The Regional Oversight Committee (ROC) 3rd Party Test

Qwest
OSS Evaluation Project
Master Test Plan

Revised Release

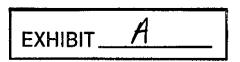Version 5.2

Submitted by:

KPMG Consulting

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EXHIBIT _____A_____

12. Evaluation of POP Functionality and Performance Versus Parity Standards and Benchmarks

12.1 Description

The POP Functional Evaluation is a comprehensive review of the functional elements of Pre-Ordering, Ordering, Provisioning, Pre-Order/Order Data Integration; the achievement of the prescribed measures; and an analysis of performance in comparison to Qwest's Retail systems.

The test will consist of live transactions submitted over the Qwest supported interfaces, both interactively via a graphical user interface (IMA GUI) and computer-to-computer interfaces. Current plans call for testing the following Qwest interfaces: IMA GUI and IMA EDI for LSRs, and EXACT/TELUS for ASRs. The following table depicts the functionality with which each interface will be tested:

Table 12.1.1   Functionality and Interfaces

Functionality	IMA GUI	IMA EDI	EXACT/TELUS
Pre-order	X	X	
Order	X	X	X
Pre-order/Order Data Integration	X	X	

The master interface list will be finalized during the actual testing to allow for any corrections/additions to be made as interfaces change.

The EDI interface will be tested using an interface built by HP according to specifications and processes provided to CLECs by Qwest. The GUI will be tested through transactions entered directly into the appropriate GUI interface. The ASR interface will be tested through transactions entered into TELUS or an existing CLEC's EXACT interface. Where appropriate, manual transactions will be submitted as well.

Data on the POP processes will be collected, analyzed and used to produce the output reports. The POP functional and performance evaluation will examine an end-to-end view of the pre-ordering through provisioning process. It will include a mix of stand-alone pre-ordering and ordering transactions, along with pre-order transactions followed by orders, supplements, and cancels. KPMG Consulting will collect data provided by HP on transaction submissions and responses, and on Qwest provisioning activities. Where possible and appropriate, this information will be collected and maintained electronically. Both ASR and LSR orders will be tested. Erred as well as error free transactions will be tested. Not all orders will go through the physical provisioning process. Some will be future dated, and others will be canceled before provisioning activities commence. Verification and validation of provisioning activities will be performed in Section 14.

As part of the POP Functional Evaluation, KPMG Consulting will also seek both qualitative and quantitative data on the real world experience of CLECs operating in the thirteen participating

ROC states. CLECs willing to participate in this test will be interviewed and their experiences will be incorporated into the test results after validation by KPMG Consulting. In addition, for some types of transactions, involvement will be sought from willing CLECs to participate in some aspects of the live transaction testing. This will be done for two principal purposes.

First, CLEC participation will be important for complex orders that cannot be simulated adequately in the test environment. Examples include complex facilities-based orders and orders, like those for unbundled loops with LNP, which require an actual CLEC switch to fully complete. Second, it is important to attempt to incorporate information to help control for "experiment bias" of the results. Therefore, KPMG Consulting will ask CLECs to execute live orders that replicate those sent over the test systems.

Successful completion of all of these aspects of the test requires active participation of one or more CLECs. However, CLEC participation is voluntary, and the scope of that participation is up to each individual CLEC.

12.2 Objective

The objective of this test is to validate the existence, functionality, and behavior of the interfaces and processes required by Qwest for pre-ordering, ordering, and provisioning transaction requests and responses. The POP functions tested will also be validated against the Qwest documentation that specifies which functions are and are not available within the Qwest OSS.

12.3 Entrance Criteria

Table 12.3.1   Entrance Criteria

Criteria	Responsible Party
No legally effective orders or injunctions preventing the test exist	Qwest, ROC
The ROC has verified measurements to be used in the test	ROC, Liberty Consulting
All required Qwest interface capabilities must be operationally ready	Qwest, HP
HP is operationally ready	HP
The statistical plan is in place	ROC, TAG, KPMG Consulting
The pass/retest criteria have been identified	ROC, KPMG Consulting
Interfaces are built and tested	KPMG Consulting, HP
EDI interface is "certified" by transaction/product type	Qwest
Inventory of all Qwest relevant (company-wide and regional) systems and interfaces identifying release number and version has been documented	KPMG Consulting, HP, Qwest
Wholesale and retail measurement processes evaluated	ROC, KPMG Consulting, Liberty Consulting
Measurement collection process is defined	KPMG Consulting, HP
Dial-up connectivity to GUI interface established	Qwest, KPMG Consulting, HP

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Criteria	Responsible Party
Business rules for all transactions to be tested are available	*Qwest*
Test bed accounts and facilities in place	*Qwest*
Test bed provisioned and validated	*Qwest, KPMG Consulting*
CLEC test volunteers identified	*KPMG Consulting*
Test cases developed	*KPMG Consulting*
Specific test cases to test in conjunction with CLEC volunteers have been identified	*KPMG Consulting*
Specific evaluation techniques developed	*KPMG Consulting*
Evaluation criteria defined	*KPMG Consulting*
Help Desk log and contact checklists created	*KPMG Consulting, HP*

12.4 Test Scope

Ordering transactions consists of three distinct, but related, processes:

- Pre-order Processing—submission of requests for information required to complete orders;

- Order Processing—submission of orders required to add/delete/change a customer's service;

- Provisioning—physical work performed by Qwest as a result of the submitted orders and software changes accomplished via submitted orders into Qwest switches and network elements.

The ordering transactions test suite will be comprised of real life, end-to-end test cases that cover the entire spectrum of pre-order, order, and provisioning. The following order types will be tested:

- Migrate "as is"

- Migrate "as specified"

- New customer

- Feature Change

- Directory Change

- Number Change

- Add lines

- Suspend/Restore

- Disconnect (full/partial)

- Move (inside/outside)   **Deleted:** *1*

- Number Portability (LNP)

- Change to New Local Service Provider

- UNE Loop Cut Over

- Change of service delivery method

The order types identified above will be ordered using the available and applicable Qwest service delivery methods. The following service delivery methods will be tested:

- Resale

- Unbundled Loops, including xDSL capable loops

- UNE Platform, residential and business

- Other UNE Combinations such as EELs

- Other Unbundled Network Elements such as UDIT

- Any other service delivery methods that may become available at the time of the test which are approved by the ROC for inclusion in the test

The orders will be placed using Qwest's existing interfaces: GUI, computer-to-computer, and manual. The following assumptions pertain to ordering interfaces:

- Qwest electronic interfaces, both GUI and computer-to-computer, will be tested during the Volume Performance Test

- Orders will be issued using both ASR and LSR forms, as appropriate

- The GUI will be tested from multiple terminals at the same time

- If a scenario calls for an order type that can not be submitted electronically, the request will be submitted manually.

Other important aspects of ordering will be tested:

- Flow through order types, as stated and agreed-to by Qwest, will be tested to ensure that they do not require manual handling. The complete set of identified flow through order types will be evaluated to ensure that they actually do flow through (See Section 13).

- Integration of pre-order and order data functionality which transfers values from pre-order responses to ordering documents

- Supplemental orders (changes to orders in process), including cancels, will be tested

- Multiple products and features will be tested; the tests will cover a broad range of the options available to CLECs and resellers

- Multiple switch-types, end-offices, states and cities will be included in the test

- A portion of the orders sent will be physically provisioned (See Section 14). Some orders will be future dated, allowing them to be canceled prior to work scheduling and provisioning

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- CLECs will be solicited for involvement in some aspects of the test, especially for assistance in the testing complex services, services with long lead times, and services that require network resources (e.g. loop hot-cuts)

- Timeliness of methods employed by Qwest to process UDIT ASRs

- In addition to normal orders, orders with planned errors will be sent to Qwest to check the accuracy of its system edits and service representatives

- Service locations supported by different Qwest ordering, provisioning, and CO switching and transmission configurations will be tested

As indicated by testing principle number 13, similar test cases may be run by both HP and a production CLEC that has completed interface verification with Qwest in order to validate the processes under the oversight of KPMG Consulting. This validation process is not intended to double-test every scenario by both HP and a production CLEC, and will include no more iterations than are required for validation.

The test will be conducted using the most current release of the Qwest business rules, system releases and versions, interface versions and process/procedure documentation at the time of the test. Should multiple releases be available during the course of the test, KPMG Consulting will work with the ROC to determine which releases to test, and to what extent.

HP will build a pre-order EDI interface using Qwest specifications and evaluate the results for adequacy. The data from this pre-order interface will be integrated with LSRs for ordering on a real time or near real time basis to ensure that the two interfaces can be integrated.

The following chart contains the processes and sub-processes that will be used in evaluating Qwest's pre-ordering, ordering, and provisioning functionality and performance.

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Revised Release 5.2

Table 12.4.1

Process Area	Sub-Process
Pre-ordering	Retrieve customer CSR
	Validate Customer Address
	Perform Loop Qualification
	Perform Facility Check
	Reserve telephone numbers
	Request information about services, features, and PIC/LPIC choices available to customers
	Determine due date/appointment availability
	Acquire Directory Listing information
Ordering	Submit order for migration of a customer from Qwest to a CLEC "as is"
	Submit order for migration of a customer from Qwest to a customer "as specified"
	Submit order for partial migration of a customer from Qwest to a CLEC
	Submit order for establishing service for a new customer of a CLEC
	Submit order for feature changes to an existing CLEC customer
	Submit order for adding lines/circuits to an existing CLEC customer
	Submit order for a telephone number change for an existing CLEC customer
	Submit order for a directory change for an existing CLEC customer
	Submit order for the outside move of an existing CLEC customer
	Submit order for suspending service of an existing CLEC customer
	Submit order for restoring service to an existing CLEC customer
	Submit order for disconnecting service from an existing CLEC customer
	Submit order for disconnecting some lines/circuits for an existing CLEC customer
	Submit order for migration of a customer from another CLEC
	Submit order for a CLEC to Qwest win-back
	Change service delivery method for an existing CLEC customer
	Order interoffice facilities
	Receive order confirmation
Provisioning	Receive notification of jeopardy or delay
	Receive completion notification

The following table contains the evaluation measures that will be used in evaluating Qwest's pre-ordering and ordering functionality and performance.

Table 12.4.2   Pre-Ordering and Ordering Evaluation Measures

Evaluation Measure	Evaluation Technique	Criteria Type
Accessibility of GUI (excluding Interoffice facilities)	Transaction Generation	Quantitative
Accessibility of computer-to-computer interface (excluding Interoffice Facilities)	Transaction Generation	Quantitative
Accuracy and completeness of functionality	Transaction Generation	Quantitative
Timeliness of response	Logging	Quantitative
Completeness of response	Transaction Generation, Inspection	Qualitative Quantitative
Clarity and accuracy of error messages	Transaction Generation, Inspection, Document Review	Qualitative
Usability of information	Transaction Generation, Inspection	Qualitative
Consistency with retail capability	Inspection	Qualitative Quantitative

Table 12.4.3   Provisioning Evaluation Measures

Evaluation Measure	Evaluation Technique	Criteria Type
Timeliness of pr ovisioning	Transaction Generation, Inspection, Logging	Quantitative
Frequency of delay or rescheduling of provisioning	Transaction Generation, Inspection, Logging	Quantitative
Accuracy and completeness of provisioning	Transaction Generation, Inspection, Logging	Quantitative
Completeness and consistency of process	Inspection, Document Review	Qualitative

12.5 Scenarios

The specific scenarios to be used in this test can be found in Appendix D.

12.6 Test Approach

12.6.1 Inputs

1. Test scenarios and test cases

2. Validated test bed

3. Certified interfaces   **Deleted:** 1

4. Documentation (ordering guides, order/pre-order business rules, etc.)

5. Trained personnel to execute test cases

6. Help Desk log and contact checklists

12.6.2 Activities

1. Use test cases to develop transactions and transaction content based upon instructions provided in the appropriate handbook(s).

2. Interview CLEC volunteers and coordinate joint testing activities.

3. Submit transactions. Submittal date and time and appropriate transaction information logged.

4. Receive transaction responses. Receipt date, time, response transaction type, and response condition (valid vs. reject) logged.

5. Report on missing transactions (e.g. missing confirmations and completion notices).

6. Match transaction response to original transaction.

7. Verify transaction response contains expected data and flags unplanned errors.

8. Verify that pre-order data are integrated into ordering documents/processes as appropriate.

9. Manually review unexpected errors. Identify error source (KPMG Consulting, HP or Qwest). Identify and log reason for the error. Determine if test should be suspended or repeated.

10. Contact help desk for support as indicated in test cases and for unexpected errors following the appropriate resolution procedures. Log response time, availability, and other behavior of functions as identified on the help desk checklist.

11. Correct expected errors and resubmit. Re-submittal date, time, and appropriate information logged.

12. Verify receipt of appropriate responses, where multiple responses are expected for the same request.

13. Identify transactions for which duplicate or multiple responses were received in error.

14. Record missing responses.

15. Review status of pending orders. Verify and record accuracy of response.

16. Generate HP reports.

17. Generate Qwest measurement report for test date range.

18. Obtain from Qwest measurement reports for HP, aggregate CLECs and Qwest retail for the test data range.

19. Compare KPMG Consulting -produced HP measures to Qwest-produced HP measures to ensure there is no problem with the data being collected for test reporting purposes.

20. Report CLEC aggregate measures as a data point to check for consistency.

21. Assess quality of business processes and compare, where information is available, with equivalent retail processes.

12.6.3 Outputs

1. Reports that provide the measures to support the standards of performance defined in Appendix C

2. Variance between actual performance and the standards of performance defined in Appendix C

3. Unplanned error count by reason code and percentage of total

4. Reports of missing transactions, e.g., confirmations and completion notices

5. Rejects received after confirmation notification and percentage of total

6. Transaction counts, error ratio, response time, etc., by transaction type, product family, and delivery method

7. Minimum, maximum, mean, average, and aggregate response time/interval per transaction set

8. Transaction counts per response time/interval range per transaction set

9. Orders erred after initial confirmation

10. Completed help desk logs and checklists

11. Help desk accuracy and timeliness report

12. HP measurement reports produced by both KPMG Consulting and Qwest

13. KPMG Consulting-produced, HP data to Qwest-HP data comparison

14. Qwest-produced, HP data to Qwest retail, adjusted[2] retail or benchmark data comparison

15. Measure of parity performance between retail and wholesale

16. Observation and Exception reports

17. Final report

12.7 Loop Qualification Process "Parity by Design" Evaluation

In addition to the above elements of this POP Functionality test, KPMG Consulting will perform an evaluation of the Loop Qualification process Qwest provides to wholesale customers compared to the Loop Qualification process it provides to its own retail customers to determine if parity exists in the design, implementation and use thereof. This evaluation will examine the wholesale and retail end-to-end processes, the results of the same queries made to the two processes, and all additional avenues of follow-up or recourse available to either wholesale or retail operations or both. This evaluation should answer the following questions:

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[2] Qwest's retail data for 2 wire non-loaded loops, DS-1-capable loops, and UNE-P POTS is normally disaggregated to MSA/non-MSA and interval zone 1/interval zone 2 and compared at this disaggregated level. Because the TAG has decided not to require statistically significant sample sizes at this level of disaggregation, Qwest's retail data must be adjusted in order to provide for an apples to apples comparison to the data generated by the pseudo-CLEC. Accordingly, Qwest will adjust its retail data to reflect the percentage of MSA/non-MSA and zone 1/zone 2 transactions generated by the pseudo-CLEC. For example, if the pseudo-CLEC's UNE-P transactions are spread across 70% MSA and 30% non-MSA wire centers, Qwest's actual retail comparative results will be adjusted so that the MSA results will be weighted 70% and the non-MSA results will be weighted 30% to arrive at the result for comparison.

- Does a wholesale loop qualification transaction result in the same information as a retail transaction for the same loop?

- Does the loop qualification information come from the same database (directly or indirectly) with the same frequency of update?

- Are the wholesale responses returned in accordance with benchmarks set?

- Are any differences in the sub-processes or remedial options available in the retail loop qualification process versus the wholesale process?

12.7.1 Description

The Loop Qualification Process "Parity by Design" Evaluation is a review of the loop qualification processes and procedures developed by Qwest to support both retail and wholesale customers. Operational analysis techniques will be used to determine if parity exists in the design, implementation and use of the qualification process. Additionally, this evaluation will assess remedial options available in the retail process versus the wholesale process.

12.7.2 Objective

The objective of this evaluation is to determine whether the loop qualification process Qwest provides to its wholesale customers is equivalent to the process Qwest uses for its own retail customers. This will be accomplished through an examination and analysis of Qwest's internal processes and a comparison to the processes available to Qwest's wholesale customers.

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12.7.3 Entrance Criteria

Table 12.7.3.1   Loop Qualification Process Entrance Criteria

Criteria	Responsible Party
No legally effective orders or injunctions preventing the test exist.	ROC, Qwest
The ROC has verified measurements to be used in the test	ROC, Liberty Consulting
Pass/retest criteria have been identified	ROC, KPMG Consulting
Loop Qualification procedures and documentation are available	Qwest
Interview guide, questionnaire and process review checklist developed	KPMG Consulting
Interviewees identified and schedule developed	Qwest, KPMG Consulting

12.7.4 Test Scope

Table 12.7.4.1   Loop Qualification Process Evaluation Measures

Process Area	Sub-Process	Evaluation Measure	Evaluation Technique	Criteria Type
Loop Qualification Pre-Order query process	Pre-Order Receipt and Logging	Consistency between wholesale and retail processes	Inspection Document review Interview	Parity
Assemble Pre-Order Response	Delivery of error messages and queries	Consistency between wholesale and retail processes	Inspection Document review Interview	Parity
	Delivery of response	Consistency between wholesale and retail processes	Inspection Document review Interview	Parity
Escalation Process	User-initiated escalation	Consistency between wholesale and retail processes	Inspection Document review Interview	Parity
Process Management	General management practices	Consistency between wholesale and retail processes	Inspection Document review Interview	Parity
	Performance measurement process	Consistency between wholesale and retail processes	Inspection Document review Interview	Parity
Capacity Management	Capacity Management processes and procedures	Consistency between wholesale and retail processes	Inspection Document Review Interview	Parity

12.7.5 Test Scenarios

Not applicable.

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12.7.6 Test Approach

12.7.6.1 Inputs

1. Inquiry handling procedures
2. System technical documentation
3. Interview Guides
4. Process review checklist
5. Personnel to conduct interviews with Qwest
6. Personnel to conduct interviews with CLECs

12.7.6.2 Activities

1. Gather background information
2. Review procedure documents
3. Interview Qwest personnel
4. Interview CLEC personnel
5. Complete process reviews through interviews and observations
6. Create interview summaries

12.7.6.3 Outputs

1. Completed loop qualification process review
2. Completed loop qualification document review
3. Completed interview summaries
4. Observation and Exception reports
5. Final Report

12.7.7 Exit Criteria

Table 12.7.7.1   Exit Criteria

Criteria	Responsible Party
Global exit criteria satisfied	See Section 7

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12.8 POP Manual Order Processing Evaluation

12.8.1 Description

The POP Manual Order Processing Evaluation is a comprehensive review of the methods and procedures used to handle orders that have been manually submitted or require manual intervention by Qwest during order processing. Operational analysis techniques will be used to conduct this test. This test will include a review of the procedures in place to plan for and manage projected growth in order processing.

12.8.2 Objective

The objective of this test is to validate the processes and procedures used to support manual submission of orders for service and to ensure that these procedures are being uniformly followed by Qwest's personnel across the three regions.

12.8.3 Entrance Criteria

Table 12.8.3.1 Manual Order Process Entrance Criteria

Criteria	Responsible Party
No legally effective orders or injunctions preventing the test exist.	ROC, Qwest
The ROC has verified measurements to be used in the test	ROC, Liberty Consulting
HP is operationally ready	HP
Pass/retest criteria have been identified	ROC, KPMG Consulting
Manual orders procedures and documentation are available	Qwest
Interview guide, questionnaire and process review checklist developed	KPMG Consulting
Interviewees identified and schedule developed.	Qwest, KPMG Consulting

12.8.4 Test Scope

Table 12.8.4.1   Manual Order Processes

Process Area	Sub-Process	Evaluation Measure	Evaluation Technique	Criteria Type
Receive Orders for Manual Processing	Order Receipt and Logging	Completeness and consistency of process	Inspection Document review	Qualitative
Process Orders Manually	Entry of Order into SOP	Completeness and consistency of process	Inspection	Qualitative
Send Order Response	Delivery of error messages and queries	Completeness and consistency of reporting process	Inspection Document Review	Qualitative

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Revised Release 5.2

Table 12.8.4.1 Manual Order Processes

Process Area	Sub-Process	Evaluation Measure	Evaluation Technique	Criteria Type
	Delivery of confirmations, completions and acknowledgements.	Completeness and consistency of reporting process	Inspection Document Review	Qualitative
Status Tracking and Reporting	Status tracking and reporting	Completeness and consistency of reporting process	Inspection Document review	Qualitative
Problem Escalation	User-initiated escalation	Completeness and consistency of process	Inspection Document review	Qualitative
Process Management	General management practices	Adequacy and completeness of processing management practices	Inspection Document review	Qualitative
	Performance measurement process	Adequacy and completeness of and adherence to manual order processing performance management practices	Inspection	Qualitative
Capacity Management	Capacity management processes and procedures	Adequacy and completeness of capacity management process	Inspection Document review Interview	Qualitative

12.8.5 Inputs

1. Order handling procedures
2. System technical documentation
3. Interview checklist
4. Process review checklist
5. Personnel to conduct interviews

12.8.6 Activities

1. Review procedure documents
2. Interview Qwest personnel
3. Complete process reviews
4. Perform adequacy study of manual order processing performance measures   **Formatted:** Bulletsand Numbering
5. Create evaluation summary   **Formatted:** Bulletsand Numbering

12.8.7 Outputs

1. Completed process review checklists
2. Completed interview checklists   **Deleted:** 1
3. Evaluation summary

| 4. White paper regarding manual order processing performance measures

12.9 Exit Criteria

Table 12.9.1   Exit Criteria

Criteria	Responsible Party
Global exit criteria satisfied	See Section 7

13. Order Flow Through Evaluation

13.1 Description

The Order Flow Through Evaluation tests the Qwest systems capability to flow orders through from the CLEC through the application-to-application interface into the backend Qwest service ordering processing systems without any human intervention. Orders that qualify as flow through, i.e., orders not needing manual action, will be tested to determine compliance with eligibility to flow through with actual results.

Qwest will update the list of flow through ordering scenarios and USOC flow through indicators eligible during the testing period if changes in the Qwest business rules or systems warrant. Changes to the list will be incorporated into the test and will be noticed to the industry through the Co-Provider Interface Change Management Process ("CICMP").

Flow through orders will be submitted through both the GUI and the computer-to-computer interfaces. Any supplements and cancels that are considered to be flow through will also be submitted. The order transactions will be monitored to verify that they do not "fall out" for manual handling in the Qwest Interconnect Service Center (ISC) and are accepted by Qwest's Service Order Processor (SOP) without manual intervention.

This test will be conducted as a part of the POP functional testing (See Section 12).

13.2 Objective

The objective of the Order Flow Through Test is to verify the ability of Qwest to flow through their front end systems, without manual intervention, all order types that at the time the transactions are to be submitted are designated by Qwest to be flow through. This test will also assess that the flow through capabilities of Qwest's systems are uniform across the three regions.