accomplished through Phase II - Business Rules Testing • Does the SATE capture Business Process Layer edits and Back-office Legacy system errors that may be caused by LSR ordering mistakes as they are documented in the Qwest error lists provided for Release 9.0? • Does the SATE employ the updated business rules edits as provided in the IMA EDI 9.0 Release documentation?	U	HP conducted this test based on its interpretation of the PID PO-19 language that calls for strict adherence to business rules. HP's current understanding of the PID PO-19, as it is written, does not provide any formula to draw inference of the level of adequacy for business rules validation. HP has provided the results obtained per the execution of scenarios where expected results were based on business rules that changed due to the implementation of Release 9.0. This was determined by analysis of the Release 9.0 Disclosure Documentation. The results show an 87.3% (after re-test) level of accuracy for the scenarios executed. Based on the initial benchmark or 95%, this criteria is given an unsatisfactory rating. Phase II performance, as measured by PO-19, indicates that 97% (96.6) of transactions yielded expected results in terms of EDI Mapping, Data Attributes, and Workflow. HP believes that the level of performance is adequate to support CLEC new release testing. In the area of product consistency, which is not measured by PO-19, HP observed a level of unexpected results of approximately 14% (13.9). These unexpected responses were not used by HP in its determination of adequacy and are included for information purposes only.

Criteria	Results[1]	Summary
		See HP Recommendations in section 2.2.
HP will confirm the results of a scenario in SATE will match the results of a similar scenario in IMA EDI 9.0 production. This will be verified through Phase IV – Production Likeness Testing. • Does the SATE react to transactions with the same results they would receive if submitted in the IMA EDI 9.0 Production environment?	N/A	HP planned to conduct this test based on its interpretation of the PID PO-19 language that calls for production likeness. HP's current understanding of the PID PO-19, as it is written, does not provide any formula to draw inference of the level of adequacy for production mirror validation. HP did not conduct this test. See HP Recommendations in section 2.2
HP will confirm the SATE returns consistent responses. This will be verified throughout Phase II and Phase IV of New Release testing. • Do transactions submitted in SATE 9.0 produce consistent responses when the same transaction is executed in SATE across the testing phases? • Do transactions submitted to the SATE for Release 9.0 produce consistent responses for like transactions in Production IMA EDI Release 9.0?	N/A	Due to the fact that Phase IV was never performed, this evaluation criteria is not applicable to this New Release Test of 9.0. See HP Recommendations in section 2.2.
HP will confirm that the IMA EDI SATE 9.0 supports all transactions described in the SATE supporting documentation. • Are the scenarios supported in the 9.0 SATE inclusive of the products and activities that are required to support the business processes of a CLEC's operations in AZ? • Are new products and services made available through the implementation of the new IMA EDI release 9.0 made available in SATE?	S	SATE does support the products required by a CLEC doing business in the state of Arizona. This is based on evidence supported by Qwest's response to HP's data request HP DEC01-001. Furthermore, Qwest demonstrated the ability to add new functionality to SATE with this new release of 9.0 as shown through the implementation of the new Pre-Order LQQ - Loop Qualification Query/Response.
HP will confirm the 9.0 SATE	S	An overall result of Satisfactory is

Criteria	Results[1]	Summary
accurately supports all post-order transactions and functional acknowledgements. • Do the SATE responses get created per the expectations set by the documented time frame? • Do the SATE responses received provide expected outcomes? • Do the SATE responses received provide comprehensive messages when warranted by the test scenario? • Does the SATE accurately support all pre-order and post-order transactions and functional acknowledgements?	S U S S	warranted as HP did confirm that all pre-order, post order and functional acknowledgments that are available in SATE are adequately supported. This is documented further through the Transaction Test scenario summaries that show the send and receive dates of those transaction types across all of the testing phases completed. There is one exception to this overall evaluation of Satisfactory. That is in relation to the second criteria question. Phase I testing has provided results that indicate the expected outcomes documented in the Data Document were not always accomplished. See HP Recommendations in section 2.2
HP will determine whether the SATE adequately accommodates new release testing. Based on the ranking applied, and the comments provided in the summary column: HP will determine if the overall transaction functionality provided by SATE is adequate for CLEC New Release Testing.	S	The Phase I testing outcome produced a 93% level of accuracy in expected results. While this result does not meet the PO-19 benchmark of 95% the margin of shortfall is small. In addition, HP has observed a clear trend across release 7, 8 and 9.0 testing is showing that Qwest should achieve the 95% accuracy rate with the next implementation of IMA EDI changes into SATE. Although the transaction results for Phase II did not meet the benchmark specified for this evaluation, HP believes that SATE demonstrated better that 95% accuracy in scenarios that dealt with transaction functionality, field characteristics, and transaction format. HP concludes that Qwest has provided a 95% accuracy when comparing expected results to the actual results during the Phase III transaction test. This has provided a strong indicator that SATE is maturing as expected in supporting an environment for CLEC interconnection testing.

3.9 Summary of Activities

This New Release transaction test utilized a new HP trading partner ID - HP9 that was defined specifically for this test. . HP utilized an internal SATE test environment that supported an order entry tool and an EDI translation tool that allowed the entry and formatting of LSR's as prescribed by the Qwest pre-order and ordering rules for IMA EDI 9.0. Once the orders were translated into the standard EDI format according to the Qwest 9.0 release specifications, they were sent on to SATE. Responses received from Qwest provided the basis for comparison to the Qwest SATE Data Document expected responses. This data was collected using the same technology that is currently used for the Arizona 271 OSS Test.

An Issues Management process was utilized to identify and manage resolution of New Release transaction test issues that may potentially cause a negative evaluation. Details of this process are provided in the SATE Issues Management Process found separately.

A public weekly call was held to review the status of the New Release testing with all parties. All documentation and assistance made available to HP by Qwest for use by HP during the New Release test of SATE will be made available to all participants to verify that HP was not being given special treatment.

All New Release transaction test results have been captured in a number of Microsoft Excel worksheets. They are all enclosed as appendices to this report. The transaction test results have been captured on these worksheets and provided to the community each week. These worksheets include Qwest's standard Scenario Summary worksheets as well as HP's standard Transaction Test Scenario Comments Log. A Scenario Summary worksheet exists for each Phase of the Transaction Test as well as a corresponding scenario Comments Log. The Scenario Summary worksheet lists each scenario that was submitted with the date the LSR was sent to Qwest, and the date a corresponding response was received by HP. The Comments Log also lists each scenario with the outcome status. If the outcome was not successful then HP enters a comment on the log that details the transaction processing events and the unexpected results. Qwest reviews the Comments Log, and the appropriate action is taken to bring resolution to the unfavorable result. Those scenarios that remained unresolved on the Comments log at the end of a testing Phase were moved to the formal Issues process. The Comment log is updated to explain the movement of the tracking of the item to the formal Issues process.

The following worksheets exist and have been included as appendices to this report: Phase 1 Summary Regression

- Phase 1 Summary Progression
- Phase 1 Comments Regression
- Phase 1 Comments Progression
- Phase 2 Summary Regression
- Phase 2 Summary Progression
- Phase 2 Comments Progression
- Phase 2 Comments Regression
- Phase 3 Summary Regression
- Phase 3 Summary Progression
- Phase 3 Comments Regression
- Phase 3 Comments Progression

4.0 Issues

4.1 Overview

As part of its SATE Evaluation Plan, HP developed an Issues Management Plan to address the issues encountered during this engagement. The purpose of this plan was to provide the ACC, Qwest, and the CLEC members of the TAG a vehicle for tracking issues identified by HP, and understand the methodology used by HP in identifying and resolving issues. This section briefly describes the methodology used by HP, and the results of executing this plan.

4.2 Methodology

As described in HP's Issue Management Plan, an issue was assumed to be a gap between the actions of the Qwest documented processes and applications and stakeholder expectations. Issue Management was the process used to close that gap by analyzing the problem and determining the proper corrective action. It consisted of identifying, documenting, tracking, prioritizing, resolving, and communicating to project stakeholders the issues that arose during the overall HP evaluation.

Issues were tracked to the four Evaluation Domains: Documentation, Co-Provider Input, Process and Transaction. Transaction issues were further broken down into the following sub-categories:

- Regression/Progression: Issues related to this sub-test of the overall transaction test.
- Negative: Issues related to negative testing.
- Production Mirroring: Issues related to testing the production mirroring functionality of SATE
- Business Rules: Issues related to unexpected responses due to business rules.
- EDI Map: Issues related to unexpected errors with EDI Mapping.
- Documentation: Issues uncovered during transaction testing that did not match Qwest documentation.

During the course of the evaluation, questions or problems were noted by the HP team, and logged on a Question Log. This log was used as a way of tracking candidate issues, and communicating them to Qwest. Inputs to this log could have come from several sources: reading Qwest documentation; analyzing transaction responses; questions raised during weekly calls with Qwest; questions raised during process interviews with Qwest; or analyzing CLEC and Qwest input on SATE design.

The severity of issues were classified according to the following definitions:

- Low severity issues were those that did not impact the completion of a transaction test scenario, or the completion of any of the specific review or the overall evaluation. Examples of low severity issues could have included:
  - Editorial issues with documentation
  - Completeness of an Individual CLEC (Co-Provider) interview
- Medium severity issues were those that impacted the completion of a transaction test scenario, but did not impact the completion of other transaction test scenarios or any of the specific review or the overall evaluation. Examples of medium severity issues could have included:
  - Ability to complete test scenarios for a certain product type
  - Unable to open or print a document.
  - Unable to schedule interviews for a process evaluation.
  - Process failures based on the expectations set by documentation.
  - Unexpected Transaction errors.
- High severity issues were those that impacted the completion of the transaction test, the completion of a specific review, and the completion of the overall evaluation. Examples of high severity issues could have included:

- EDI Interface down for a period of time impacting the ability to enter test transactions
- T1 Lines not working impacting the ability to enter test transactions
- New revisions to SATE environment requiring development/upgrades to HPC interface.
- Digital Certificate, IA/IA, Firewall or other security barriers that cause interconnection delays
- IMA EDI SATE Stub environment producing inconsistent or no responses as expected per the IMA EDI disclosure documentation
- IMA EDI SATE application changes required as noted by Qwest's internal change request generation.

Issues were also tracked according to its status throughout its resolution. The following status categories were used:

- Candidate: A problem or question that has been identified and logged as a potential issue.
- Open: A candidate issue that has been clarified as an issue.
- Under Investigation: An issue that has a defined corrective action plan, and is being worked on by Qwest.
- Resolved: An issue that has been corrected according to Qwest's corrective action plan, and being verified by HP.
- Verified: An issue that has been resolved and the correction verified by HP.
- Impasse: An issue that has reached impasse, and transferred to ACC staff for resolution.
- Closed: An issue that has been resolved and verified by HP, and closed.
- Closed – Unresolved: An issue that has been resolved verified and closed but unresolved. If there were open questions or comments against closing the issue, and HP was not able to come to agreement before the end of the evaluation, HP changed the status of the Issue in the Issues tracking system to Closed – Unresolved.

4.3 Results

The following table summarizes the issue candidates identified and tracked by HP via the HP Formal Issue Process during this engagement. Please see Appendix A for complete details on each issue candidate.

Table 13 – Candidate Issues

Candidate Sequence Number	Domain	Candidate Issue Statement	Comments
9014	Transaction Test	Phase 3 Regression testing of the 9.0 Data Document using the scenarios for AAQ6, AAQ7, and AAQ8 did not return the expected responses.	02/21/02: HP submitted request and received did not receive the expected response. The ABTIME was missing from the AAR. This is not a new error as it was present in the first transaction test and HP did not identify the error. 02/22/02: HP: This item remains open. HPC will prepare a formal issue management document. 02/25/02:Qwest: This is fixed in the current version of the data document. 02/26/02: HP: Ver 9.07 of the Data Document no longer includes the ABTIME in the expected results.

Candidate Sequence Number	Domain	Candidate Issue Statement	Comments
9015	Transaction Test	Phase 1 Regression testing of the 9.0 Data Document using the scenario for AVQ7 did not return the expected response.	01/31/02: HP submitted transaction and received the expected response type. However, the SATE 9.03 Data Document indicates that X Fireside Drive will also return "FLR 2" and the LD2/LV2 combination for "FLR 2" was not returned in the AVR response. 02/01/02: Qwest: CR 37059 was created to resolve this issue. 02/07/02: Qwest: Distributed the SATE Data Document 9.0 v05. 02/07/02: HP: Retested and received expected response. 02/08/02: Qwest: 37059 is targeted to be placed into production SATE this weekend and to be available to test on Monday.
9016	Transaction Test	Phase 3 Progression testing of the 9.0 Data Document using the scenarios for CEN3 and CEN4 did not return the expected responses.	02/20/02: HP submitted PON=R9PB-CENC-00301 and received the FA. Expecting VICKI path [39]. Received error: "EU Form:Location and Access Section 2:Address validation failed". The scenario has been re-checked and the discrepancy cannot be identified as this same scenario was successful in Phase I testing and the address data matches the v9.04 Data Document. This appears to be an error. 02/21/02: HP received the newly distributed SATE v9.04a Data Document. 02/21/02: HP corrected the VICKI remark path and resubmitted PON=R9PB-CENC-00302. (The Phase I scenario did not contain a VICKI path.) Received the FA. Expecting VICKI path [39]. Received error: "EU Form:Location and Access Section 2:Address validation failed". HP confirmed that the address data matches the v9.04a Data Document. This appears to be an error. 02/21/02: HP sent e-mail inquiry to Qwest. 02/21/02: Qwest: Use MPLS in the city field instead of Minneapolis. CR 38026 was created to fix the data document.

Candidate Sequence Number	Domain	Candidate Issue Statement	Comments
			02/22/02: HP: Retested using this corrected data (TID=152750 PON=R9PB-CENC-003-A). Expecting VICKI path [39]. Received FOC and SU. Expecting 865JEOP. 02/25/02: Qwest: This is fixed in the current version of the data document. 02/27/02: HP: This has been corrected in the 9.07 ver of the Data Document.
9017	Transaction Test	Phase 3 Regression testing of the 9.0 Data Document using the scenario for CSR11 did not return the expected response.	02/18/02: HP submitted request and received the expected response. However, the CITY data value was followed by a trailing comma which is not depicted in the SATE v9.04 Data Document. This is not a new error as it was present in the first transaction test and HP did not identify the error. 02/21/02: Qwest: CR 38050 was entered to remove the comma from the system data. 02/27/02: HP: This has been corrected.
9018	Transaction Test	Phase 1 Regression testing of the 9.0 Data Document using the scenario for CSR2 did not return the expected responses.	02/01/02: HP submitted transaction and received expected response type. However, the CSRR appears to have mixed-up the MTX02 data values of RSID, PIC, PCA and LPIC: N9|JH|RSID|FFID MTX||5123 N9|JH|PIC|FFID

Candidate Sequence Number	Domain	Candidate Issue Statement	Comments
			N9|JH|PCA|FFID MTX||R28 N9|JH|LPIC|FFID N9|JH|EDT|FFID Request that Qwest evaluate the CSRR EDI mapping for the USOC FFIDs. 02/05/02: Qwest: Advised that a CR has been opened to address this issue: CR 37072. 02/06/02: Qwest: Advised that the fix for CR 37072 was completed. 02/07/02: HP: Re-submitted transaction and received the expected response.
9019	Transaction Test	Phase 3 Regression testing of the 9.0 Data Document using the scenario for CSR9 did not return the expected response.	02/18/02: HP submitted request and received the expected response. However, the SATE 9.04 Data Document depicts that in addition to the data described, a message is also returned: "Message Returned:All requested WTNs/ECCKT were found on the CSR returned". This message was not present in the response. This is not a new error as it was present in the first transaction test and HP did not identify the error. 02/22/02: HP: This item remains open. HPC will prepare a formal issue management document. 02/27/02: HP: The message was removed from the data document.
9020	Transaction Test	Phase 1 Regression testing of the 9.0 Data Document using the scenarios for FAQ10 and FAQ5 did not return the expected responses.	02/01/02: HP submitted the transaction and received the expected response. The one exception that should be noted is the that the error message received did not match the error listed in the data document. The Data Document indicates "· Unable to locate specified Address· OSS Gateway: VERIFY STREET NAME Message[0] Verify Street Name entry.· Address Validation is not an EXACTMATCH". HPC received "OSS Gateway: Error caught by data source Message[0] OSS Gateway: Error caught by data source Message[0] ERROR:No exact match was found for the address provided.".

Candidate Sequence Number	Domain	Candidate Issue Statement	Comments
			02/04/02: Qwest: This was fixed as part of the errors analysis that Qwest has performed in recent days. The data document to be published this evening contains the updated error messages, including the messages received for these transactions. 02/05/02 Qwest: Distributed SATE Data Document 9.0 v04 on the evening of 2/4/2002 that corrected this Data Document error. 02/07/02: HP: Retested and received the expected response.
9021	Transaction Test	Phase 1 Regression testing of the 9.0 Data Document using the scenarios for FAQ7 and FAQ8 did not return the expected responses.	02/01/02: HP submitted the transaction and received the expected response. The one exception that should be noted is the format of the ECCKT on the first line. The Data Document indicates "5094875000", HP received "509 487-5000". 02/07/02: Qwest: Distributed the SATE Data Document 9.0 v05 and advised to retest writeups from 02/04/2002. 02/07/02: HP: Retested and received the same response containing: "509 487-5000". The Data Document indicates "5094875000". 02/13/02: Qwest: FAQ7 and FAQ8 will be fixed in the 9.05 data document. 02/15/02: HP: This has been corrected in the 9.05 data document.
9022	Transaction Test	Phase 3 Progression testing of the 9.0 Data Document using the scenarios for LQQ1, LQQ2 and LQQ5 did not return the expected responses.	02/18/02: HP submitted request and did not receive the expected response. Sent the same scenario that was successful during the first transaction test, yet this test returned an error: "Invalid combination of MS, TOS, NC, and NCI". This is a new error. 02/21/02: Qwest: LQQ1, 2, 5: CR 39043 has been entered to resolve this issue. 02/25/02: Qwest: Event Notification 5864384. Description of Trouble: In the developer worksheet for Loop Qualification Query, LQQ-10, NCI, the valid values are

Candidate Sequence Number	Domain	Candidate Issue Statement	Comments
			shown as 02QB5.00A, 02QB5.01A, 02QB5.00C, and 02QB5.01C. These values are incorrect, and as a result the error "Invalid combination of MS, TOS, NC and NCI" is issued on an Unbundled ADSL LQQ in IMA EDI Release 9.0. Work Around: LQQ-10, NCI should be populated with 02QB9.00A, 02QB9.01A, 02QB9.00C, or 02QB9.01C. 02/27/02: HP: Changed the NCI code and received the expected results.
9023	Transaction Test	Phase 1 Progression testing of the 9.0 Data Document using the scenarios for LQQ2, LQQ4 and LQQ6 did not return the expected responses.	02/04/02: HP submitted request and did not receive the expected response. Received the error "OSS Gateway: Error caught by data source Message[0] ERROR No information was found for this address." 02/07/02: Qwest: Advised that the query may not be valid. 02/08/02: HP: Corrected query and resubmitted. Received errors: "STATE required when TNADDRCKTIND is A" and "CALA or ZIP required". Both STATE and CALA were transmitted on the query. 02/08/02: Qwest: Indicated that the PO1 loops must follow the sequence outlined in the EDI Mapping Example. 02/08/02: HP: Updated map to move the PO1-ADSL loop to write after ADDRQ. Resent INQNUM 020208151764. Received the same error. 02/08/02: Qwest: Will continue to research. 02/11/02: Qwest: Notified HP that CR number 37384 has been opened to address this error. 02/12/02: Qwest: Notified HP that CR number 37384 will be deployed this evening and HP can test the transaction tomorrow. 02/13/02: HP: Retested (INQNUM=020213151780) and received expected response.

Candidate Sequence Number	Domain	Candidate Issue Statement	Comments
9024	Transaction Test	Phase 3 Progression testing of the 9.0 Data Document using the scenarios for LQQ3 and LQQ4 did not return the expected responses.	02/18/02: HP submitted request and received the expected response except that the values received for LLG do not match the data document. Per the EDI mapping example in Chapter 14 of the IMA 9.0 Disclosure on page 12, LLG is mapped to the MEA03 data field. The returned MEA03 value for the 5 LLG values was '6.6' and 4 each of '0' in the response. The SATE 9.04 Data Document incorrectly depicts the Gauge Code and Loop Length (which is mapped to MEA04 per the mapping example) as being the data values for LLG. The Gauge Code and Loop Length are not identified as data fields in Appendix A of the IMA 9.0 Disclosure. This is not a new error as it was present in the first transaction test and HP did not identify the error. 02/25/02: HP: HP has relooked at this issue. The Data Document indicates that an LLG = 17G0.0000kft. A value of 17 is not listed in the Data Dictionary. Since the LLG can repeat 5 times this may be an oversight in the Data Dictionary. The Data Document depicts the Measurement Value MEA03
9025	Transaction Test	Phase 1 Progression testing of the 9.0 Data Document using the scenarios for RLDQ7, RLDQ8, RLDQ19 and RLDQ23 did not return the expected responses.	02/04/02: HP submitted request and received the expected response. One item is worth noting. The Data Document indicates that a BLDG A will be returned. HP did not receive that in the response. 02/07/02: Qwest: Distributed the SATE Data Document 9.0 v05. 02/07/02: HP: Retested and received expected response. 02/08/02: Qwest: CR 36933 has been entered to return the BLDG data. This is scheduled to be deployed this weekend and to be available to test on Monday.
9026	Transaction Test	Phase 1 Regression testing of the 9.0 Data Document using the scenario for TNAQ2 did not return the expected response.	02/01/02: HP submitted the transaction and received the expected response. One item is worth noting. The CUSTOMIND was a blank in the third phone number. This created a syntactically incorrect response from Qwest. The Business Rules indicate that acceptable values are

Candidate Sequence Number	Domain	Candidate Issue Statement	Comments
			Y and blank. However the field, in EDI, is mapped to a PID08. The PID08 is an ID table, therefore a blank is not an acceptable response. The business rules indicate that the CUSTOMIND is returned if the TNRES is present. HP received the TNRES. The segment(s) in question are listed below. SLN|MIXED|3|A|1|EA SI|TI|RV|299-901-4570 PID|X||TI|CUSTOMIND|||SO-RSQ| 02/06/02: Qwest: Advised that the fix for this will be deployed on 02/07/2002 and this can be re-tested on 02/08/2002. 02/08/02: HP: Retested (INQNUM=020208151748) and received the same situation where the PID08 value returned a blank: PID|X||TI|CUSTOMIND|||SO-RSQ| SLN|MIXED|3|A|1|EA SI|TI|RV|299-901-6259 02/11/02: Qwest: Notified HP that the fix was deployed over the weekend. 02/
9027	Transaction Test	Phase 1 Regression testing of the 9.0 Data Document using the scenario for TNAQ3 did not return the expected response.	02/01/02: HP submitted the transaction and received the expected response. One item is worth noting. The Data Document indicates that one error message will be returned, HP received the one noted on the data document, and one additional one. The second error message was "OSS Gateway: Verify input. No available numbers satisfy all the valid input parameters No Telephone Numbers available for this query". 02/04/02: Qwest: This was fixed as part of the errors analysis that Qwest has performed in recent days. The data document to be published this evening contains the updated error messages, including the messages received for these transactions. 02/05/02: Qwest: Distributed SATE Data Document 9.0 v04 on the evening of 2/4/2002 that corrected this Data Document error.

Candidate Sequence Number	Domain	Candidate Issue Statement	Comments
			02/07/02: HP: Retested and received the expected response.
9028		Phase 2 Regression testing of the 9.0 Data Document using the scenario for TNAQ3 did not return the expected response.	02/14/02: HP submitted query and received the expected error message, but also received the following error message. This message is not documented in Errors List: "TNAEASNUM 900«ERRMESG«Nearby telephone numbers (NTNUM),easy numbers (ECATEG),easy word numbers (EWORD), and consecutive blocks (CBLOCK)are mutually exclusive. Cannot request more than one of these types of numbers". The conflict with this error message is that the EDI mapping example on page 11 of chapter 9 of the IMA 9.0 Disclosure appears to require NTNUM to be mapped in order to transmit the value of ECATEG or EWORD. 02/25/02: Qwest: The SI segment where NTNUM, ECATEG, EDWORD and EJUST is horizontal SI arrangement. The order in how these fields come doesn't really matter. It doesn't force you to send the NTUNM in order to send ECATEG. For example, you can send the transactions this way SI|TI|RQ|ECATEG|ZZ|EWORD. This will be a valid transaction to send. 02/26/02: HP: The Disclosure Document does not indicate that the paired elements of the SI segment can be sent in any order. Since the TNNUM is not used if the ECATEG or EWORD is used, it may be better to depict them on separate SI segments. 02/26/02: HP: Corrected map, sent query and received the expected results.
9029	Transaction Test	Phase 1 - Regression testing of the 9.0 Data Document using the scenario for TNAQ4 did not return the expected response.	02/01/02: HP submitted the transaction and received the expected response. One item is worth noting. The Data Document indicates that one error message will be returned, HP received the one noted on the data document, and one additional one. The second error message was "OSS Gateway: System problem

Candidate Sequence Number	Domain	Candidate Issue Statement	Comments
			encountered. Call UHD/OSS No Telephone Numbers available for this query". 02/04/02: Qwest: This was fixed as part of the errors analysis that Qwest has performed in recent days. The data document to be published this evening contains the updated error messages, including the messages received for these transactions. 02/05/02: Qwest: Distributed SATE Data Document 9.0 v04 on the evening of 2/4/2002 that corrected this Data Document error. 02/07/02: HP retested and received the expected response.
9030	Transaction Test	Phase 1 Progression testing of the 9.0 Data Document using the scenario for UDLNP1 did not return the expected response.	02/05/02: HP submitted LSR with TID=151692 and received FATAL error "Could not check supplemental (Unknown product type)" 02/06/02: Qwest: Advised that the fix for this 860 problem is completed. 02/07/02: HP: Retested with TID=151712, ver=04. Requested and received the 855SU, 865FOC, 865JEOP and 865CN.

For any 'Closed' candidate issues, HP has explained the reason for a candidate issue being closed above and in the Internal Issue Tracking Log.