

Qwest Communications, Inc.

EDI Implementation Guidelines – for Interconnect Mediated Access (IMA) Version 17.0

Date

February 25, 2005

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Abstract:

This document will assist CLECs in understanding and successfully managing the process of implementing EDI trading capabilities between their organization and Qwest. The information in this document is specific to the use of the EDI interface to Interconnect Mediated Access system and should not be construed as being applicable to other EDI interfaces available from Qwest.

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Document Information

Document Owner: Qwest Lead IT Project Manager – Electronic Interface Services

Document History

All revisions made to this document are listed here in chronological order.

<u>Version</u>	<u>Date</u>	<u>Description</u>
1.0	01/07/00	Initial Distribution
2.0	04/12/00	Revised Distribution
3.0	12/08/00	Revised Distribution
4.0	04/23/01	Revised Distribution Note: VER 4.00 represents a rearrangement of prior IMA EDI information and the incorporation of Facility-Based Directory Listing implementation guidance. Changes to this document are reflected in archived redline/revision copies. Also, Certification Testing is now known as Controlled Production.
5.0	07/25/01	Revised to include Stand Alone Test Environment Implementation guidance and Service Bureau EDI Implementation Guidelines
6.0	10/11/01	The requirement for BANs to be loaded for EDI users was removed and a supplemental Order flow to Section 3, was added to the Technical Information.
7.0	11/09/01	Changed ‘Testing’ to ‘Progression’. Added SATE data addition process. Moved information to Appendix A. Updated Appendix B - Service Bureau. URL links are live. Explained use of TPRs. Explained External Address Worksheet.
8.0	11/30/01	Clarifications included: Process for addition of data to the SATE environment -Process for negotiating manually-generated responses during the Progression Phase - Interaction of the Interoperability environment with Qwest OSS - Minimum FBDL testing requirements for

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		Progression and Controlled Production - URLs were added/updated as necessary.
9.0	01/21/02	Section of FBDL removed- now an IMA product. Explanation of SATE VICKI added. Flow diagrams added. Staffing Plan added as Appendix C
9.1	02/18/02	Flow diagrams changed. Clarification of Combining Interoperability and SATE in Progression Testing. The inability to submit a supplemental order via the GUI when initial order was sent via EDI and vice versa. Clarification on Non-Fatals sent after an FOC. Clarification of minimum test requirements for Implementation and Migration
10.0	05/03/02	Restructure of process information to improve flow. Clarification of minimum test requirements for Implementation and Migration.
11.0	10/02/02	Question log process expanded. Sate product list and hours of availability updated. Clarification of negative 997 testing. FBDL testing process updated.
12.0	02/20/03	Added requirement for FBDL that CLECs need to test additional listings. Clarified Jeopardy flow. Revised roles and responsibilities.
13.0	06/20/03	Updated Service Bureau requirements for connectivity and digital certificates. Updated X-12 examples to reference 13.0 standards. Clarified the process for responses that will be sent during Regression Testing. Further clarified Service Bureau section, pertaining to Qwest's requirements. Update the information surrounding Qwest responses due to the new LR response replacing the FOC, JEOP, NF, and FATAL. Updated SATE Product list.
14.0	10/24/03	Updated Requirements review activities and timelines associated with Question Logs. Updated IMA Data Conversion to include information regarding dates. Changes to Appendix A. Updated Migration Requirements. Added new FBDL testing requirements.
15.0	3/5/04	Updated the following process elements: Requirements Review: Question Log, Implementation/Migration processes

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		(Negotiations, Controlled Production), Minimum Testing Criteria, Production Support, Template requirements.
15.1	5/3/04	Clarified Controlled Production Minimum Testing Criteria, Updated Service Bureau Lead definition
16.0	9/3/04	Update “Scenario Summary” and “Testing Status Log” to “Test Plan”, Updated all Visio process diagrams, Clarified Migration language, Updated Router Configuration timelines, Clarified Digital Certificate coordination information; Updated CLEC requirements for migration projects in the Service Bureau appendix; Removed Appendix C: Qwest’s EDI Implementation Staff Plan and Organizational Information
17.0	2/25/05	Added information regarding setup of Subscriber Responses for DLEC & LOA-authorized provisioning agreements, Updated Entrance/Exit Criteria for Controlled Production, Production and Migration Readiness Assessments, Removed the 14.0 information in the Question Log section, Updated Technical Information section with more current examples, Updated list of products available in SATE

Important: This document has been through a formal review process. To the best of our knowledge it is accurate. Qwest Communications, Inc. reserves the right to make further modifications, as necessary.

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Qwest Information Technologies

EDI Implementation Guidelines – for Interconnect Mediated Access (IMA)

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1. Introduction

Purpose

This document assists Competitive Local Exchange Carriers (CLECs) in understanding and successfully managing the process of implementing EDI trading capabilities between their organization and Qwest.

Audience

This document is intended for organizations wishing to implement wholesale trading capabilities with Qwest for the exchange of Pre-Order, Order, and post-Order information via the IMA EDI interface. It also contains information regarding the Qwest Stand Alone Test Environment (SATE) that can be utilized for either regression testing of EDI interface software or progression testing that is related to the implementation of an IMA release. Service Bureaus, as related to an Implementation project, are covered in Appendix B.

Scope

This document provides a general overview of the EDI Implementation Process. Additional information and documentation will be provided during implementation support meetings. The information in this document applies to the use of the IMA EDI interface and should not be construed as being applicable to other EDI/electronic interfaces available from Qwest.

Sections in this Guide

This document is divided into three sections addressing the Implementation Process in terms of both the business and technical information. Following the Introduction, the Implementation Activities section addresses the Trading Partner requirements and processes in an EDI implementation project (or migration). The Technical section addresses system and interface issues, and the data syntax/business rules necessary to successfully create and submit electronic information via EDI to Qwest systems.

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Acronyms

BA	Business Analyst (EDI Implementation Team)
CLEC	Competitive Local Exchange Carrier (The term CLEC generically refers also to any customer implementing IMA EDI)
CMP	Change Management Process
CM	Configuration Management
EDI	Electronic Data Interchange
FBDL	Facility Based Directory Listings
IMA	Interconnect Mediated Access
IPM	Implementation Project Manager (aka: PM)
IT I&D	Information Technologies Implementation and Deployment
LSR	Local Service Request
LIPM	Lead Implementation Project Manager (aka LPM)
LPM	Lead Project Manager (EDI Implementation Team)
LSOG	Local Service Ordering Guidelines
OBF	Ordering and Billing Forum
OSS	Operational Support Systems
PM	Project Manager (EDI Implementation Team)
SATE	Stand Alone Test Environment
SPOC	Single Point of Contact
SYAD	System Administrator
TCV	Trading Partner Configuration Verification
TSE	Technical Support Engineer (EDI Implementation Team)
VICKI	Virtual Interconnect Center Knowledge Initiator

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2. Implementation Activities

The use of EDI provides an effective mechanism to automate the communication and processing of Order information and to reduce manual processes. The EDI Implementation Process will progress according to an agreed upon plan and timeline. The typical project phases for CLECs implementing a given release will include:

1. **Initial Communications:** During this phase, all activities to initiate a CLEC's implementation are conducted, including the Kickoff conference call.
2. **Implementation or Migration Project Plan Negotiation:** During this phase, the Implementation or Migration Project Plan is proposed and negotiated.
3. **Requirements Review:** The Requirements Review phase provides an opportunity for a CLEC to review Qwest's EDI system and business requirements and ask any questions they may have regarding those requirements.
4. **Firewall and IA-to-IA Connectivity Testing:** During this phase, CLEC connectivity is established and tested. This phase includes the set up of the circuit, pushing of firewall rules, Trading Partner Relationships and IA configuration.
5. **Progression Testing:** This phase affords the CLEC the opportunity to validate their technical development efforts and to quantify LSR processing results. Qwest provides two environments for progression testing, Interoperability and SATE. A CLEC may use either environment or a combination of the two for Progression Testing.

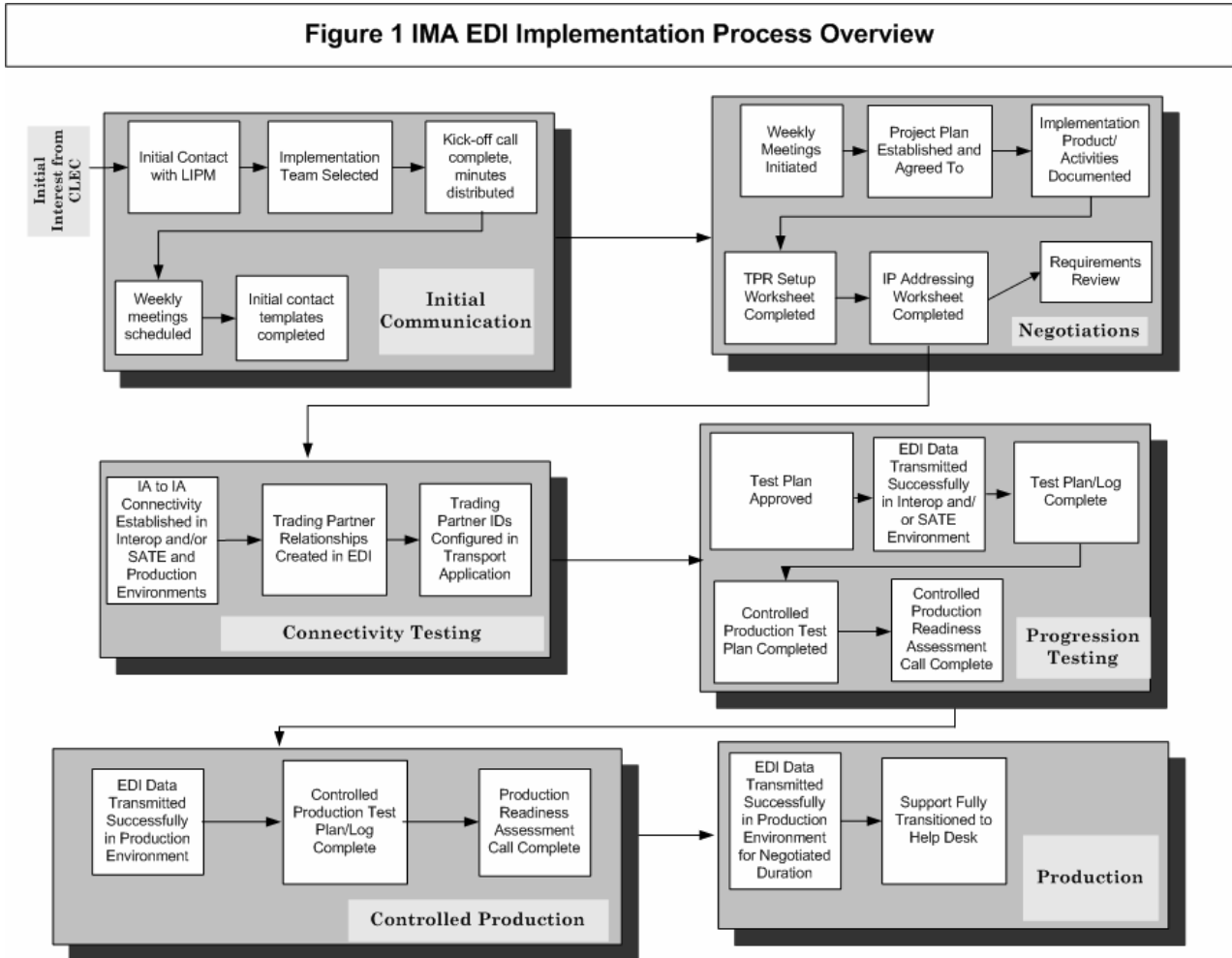
If a CLEC chooses to test in both environments as part of a single Progression Testing Phase, the details of such an arrangement will be determined on the regularly scheduled CLEC implementation calls and reflected in the project plan. Additionally, certain activities, such as connectivity, may have to be repeated for each environment. During testing, it is the CLEC's responsibility to navigate between the two environments.

6. **Controlled Production:** This phase consists of the controlled submission of CLEC requests to the Qwest production environment for provisioning as production orders. Qwest and the CLEC use Controlled Production results to determine operational readiness for full Production turn-up.
7. **Production:** The CLEC is certified and able to submit full volumes of production LSRs and pre-order transactions to Qwest.

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Figure 1 provides an overview of the steps in each phase of a standard EDI Implementation process. Some activities are precursors to others that follow. Others may be done in parallel. For example, requirement review and Scenario template development may occur while connectivity is being established. The Firewall Rules and IA-to-IA Connectivity testing phase steps can be environment specific with certain tasks needing to be repeated for each environment that the CLEC would like to utilize.



Note: Serial Progression through the phases is not required as noted within the detailed processes

CLECs have the ability to utilize SATE to test EDI functionality without supervision or direct support separate from an Implementation or Migration. This process is called Regression Testing and occurs only in the SATE environment. Additionally, Third-Party Software Vendors or Service Bureaus may test their EDI with Qwest IMA EDI as part of a Regression Test, and should contact the LPM directly, as they will not have an assigned Qwest Service Manager (see cover page for contact number). Additional information regarding Regression Testing can be found later in this document under the topic Regression Testing.

Chart 1 summarizes the relationship between IMA EDI Implementation testing phases and IMA EDI environments, specifically which environment(s) can be used for each testing phase.

Chart 1 IMA EDI Testing Phases vs. Environments

Environments: Testing Phases:	Interoperability	SATE	Production
Progression	✓	✓	
Regression		✓	
Controlled Production			✓

Initial Communications

This section explains the objectives of the Initial Communications activity regarding EDI trading capabilities. The Initial Communications discussion is intended to accommodate:

- A general description of the EDI interface
- An overview of the EDI Implementation Process
- Identification of applicable EDI documentation resources
- Determination of the specific EDI functionality to be implemented by the CLEC

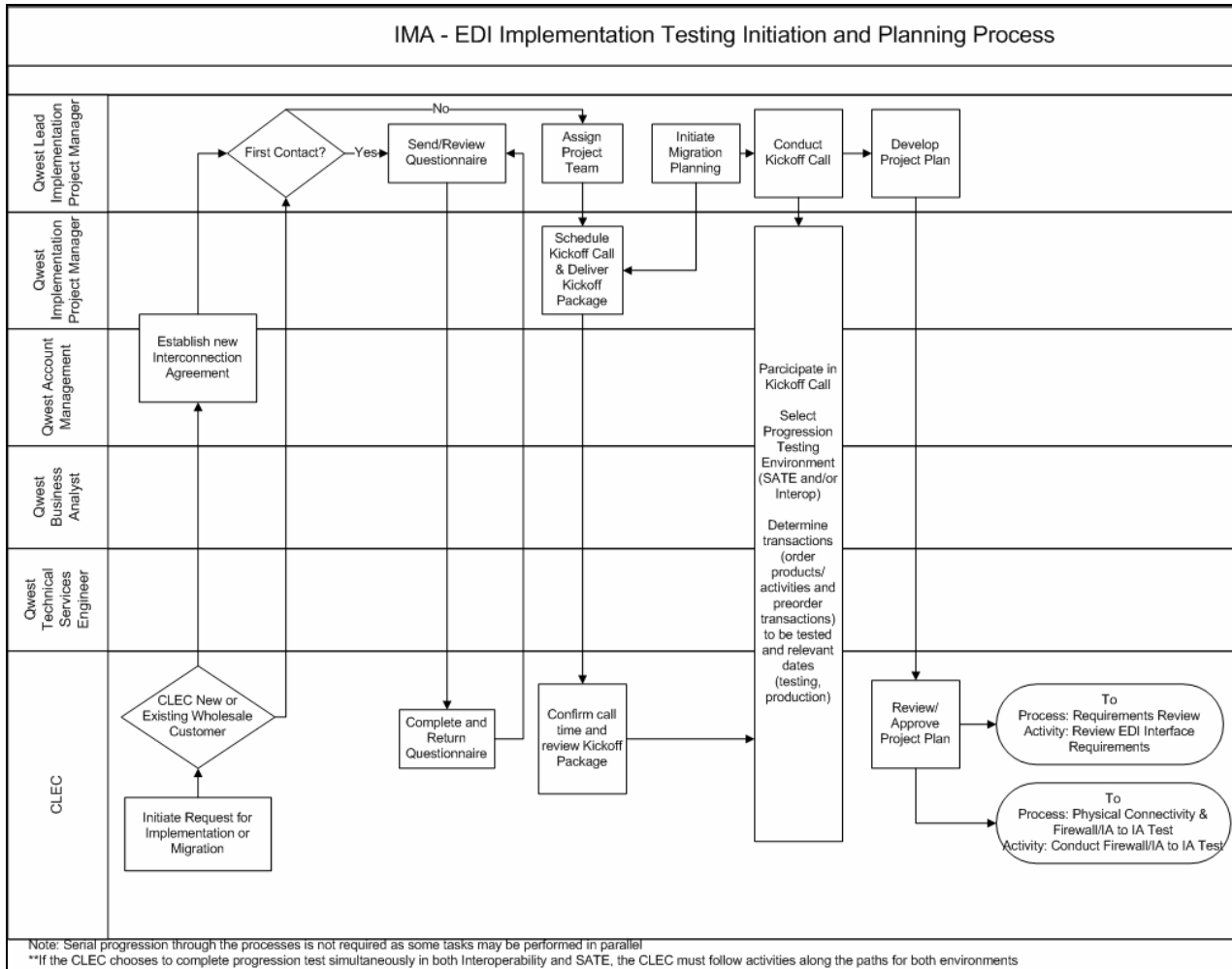
Each CLEC will be provided with a Qwest EDI Implementation Team or a SPOC, who will perform all the roles noted below. The SPOC/Team members will work with the CLEC throughout the CLEC's EDI Implementation. The EDI Implementation Team roles are:

- **Project Manager (PM):** Responsible for facilitating meetings, coordinating overall Project Plan, and is the primary point of contact for CLEC implementation process.
- **Business Analyst (BA):** Responsible for providing assistance with the business rules and processes associated with the products offered by Qwest via EDI.
- **Technical Support Engineer (TSE):** Responsible for facilitating the implementation processes from a systems standpoint.

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Initial Communications and Project Plan Negotiations Flow Diagram



Initial Communications Activities

When a CLEC is interested in implementing EDI, the Qwest Service Manager will put them in contact with the Lead Implementation Project Manager (LPM) who will then provide an Initial Contact Questionnaire for the CLEC to complete and return. When the LPM receives the completed Questionnaire, an Implementation Project Manager (PM) will be assigned and a kickoff call will be scheduled. If a Third-Party Software Vendor or Service Bureau wants to use SATE for regression testing, they will contact the LPM directly (see cover page for phone number) as they will not have a Qwest Service Manager.

The following activities will occur as part of the project initiation meeting (Kickoff call) between Qwest and the CLEC:

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- Provide overview of the EDI Interface to Qwest IMA ordering systems
- Review of Qwest Data Transport Requirements
- Introduce Qwest and CLEC team members and identify roles and responsibilities
- Identify the objectives and scope of the products to implement
- Identify the available EDI interface release version and the timeframes within which the Implementation Project steps will be performed
- Review the Implementation Guidelines and the Implementation Processes
- Discuss the Progression Testing environment options – SATE and/or Interoperability environment. Negotiation of manually-generated Post-Order transaction responses, if the interoperability environment is chosen or SATE is used without VICKI
- Review documentation resources
- Discuss administrative processes

Initial Communications Phase Completion

The initial communications phase will be considered complete with the initiation of weekly project status calls with the CLEC.

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Project Plan Development/Negotiation

A formal Implementation/Migration Project Plan that represents the milestones and responsibilities of all parties throughout the planned EDI implementation or migration process will be mutually negotiated. Regularly scheduled conference calls will be conducted to review progress, answer questions, and identify and communicate resolution of issues. The respective project managers will be responsible for maintaining and monitoring progress within the Project Plan. If Progression Testing occurs in the interoperability environment, Qwest will negotiate with the CLEC the number of, and manner in which, manual post-order transactions will be returned to the CLEC. A mutual negotiation and approval process will be used to manage changes to schedules as recommended or required by either party. All parties will give sufficient advance notice to the other party to allow adequate analysis of the impact of any proposed schedule changes.

The inability of either party to meet any of the milestones contained in the Implementation or Migration Project Plan on the date(s) identified may result in the need to renegotiate a revised Project Plan. All revised plans will be developed based on the availability of resources from within the respective organizations and may contain dates that are substantially different from those described in the original plan.

For Regression Testing in SATE a formal Usage Plan will be developed to indicate the volume and timing of SATE activity.

The development of, and agreement to, a formal Implementation/Migration Project Plan or SATE Usage Plan is the pre-requisite to beginning the Implementation Process or SATE regression testing activity.

Typical Implementation Timeline

The following diagram illustrates a typical implementation timeframe (Figure 2). Actual implementation duration will depend on the number of EDI transactions to be implemented, resource availability, project scope, and other factors.

This diagram presents a high-level description of implementation phase with typical timelines for the implementation of one to three (1-3) EDI transaction types. If a CLEC desires to implement more than three EDI transactions the project team will adjust the timelines accordingly.

Figure 2 Sample Implementation Project Timeline (Illustrative Only)

	Task Name	Duration										
			Wk 2	Wk 4	Wk 6	Wk 8	Wk 10	Wk 12	Wk 14	Wk 16		
1	Initiation Discussions/Negotiations	2 w	■									
2	Requirements Review	4 w	■									
3	Circuit Installation/Configuration	5 w	■									
4	Firewall and IA-to-IA Testing	1 w				■						
5	Test Data Development	4 w					■					
6	Progression Testing Phase	3 w							■			
7	Controlled Production	2 w										
	Production Turn-up	1 w										

Qwest recommends that a phased approach be used when implementing multiple EDI transactions. Using a phased approach, the CLEC chooses the EDI transactions that are most important to their business plan. The most important EDI transactions would be implemented first. Additional EDI transactions would then be implemented in phases during the implementation that is already underway or once the initial EDI transactions are already in production. A detailed Project Plan representing each phase will be mutually defined. The plans will describe the specific activities to be performed in support of each phase of implementation for each EDI transaction.

Regression testing (by a CLEC, Third Party Software Vendor, or Service Bureau) would also include the same initial activities, steps 1, 3, and 4 above. In the discussion of these steps in the following sections of this document, requirements noted for ‘CLECs’ will also pertain to Service Bureaus and Third-Party Software Vendors. Further information for Service Bureaus can be found in Appendix B – Service Bureau EDI Implementation Guidelines.

Project Plan Negotiation Phase Completion

This phase of the EDI Implementation will be considered complete with the creation of an agreed upon project plan.

Requirements Review

A critical factor in a successful implementation is a thorough understanding by the CLEC of the Qwest EDI interface. The requirements review phase of implementation will provide the CLEC with an opportunity to develop a clear understanding of Qwest requirements for IMA. This review is critical to the CLEC who must:

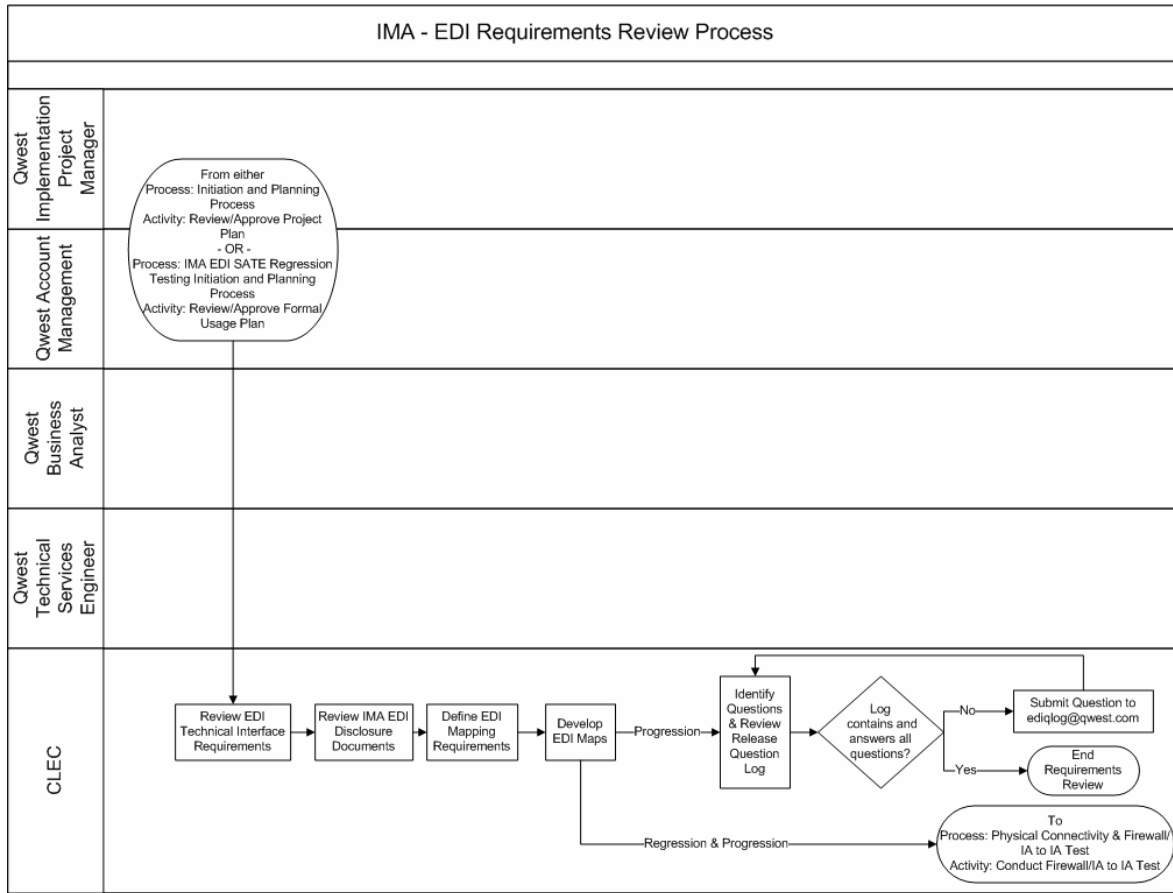
- Develop and define the business processes and procedures necessary to support the use of their EDI interface for IMA transactions.
- Develop the appropriate documentation (i.e., Methods and Procedures) necessary to support the use of the EDI interface by CLEC personnel.
- Perform any necessary database gap analysis for the purpose of ensuring that all data fields that carry the EDI information can be successfully populated.
- Identify appropriate data values.
- Select Pre-Order transactions to support the intended products to be ordered through EDI.

NOTE: Qwest strongly recommends the use of Pre-Order transactions to assist CLECs in achieving Order content accuracy, reducing rejection rates, and improving Service Order flow-through.

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Requirements Review Process Flow



Requirements Review Activities

While it is the CLEC’s responsibility to perform a thorough review of all Qwest requirements, Qwest will provide support to clarify issues and answer questions regarding the EDI interface business rules, requirements, and the Implementation Process. Qwest recommends the following process to ensure that the CLEC has a thorough understanding of the answers to each question.

1. The CLEC reviews Qwest requirements as documented in the Disclosure Document and other documents listed in the “Qwest Document Overview” section of this document.
2. Questions arising from the CLEC’s review of EDI requirements will be included on a release-specific Question Log, which will capture questions from all CLECs and will be made available to the CLEC community.
3. The question will be submitted to Qwest via email to ediqlog@qwest.com.

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4. Qwest will add the new question to the log and either provide a response to the question or identify those questions requiring further investigation and research. Qwest has 5-10 business days to provide this initial response. Questions submitted in a week will be added to the log and posted the following Friday. Responses are communicated via posting of the log to the EDI FAQ website (www.qwest.com/wholesale/ima/edi/faq.html) each Friday. If there are no updates, the log header will indicate that there were no updates for that posted version. The questions will have one of three statuses: New=Question was recently added and status or a response will be included in the next log; In Progress=Question required further investigation and research and is currently in progress; Closed=Question has been answered.
5. If a CLEC has follow-up questions on a Log item that is Closed, the additional question will be submitted to the ediqllog@qwest.com email address and will be tracked as a new question with a reference back to the original question.

Requirements Review Phase Completion

The Requirements Review phase of the implementation will be considered complete when the CLEC determines that they have adequately reviewed Qwest's requirements documentation. The CLEC may decide to continue use of the Question Log throughout the implementation.

Qwest Documentation Overview

The following documents provide additional information on the Implementation Process, IMA EDI Requirements, or are designed to capture necessary business and configuration parameters. Distribution of these documents will occur as needed during the course of the implementation project.

Distributed prior to the kickoff call:

- Kickoff Agenda
- Generic Project Plan
- Contact List Template
- Qwest and Industry Website URLs

Distributed after the kickoff call:

- IP Addressing Worksheet
- Trading Partner Identification Worksheet
- Test Plan Template

Distributed during the Progression Testing phase:

- Qwest IMA EDI Troubleshooting Guide

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Additional information can be found on the IMA EDI website (<http://www.qwest.com/wholesale/ima/edi/index.html>) including:

- EDI Implementation Guidelines for Interconnect Mediated Access (IMA)
- Frequently Asked Questions
- IMA EDI SATE Data Document (Release Specific)
- IMA FBDL Corrective Procedures and Confirmation/Error Codes
- Link to Disclosure Document (Release Specific)
- VICKI Path Document
- SATE Data Request Form
- IMA and SATE Errors List (Release Specific)
- Populated EDI X12 Mapping Examples (Release Specific)

Information specific to each new release is made available to the CLEC based on the schedule in Table 1.

Table 1: Qwest IMA EDI Disclosure Document Publication Schedule

PUBLICATION	SCHEDULED DELIVERY
Draft Disclosure Document	73 days before Release Date
Disclosure Document	45 days before Release Date
Change Summary	45 days before Release Date
Disclosure Document Addendum #1	2 Wks. after Release Date
Disclosure Document Addendum #xx	As Required to notify CLECs of system bugs

Disclosure Document

The Qwest EDI Disclosure Documents present Qwest EDI interface requirements on a transaction or product-specific basis. The Disclosure Document is issued and available on the Qwest website forty-five (45) days prior to each release (draft is available 73-days prior to the release) with a change summary from the prior release. When the Disclosure Document for a release is available, a release notification is distributed to the CLECs.

The content of the document may change after issuance, as the release is not yet deployed. To notify CLECs of any changes to the Disclosure Document, Qwest will issue an Addendum to the Disclosure Document two weeks after the release is issued. The Addendum will be placed on the Qwest website and a Release Notification will be distributed to the CLECs. Additionally, the Disclosure Document will be updated as required to correct for documentation and/or system bugs.

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When addenda are posted, the individual chapters and appendices will show an updated date next to the chapter title to indicate that the content in that chapter has been updated in that addenda.

The Disclosure Document contains a chapter for each transaction or product. Each chapter contains the following sections:

- Business Model—describes the electronic communication that comprises the complete business transaction cycle for a particular EDI functionality and presents the sequence by which these electronic communications will be exchanged. This appears as an appendix for all order products.
- Trading Partner Access Information—outlines data values for the ISA and GS segments, describes delimiter use, and indicates the version of the industry standard upon which an EDI transaction or Order is based
- Mapping Examples—defines the syntax and structure of the EDI transaction data
- Data Dictionary—offers a description of the individual EDI segments and elements that are contained within a particular transaction

Disclosure Appendices contain:

- Developer Worksheets
- IMA Additional Edits
- Change Summaries (Developer Worksheet & Product Chapter changes)
- Generic Order Flow Business Model
- Valid Product Conversion Chart
- Product Family & Product Matrices

The content of the Disclosure Document is described in further detail in the Technical Section of this document.

The disclosure documents can be found at:

<http://www.qwest.com/disclosures/netdisclosure409.html>

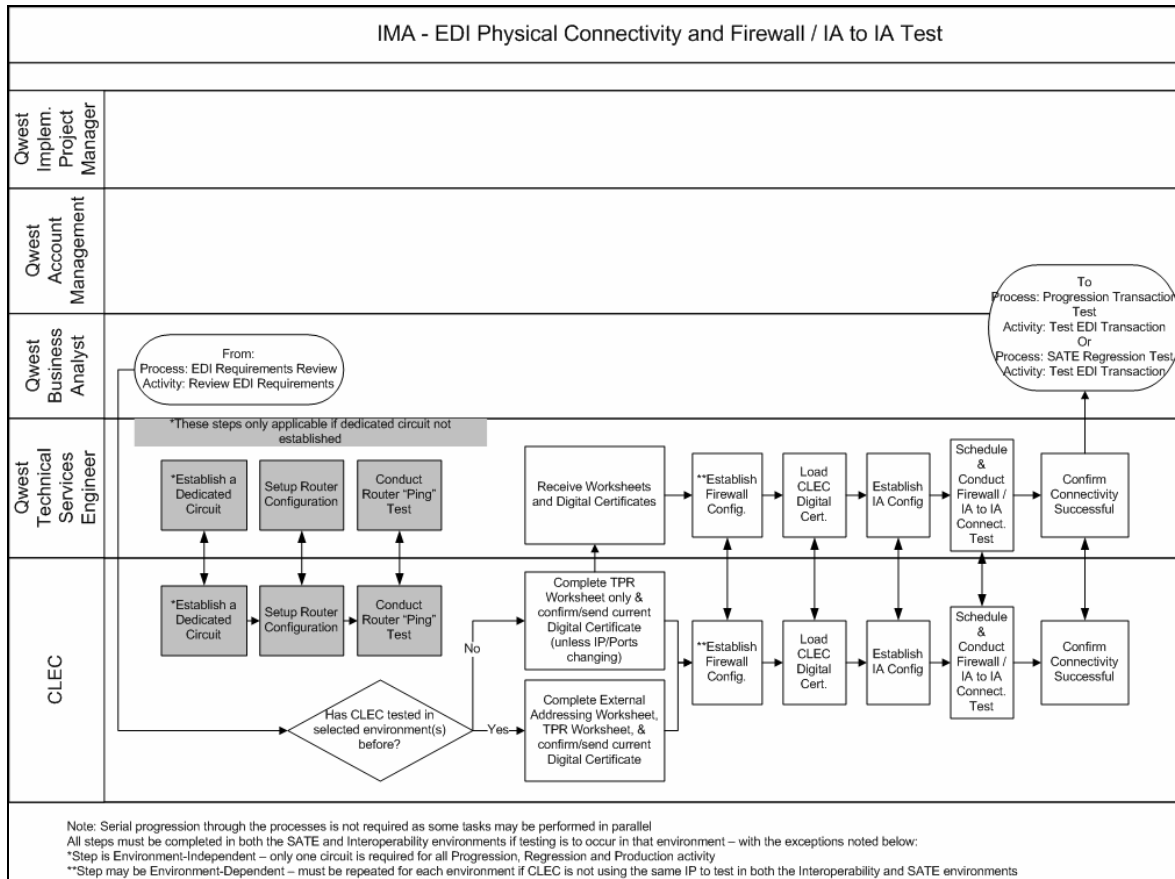
Establishing a Dedicated Circuit and Connectivity Testing

A dedicated circuit is needed before implementing the Qwest IMA EDI interface. This will provide a secure network to send and receive data between Qwest and the CLEC, providing an efficient means to transport high volumes of data.

The same circuit can be used to connect to the production environment, the interoperability environment, and SATE simultaneously.

It is feasible to share a circuit already being used between Qwest and a CLEC (or a Service Bureau). If a circuit is shared, it is critical for the circuit owner to monitor the transmission volumes as performance issues could be impacted. Qwest will require a letter of authorization (LOA) from the circuit owner when a circuit is shared.

Establishing a Dedicated Circuit and Connectivity Testing Process Flow



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Establishing a Dedicated Circuit and Connectivity Testing Activities

1. Establish a Dedicated Circuit

The dedicated circuit can be ordered from the carrier of the CLEC's choice. Qwest is able to accommodate a Frame Relay circuit or a point-to-point connection. Currently, Qwest does not support a dial up application, VPN or an ISDN circuit for the IMA EDI interface. The bandwidth requirements for connectivity to the IMA EDI interface are a T-1, fractional T-1, or 56K line. Determining the bandwidth sizing is a function of estimating the number of concurrent users accessing an application, the number of applications riding on the facility, and the contentions for access between those 'user instances'. Qwest recommends that a facility engineer be consulted to determine the bandwidth size required to accommodate the CLEC's specific needs.

Qwest requires that the CLEC's circuit terminate at a Qwest data center demarcation point. These demarcation points are located in Denver, Colorado and Omaha, Nebraska.

When a CLEC or Service Bureau requires use of multiple circuits, two options are available and should be chosen based on the CLEC's Implementation Plan. The Data Network Information and Requirements Form

(<http://www.qwest.com/wholesale/clecs/electronicaccess.html>) is used to communicate selection of one of the following two options to Qwest:

- Option 1. Load Balancing - allows transmissions to be distributed across multiple circuits.
- Option 2. Redundancy - allows transmissions to travel over the secondary route, in the event of a circuit failure.

If further circuit information is needed, please contact your Qwest EDI Implementation team.

2. Setup Router Configuration

The CLEC's circuit will need to be connected to the Qwest router located at one of the two data centers. This will require an internal circuit order to be issued and provisioning can take approximately 30 to 45 days from the date the request is correctly submitted. The internal order will not be placed until a Qwest circuit ID, Qwest order number, and a due date is provided by the CLEC to the Qwest EDI Implementation team. This information identifies the terminating point of the CLEC's incoming circuit.

The router configuration step completes the physical network connection when access is granted from the CLEC's external registered IP addresses to the Qwest firewall. To initiate the router configuration request, all data elements on the Data Network Information and Requirements Form must be filled out and returned to the Qwest EDI Implementation Team. It

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is expected that Qwest router configuration will be completed within ten (10) business days from the date the request for access is submitted.

3. Conduct Router “Ping” Test

Upon completion of the necessary connectivity configuration requirements, a router/hardware connectivity test (ping) is scheduled. The testing of network connectivity may take as little as one day. However, if access to the external circuit is not readily available, this activity must be rescheduled. This test is the last phase in completing the physical connectivity configuration to the IMA EDI application. Connectivity testing usually consists of Qwest and the CLEC pinging and telnetting each other’s systems and verifying the responses were as expected. The intent of this test is:

- To verify that the physical requirements of the connectivity configuration have been met by Qwest and the CLEC.
- To ensure that EDI hardware of both parties is able to communicate effectively over the circuit.

4. Establish Firewall Configuration

Qwest must establish the CLEC as a Trading Partner on the firewall.

- a. After the development of an agreed-upon project plan, Qwest will send the CLEC an IP Addressing Worksheet. The IP Addressing Worksheet is used by Qwest to establish its Firewall configuration. The IP Addressing worksheet will display the unique IP addresses used by Qwest in the Interoperability, SATE, and Production environments.
- b. The CLEC will complete this worksheet to provide Qwest their IP addresses. The CLEC will be required to use a unique IP/port combination between the test and production environments. However, a CLEC can choose to use the same IP/port combination for both the SATE and Interoperability environments.
- c. Once the Qwest TSE receives the IP Addressing Worksheet from the CLEC, Qwest will initiate the addition of these IP addresses to the Qwest firewall rules. The addition of new firewall rules will take five (5) business days.

5. Exchange and Load Digital Certificates

Subsequent to the connectivity test, the CLEC must obtain a signed-authorized Digital Certificate. Digital Certificates are required and take approximately four to five business days to obtain. [Please refer to the requirements of TCIF for further explanation regarding the use of digital certificates.]

Once the CLEC has obtained a Digital Certificate, the certificate should be sent to Qwest. Qwest will send Qwest’s digital certificate to the CLEC. Both parties should load the received certificate into their systems.

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Digital Certificates must be kept up-to-date in all environments and it is the CLEC's responsibility to coordinate the update of their digital certificate with Qwest. Qwest requires 3 business days to update digital certificates in testing environments and 5 business days in the production environment. The digital certificate must be updated in the CLEC and Qwest environments at the same time – so the work effort must be coordinated. Failure to coordinate the work or updating of the digital certificate on only one side of the interface may result in production down-time.

6. Establish IA and Trading Partner Configurations

Qwest must also establish the CLEC as a Trading Partner within the translator and IA. The TPR Worksheet is used by Qwest to establish its IA-to-IA configuration for the CLEC. Qwest recommends the established Trading Partner Relationship (TPR) remain the same for the Testing (SATE and/or Interoperability) and Production environments.

- a. The Qwest TSE will complete a draft TPR worksheet and send this to the CLEC.
- b. The CLEC should review the worksheet and return it with any changes or approval within five (5) business days of receipt.
- c. Once approval of the TPR worksheet is granted from both parties, Qwest will configure the TPRs within Interoperability and/or SATE within five (5) business days. Qwest can place these TPRs into the production environment within five business days of completion of Progression testing.

Firewall/IA to IA Connectivity Test

Once a hardware router connectivity 'ping' test has been successfully completed, a Firewall and IA-to-IA Connectivity testing call will be scheduled to occur a few days prior to the start of the Progression Testing Phase. This test will verify the communications between the trading partner and Qwest.

Firewall and IA-to-IA connectivity is established during each phase of implementation:

- Progression (Interoperability and/or SATE)
- Regression (If connectivity has not been established for Progression)
- Controlled Production

To provide assistance with any connectivity issues that might arise, it is recommended that the following CLEC technical personnel join this Firewall and IA-to-IA configuration Testing call:

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- Security/firewall technician
- Transport/connectivity technician
- Tester

Entrance Criteria – Firewall and IA-to-IA Testing

Before the Firewall and IA-to-IA Testing can occur, the following steps must be completed:

- A dedicated circuit must be in place, and the hardware connectivity test must be completed.
- The CLEC must have installed and configured the Interactive Agent software.
- The CLEC must have returned the IP Addressing Worksheet and the Trading Partner Identification Worksheet form to Qwest.
- Qwest must establish the CLEC as a trading partner on its systems.
- Qwest and the CLEC must configure their systems to allow for electronic transaction or Order data to be sent between one another.
- Exchange of Digital Certificates between Qwest and the CLEC must be completed.

Process - Firewall and IA-to-IA Testing

The following steps will occur during Firewall and IA-to-IA Testing:

1. In the Project Plan, a mutually agreed upon date for Firewall and IA-to-IA Testing will be established and a testing call will be set up for this date. At the agreed upon date/time, representatives for the CLEC and Qwest will join the call.
2. The CLEC will send Qwest an 850 transaction (one per Trading Partner ID) either with invalid data therefore inducing a Business Process Layer (BPL) system error or one of their approved test scenarios.
3. When a valid 850 transaction is received, Qwest will, at a minimum, send the CLEC a +997 or -997 functional acknowledgement response which completes this cycle. If problems arise during this process step, each problem/issue will be reviewed and resolved with the necessary project team members via scheduled conference calls.

Successful completion of these steps will confirm that the Firewall and the IA configuration have been correctly configured.

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Exit Criteria – Firewall and IA-to-IA Testing

To demonstrate successful Firewall and IA-to-IA Testing, the following must occur:

- Qwest must receive a valid 850 transaction generated by the CLEC.
- CLEC must acknowledge receipt of the Qwest 997 (+ or -) indicating receipt of the 850.
- Qwest and the CLEC must agree that the test was successful and Firewall and IA-to-IA configuration has been correctly established.

Establishing a Dedicated Circuit and Connectivity Testing Phase Completion

This phase will be considered complete with the completion of the connectivity test in all applicable environments (SATE, Interoperability, and Production). Each test will be considered complete when all of the exit criteria are satisfied.

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Test Plan Development and Approval

During Progression Testing and Controlled Production, the set of required Scenarios that are to be tested will be mutually agreed upon and represented by the CLEC on a Test Plan. The following bullets indicate the activities to be performed during this process depending upon the testing phase and environment utilized.

For Progression Testing and Controlled Production, CLECs will submit a Test Plan using an adequate description of the test case and expected results (if testing in SATE, including the actual scenario number from the SATE data document) to represent the scenarios on the Test Plan. Qwest will review the Test Plan with the CLEC making the corrections needed for approval. For Progression Testing in both the Interoperability and SATE environments, the CLEC will complete a Test Plan document indicating the environment in which each scenario will be tested. (See ‘Scenario Creation’ in Progression and Controlled Production sections).

For any transactions to be sent to Qwest via EDI, data for the transmittal must be correctly structured. The Scenario data used in either the SATE or Interoperability environment must comply with the Developer Worksheet guidelines in terms of format and business rules and with the EDI Industry Guidelines (ANSI X12) standards for syntax, that govern the electronic data transfer process.

Test Plan Review Approval Process

The Test Plan review process for Progression Testing and Controlled Production will occur as follows:

1. The CLEC populates the Test Plan template with the scenarios the CLEC plans to test, with the expected responses. The Test Plan should represent the required Scenarios to be tested (Pre-Order transactions, product Order/Activity Types, Post-Order transactions) along with the required responses for each test Scenario. The scenarios on the Test Plan document should use an adequate description of expected results. The CLEC should ensure that the Test Plan includes transactions that will meet the minimum testing criteria for the phase of the test. These criteria are detailed in the Test Plan completion section of the Progression Testing or Controlled Production section of this document, as well as in Appendix D.
2. Qwest determines whether the CLEC has included appropriate scenarios on the Test Plan to meet the minimum requirements for Progression Testing, Controlled Production, or Migration to a new release. The BA then reviews the Test Plan comments with the CLEC.
3. The CLEC corrects the Test Plan based upon any feedback from Qwest and resubmits it to Qwest for review.
4. Tasks 2 and 3 repeat until the Test Plan is correct and approved by Qwest.

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The CLEC sends all final copies of the Test Plan to Qwest at testing completion. These final versions should exactly match the EDI information as it was actually submitted and successfully tested.

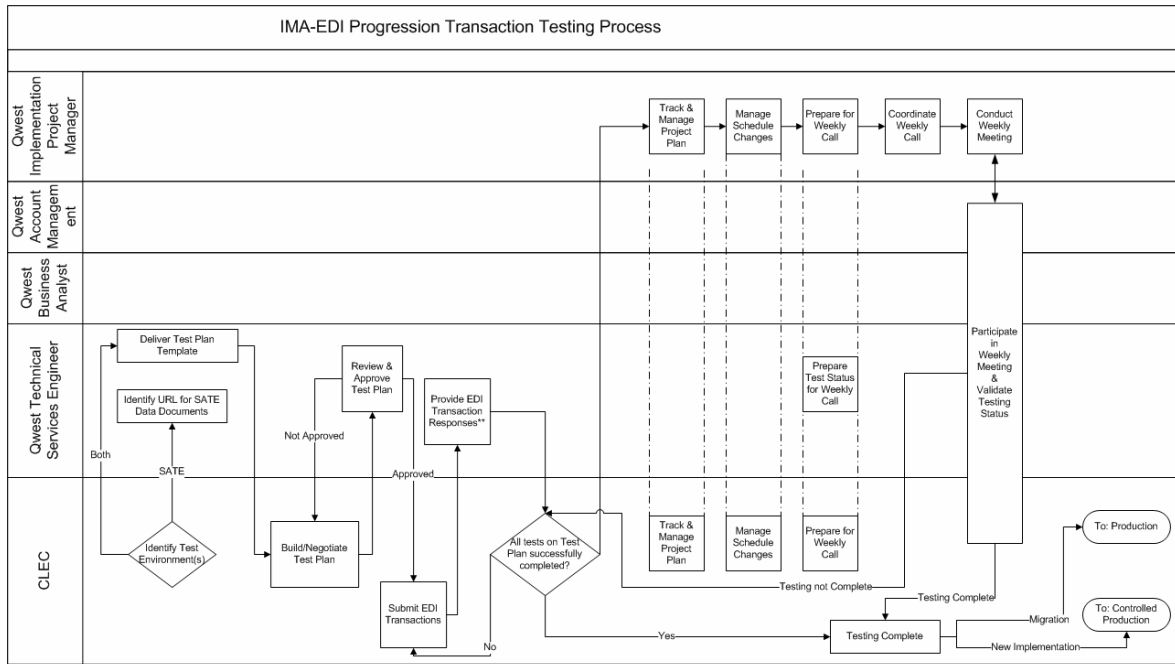
Comments Tab

The Comments Tab is used by Qwest to provide all comments regarding the Test Plan to the CLEC. It also provides a reference of all historical comments made regarding specific Scenarios. The comments will be in a tab that provides a cross-reference to indicate the Scenario number and field to which the comments apply, in addition to the reason why the noted item is an issue.

Progression Testing Phase

The Progression Testing Phase affords the CLEC the opportunity to validate their technical development efforts and to quantify LSR processing results. Progression Testing will identify the CLEC's ability to submit correct EDI transactions through the IMA system.

Progression Testing Process Flow



Note: Serial Progression through the processes is not required as some tasks may be performed in parallel
 **Order responses in Interoperability are generated by the Technical Services Engineer
 **Order responses in SATE may be generated by the Technical Services Engineer, by VICKI or Flowthrough

Progression Testing Activities

1. Choose a Test Environment

Qwest makes two environments available for CLEC use during the Progression Testing phase: Interoperability and SATE. These testing environments are described in more detail in the following sections of this document. –Table 2 below identifies the functionality provided by each environment.

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Table 2 SATE vs. Interoperability Functionality

SATE	Interoperability
Flow Through	No Flow Through
Automated Responses	Manual Responses
Provided Test Data	CLEC must use valid Qwest account data
Common Products Supported (See page 31)	All IMA products supported

A CLEC may choose to use one or both of Qwest’s testing environments. If a CLEC chooses to use both environments during a single implementation or migration, the CLEC should indicate on the Test Plan which environment will be used to test each scenario

Stand Alone Test Environment Overview

Qwest has developed a Stand-Alone Testing Environment (SATE) to take Pre-Order and Order requests, pass them to the stand-alone database, and return responses to the SATE user. SATE uses test account data and requests that are subjected to the same IMA EDI edits as those used in production. For SATE users, Qwest will provide the account data (see IMA EDI SATE Data Document). Order scenario submissions do not leave the SATE testing environment and do not affect the existing production data, nor are they provisioned while in use for the Progression Testing Phase.

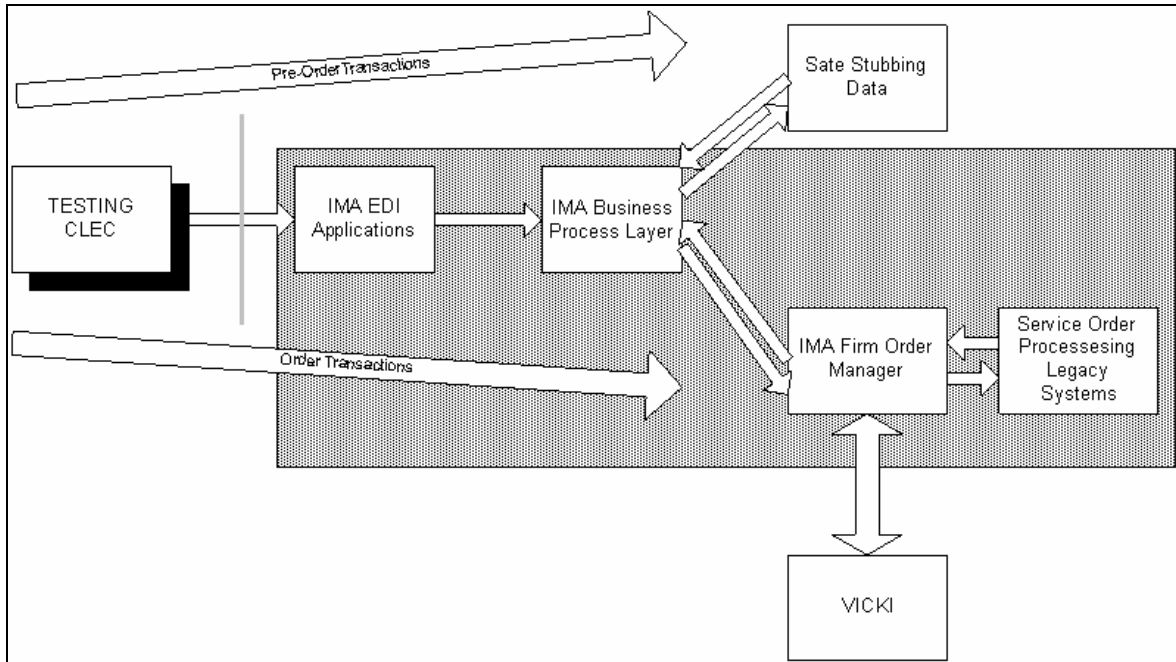
The goal of SATE is to supply a test environment that can be used to accomplish the following:

- Test an EDI application against real IMA functionality - SATE provides an unsupervised test environment that does not rely on real production systems but, at the same time, interacts with the SATE user’s application in the same manner as IMA EDI production systems.
- Test EDI maps via consistent responses – a primary benefit of both regression and progression testing.
- Run Pre-Order transactions, Orders, and Post Order transactions, including cancellations and Supplemental transactions, and receive error messages and consistent responses as a result.
- Practice the creation and submission of LSRs via the EDI interface.
- Enable the CLEC to identify where to review their business processes and modify the technology that supports their EDI interface.
- Provide automated post-order responses using VICKI.
- Provide the ability to test whether a given LSR would flow-through to the Qwest SOPs in a test environment.

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SATE System Layout



All systems in the shaded area are copies of the production systems. SATE houses simulated legacy system data and responses, known as stubs.

SATE Supported Transactions and Products

The following 836/850/860 transactions and all responses associated with them are included in the current release of the EDI Stand-Alone Test Environment:

Pre-Order

- Address Validation (Numbered Addresses only)
- Appointment Scheduling
- Cancel TN/Appointment
- Connecting Facility Assignment
- Facility Availability (Convert POTS to Unbundled Loop, POTS Facility Availability, HICAP Design Services)
- Meet Point Query
- Raw Loop Data Query
- Customer Service Record Query¹
- Service Availability
- TN Reservation Query (with TNSR following)

¹ FTP or e-mail requests will not be returned; the appropriate 855 response will be returned.

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- Loop Qualification Query
- Listings Reconciliation Query

Order

- Centrex Plus
- Centrex 21
- Centron
- Directory Listing Only
- EEL/UNE Combination
- Facility Based Directory Listing
- Local Number Portability
- POTS Resale
- Qwest DSL
- Shared Loop (including Line Splitting and Loop Splitting)
- UNE-P Centrex
- UNE-P Centrex 21
- UNE-P POTS
- Unbundled Loop
- Unbundled Loop with Number Portability (LNP only)
- Unbundled Distribution Loop
- Unbundled Distribution Loop with NP
- UNE Centrex 21 (P or STAR) Split
- UNE-P POTS (P or STAR) Split
- UNE Unbundled Loop Split
- Unbundled Loop Split with NP

Post Order

- Local Response
- Completion
- Status Updates
- Pending Service Order Notification(PSO)
- Billing Completion Notification (BCN)
- Batch Hot Cut Status Update
- Service Order Status Inquiry (SOSI)
- Provider Notification (PN) - 836 one-way (Qwest to CLEC) EDI transaction

Note: Additional functionality can be agreed upon and added in later releases. Requests for transactions not currently supported may be requested via CMP.

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SATE Transaction Responses

In SATE, Pre-Order and Order transactions are created using Qwest provided data that when submitted to SATE, will return consistent responses. These responses will enable the SATE user to test the EDI mapping structure, as well as ensure that these responses can be successfully received and interpreted by the CLEC.

SATE's VICKI (Virtual Interconnect Center Knowledge Initiator) functionality will allow a CLEC to submit a Local Service Request (LSR) in the Stand Alone Test Environment (SATE) and receive specific expected responses. The set of responses produced from chronological system events is known as a "Path". The paths are listed in detail in the SATE VICKI Path document. If a desired path includes manually generated responses, such as a Manual FOC, the response is still listed in this document, however, instead of a time delay, the phrase "Manually Generated" is shown. When a path ends in a manually generated response, the LSR will be included in a Qwest manual work queue to trigger the response to be sent to the CLEC.

The automated replies from the Stand-Alone system will remain consistent over time. For example, a Raw Loop Data query for a given phone number will always give the same reply. The only case where this will not be true is on related scenarios and the data saved in them. For example, in the case of POTS Resale, an edit is done on whether a phone number has been reserved. A CLEC may therefore have an LSR error if the TN is not reserved, but the same LSR would go through if a phone number had been reserved. Another case where saved data will be used, making replies differ, is LSRs with Supplementals.

Unless the data document indicates otherwise, the system generated error codes and messages returned in SATE will exactly mirror the Production environment. As some responses in SATE and production are manually generated, the verbiage used in SATE on outbound response may not match what a CLEC may receive in production, nor represent the actual message/data content expected from the result of the transaction or Order.

SATE does not mimic the timing of responses in production. Pre-Order responses and BPL errors are system-generated in real-time from SATE.

Where CSRs are requested via e-mail or FTP, the appropriate 855 response will be generated. The CSR will not be sent via e-mail or FTP.

CLECs may escalate a technical inquiry or a Progression response request to their assigned Project Manager (PM) or SPOC. If technical problems are experienced in SATE, Progression users should contact their assigned TSE; Regression users should send an e-mail to: sateedi@qwest.com

SATE 836 Line Loss Notifications (PN) are manually generated individually. If you wish to receive a PN transaction, progression users should contact your assigned implementation/migration TSE or SPOC and regression users should contact sateedi@qwest.com and request that one be generated.

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SATE Multi-Release Support Schedule

At a minimum, the SATE environment will support any releases that are currently available for implementation in IMA. New releases of IMA are planned for release on the IMA EDI Stand-Alone Test Environment approximately thirty calendar days prior to their release into production unless that release is deemed to be in 'red testing status'. Red testing status indicates that the IMA release's system testing effort has discovered significant issues that place the release in jeopardy. There will be no mid-cycle data conversion in SATE. The sunset dates for SATE will be the same as for the IMA Production releases.

SATE Functionality – Assumptions

Interface

- The IMA EDI Stand-Alone Test Environment will run EDI only. No IMA GUI access is provided.

Availability - Days/Hours of Operation

- The SATE system will be available from 6 am to 8 pm Mountain Time (MT) on Monday through Friday only. Technical support will be provided from 8 am to 6pm Monday through Friday. During the remaining hours that the SATE system is available (Monday through Friday 6am-8am and 6pm-8pm (MT)), limited after-hours technical support may be provided upon request.

Usage Limits

- Qwest reserves the right to limit the number of transactions or Orders submitted by any single SATE user where such usage levels could jeopardize or diminish the usefulness of SATE to other users; SATE is not to be utilized for load testing.

Transaction and Order Data Retention

- The IMA database designed to hold appointments, LSRs, and other data specific to the transactions being performed via the EDI submittals will be completely cleared of all SATE-user-submitted data 40 days after the transactions are submitted. This will impact transactions and Orders that depend on related Transaction Numbers or Purchase Order Numbers (PONs) being in the system, such as SUPs, etc. Regression SATE users must anticipate this and plan their testing accordingly. The Implementation Project Manager will assist Progression users of SATE in test scheduling.

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Adding Additional Data to SATE

The SATE Data Document contains data available in the SATE system for CLEC use in testing their IMA EDI Interface. The SATE Data Document is updated for new releases any time a product is added or a system change occurs that impacts the Data Document. In the course of testing their interface, a CLEC may need additional data added to the SATE system to support their testing. If such additional data is needed, the data request process is used.

The process for adding additional data to SATE is:

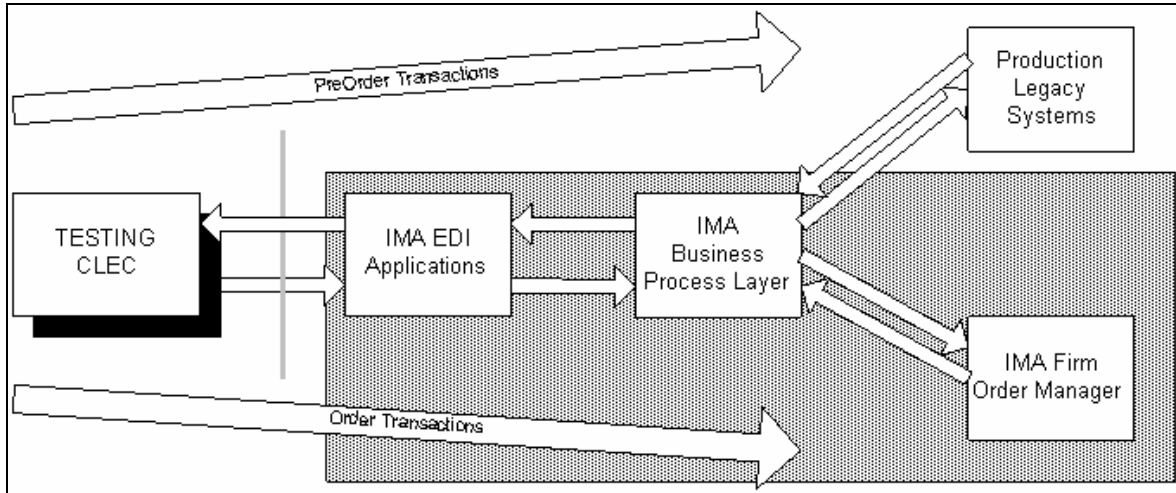
- With a new data request, the CLEC completes a Data Request Form and will be asked to provide options for times they are available to meet for an initial and second meeting. The initial meeting can occur as early as the day after Qwest receives the data request. The second meeting will be three days after the initial meeting at the earliest. Both meetings will be scheduled based upon the CLEC's availability.
- The form can be obtained from the Implementation Team or found on the Qwest IMA EDI web site: [http://www.qwest.com/wholesale/IMA EDI/document.html](http://www.qwest.com/wholesale/IMA%20EDI/document.html)
- When completing the form, the CLEC should provide a detailed explanation of the data request. This explanation needs to include comprehensive detail that will allow Qwest to clearly understand the request. The CLEC then submits the completed Data Request Form to sateedi@qwest.com.
- When Qwest receives the data request, Qwest will send an e-mail message to the CLEC stating that the request was received and accepting a time for the initial meeting.
- During the initial meeting, Qwest will review the data request with the CLEC to ensure a common understanding of the request.
- Within two business days of the initial meeting, Qwest will either send approval of the request or schedule a second meeting with the CLEC.
- During the second meeting, Qwest will work with the CLEC to resolve any open questions that Qwest has regarding the data request.
- When the intent of the request is understood, the Qwest SATE Data Document coordinator will e-mail the data to be added to SATE to the requesting CLEC. This e-mail will request concurrence from the CLEC that the data included in the e-mail will satisfy the request. The day following the second meeting Qwest will provide approval of the request, assuming there are no open issues being researched by the CLEC. With the receipt of a concurring e-mail from the CLEC, the request is considered approved.
- Within ten business days of the approval, Qwest will load the approved data into SATE.
- When the data is loaded, the SATE Data Coordinator will send an e-mail to the requestor stating that the data has been loaded into SATE and it is available for testing use.
- Although Qwest replicates all new data to all SATE CLEC accounts as part of loading new data, the data document will only be updated when multiple CLECs request similar data.

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Interoperability Environment Overview

The IMA interoperability environment is a production copy of IMA.



All systems in the shaded area are copies of production systems.

Order data in the Interoperability environment is validated against the Production OSS legacy system information and must pass all BPL edits as if it was to be provisioned. However, the order is not passed to the OSS legacy system for provisioning during the Progression Testing phase and order scenario submissions do not leave the Interoperability environment.

For the scenario to be successfully processed in the Interoperability environment, the CLEC must supply valid account data. This means that the account information must exist within the Qwest systems and be valid in terms of its account owner (Qwest or CLEC), account number, status, end user, related content and format.

In the IMA Interoperability environment, Progression Testing involves the CLECs using their own account data for submitting a minimum set of test scenarios for all transactions they wish to perform in Production.

The accounts used by a CLEC in the Progression Testing Phase will be left intact in Qwest production systems. Orders that mimic an eventual production order may thus be used in the Interoperability environment for the Progression Testing Phase. Once successfully Progression tested, these may then be submitted in Controlled Production and provisioned.

For FBDL, the scenario test bed data is provided.

Supported Transactions – Interoperability

All transactions supported by the production IMA release are supported in the Interoperability environment.

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Multi-Release Support Schedule – IMA Interoperability

The IMA Interoperability environment will support all releases supported in Production. New releases of IMA are planned for release in the Interoperability environment thirty calendar days prior to their release in Production unless that release is deemed to be in ‘red testing status’. Red testing status indicates that the IMA release’s system testing effort has discovered significant issues that place the release in jeopardy. There will be no mid-cycle data conversion in the Interoperability environment.

Transaction Responses – Interoperability

Pre-Order and Order data in the IMA Interoperability environment is validated against Qwest OSS legacy system information and system-generated error messages are returned from the BPL edits. Therefore the system-generated responses returned match those expected in production. IMA Interoperability Post-Order responses are manually generated and may include Local Responses (all types), Status Updates, and Completions. Verbiage on these outbound manually-generated Post-Order responses created by a tester in Interoperability may not exactly match the message generated by the ISC representative on a similar production transaction.

IMA FBDL responses are system generated and based on the pre-defined scenario test bed data that is submitted for testing. For FBDL, there are neither 860 transactions nor Completion responses, only 855 transaction responses. FBDL status and error codes are system generated (see IMA FBDL EDI Transaction Processing in Technical section of this document).

In Interoperability, the timing of responses is not meant to mirror production.

Availability – Interoperability

The Interoperability environment is available from 6 am to 8pm MT Monday through Friday only. Technical support will be provided from 8 am to 6pm Monday through Friday. During the remaining hours that the Interoperability system is available (Monday through Friday 6am-8am and 6pm-8pm (MT)), limited after-hours technical support may be provided upon request.

2. Test Plan Creation - Progression

To prepare for IMA Progression Testing, the CLEC sends Qwest a Test Plan for review. For SATE testing, the scenarios on the Test Plan must utilize the scenario number from the data document to enable Qwest to verify these against the source document. If the CLEC is testing in both the Interoperability and SATE environments, the CLEC must indicate the environment in which the scenario will be tested. Further information regarding the completion of the Test Plan can be found in the Test Plan Development and Approval section of this document.

As referenced in the Test Plan Development and Approval section of this document, the Test Plan must satisfy all Progression Testing minimum testing requirements. The minimum set of required Scenarios is dependent on the transactions (including Pre-Order, Order, and Post-Order) that the CLEC intends to utilize in production via EDI.

IMPORTANT...Please note the following with respect to transmission of post order responses from Qwest to the CLECS for 17.0 and future releases (including: Provider Notification, Status Updates, Billing Completion Notifications, Pending Service Order Notifications and Batch Hot Cut Status Notifications):

If any one CLEC (identified as an individual RSID/ZCID) has elected to receive a given post-order response from Qwest (for either GUI or EDI responses), all other Trading Partners who also provision services using that RSID/ZCID will also be configured to receive those post-order responses. This applies to all DLEC arrangements as well as to any other Shared RSID/ZCID or LOA arrangements that CLECs might have in place for provisioning purposes.

The Main CLEC/Trading Partner must test the response transaction as part of the certification process. Any other Trading Partners using the RSID/ZCID of the Main CLEC/Trading Partner may either elect to test that post-order response transaction and certify receipt of that subscriber response in Controlled Production or may elect in writing (e-mail is okay) to waive testing of that subscriber response and acknowledge that they understand they will be still be receiving those transactions even though they have not implemented a map to translate the transaction.

Guidance for the minimum number and type of Scenarios is reflected in the following requirements:

IMA Pre-Order Transactions - Progression Testing minimum requirements:

1. The CLEC must test every 850 and 860 Pre-Order transaction being implemented.
2. For every Pre-Order transaction Query being implemented, the CLEC must test every 855 and 865 Response Type.

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IMA LSR Order and Post-Order Transactions - Progression Testing minimum requirements:

1. The CLEC must test every 850 LSR Order transaction and every associated Activity Type being implemented.
2. The CLEC must test at least one 860 supplemental transaction per product being implemented.
3. The CLEC must test all three 860 supplemental transaction types (1=Cancel Order, 2=Change Due Date, 3=Other Change).
4. The CLEC must receive either an 855 or 865 positive response [Local Response (FOC – RT values B, C, D, or X) or DSRED (AT, AC)] for every Product/Activity Type combination being implemented.
5. The CLEC must receive at least one 865 Completion for every product being implemented.
6. The CLEC must have at least one transaction correcting a Local Response System Reject (RT Value Z) and one correcting a Local Response ISC Reject (RT Value Z).
7. The CLEC must test every 836, 855 and 865 Response Type on the Test Plan (855/865 RT Values B, C, D, or X and E, N, J, and S) – Including 836 Provider Notification (line loss), 855 Status Update and 865 Pending Service Order Notification only if it is being implemented. In addition, at least one Local Response (RT value J – Jeopardy) must be tested as the next response after receiving an 850 FOC.
8. For new FBDL implementations, CLECs must test any type of additional listing (e.g. Local Additional Listing (LAL), Local Extra Listing (LXL), etc.).

NOTE - Once initial Progression Testing for a release is complete, implementation of additional LSR products need only meet requirements 1, 2, 4, and 5 above, while additional Activity Types for previously tested products need only meet requirement 4 above.

The IMA LSR Order Scenario submittals used for the Progression Testing Phase are not sent to the legacy systems to affect the existing production data, and are not provisioned. Thus the accounts used by a CLEC in the Interoperability environment will be left intact in Qwest production systems. SATE test data accounts are provided by Qwest; therefore no production accounts are involved.

For FBDL, Qwest provides the data to the CLEC for Listing Type testing. Listing Types may include Non-Complex – “Straight Line” and “Straight Line Under” (SLU) or Complex “Caption” listings indicating multiple sub-level details (indentation). Listings Type may include the following Activity Types - New (C), Change (C), Delete (D), CLEC-to-CLEC conversion (W), and Outside Move (T). The CLEC will select and use the Qwest-provided data to correctly populate their orders for submittal to the FBDL Interoperability testing environment. If the CLEC chooses to use the SATE environment the test data is provided in the SATE Data Document.

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3. Conducting the Progression Test

Progression Testing Entrance Criteria

To begin Progression Testing, each of the following criteria must be met:

- Successful completion of Firewall and IA-to-IA Connectivity testing in the chosen (Interoperability and/or SATE) environment
- Approval of the negotiated Project Plan
- Completion and approval of a Test Plan

Progression Testing Process

The Progression Testing process is executed as follows:

1. The Qwest test environments will be available for testing during posted times and, if attended testing is selected, the TSEs will be available on testing days as scheduled and agreed.
2. The CLEC submits test transactions, according to the approved Test Plan.
3. Qwest generates the expected result 997, 836, 855, and 865 responses based on the Test Plan or in the SATE input remarks.
4. A call may be scheduled (typically on a daily basis) to provide an opportunity for CLEC and Qwest testing representatives to interact and discuss the testing results. Testing communication may also be done via email if unattended testing is selected.
5. The Test Plan/Testing Status Log will be updated to reflect, at a minimum, testing start and completion dates.

Progression Testing Exit Criteria

Progression Testing will be considered complete when the CLEC has met each of the following criteria:

- CLEC has completed all agreed upon Test scenarios as identified in the Test Plan
- CLEC is able to send valid 850 and, when applicable, 860 transactions.
- CLEC can confirm their ability to receive from Qwest the 997, 855, and 865 response transactions
- CLEC is able to generate 997 functional acknowledgements in response to Qwest 855 and 865 transactions.

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- CLEC can confirm their ability to notify users of responses generated by Qwest, to indicate whether the submitted transaction was successfully processed.
- CLEC can confirm their ability to detect transaction processing failure within any component of the EDI environment.
- CLEC has completed the list of points-of-contact for after-hours and emergency issues in the Troubleshooting Guide and submitted it to Qwest.
(See ‘CLEC Roles and Responsibilities’ in the Production section).

Progression Testing Phase Completion

This phase will be considered complete when all of the Progression Testing exit criteria are satisfied.

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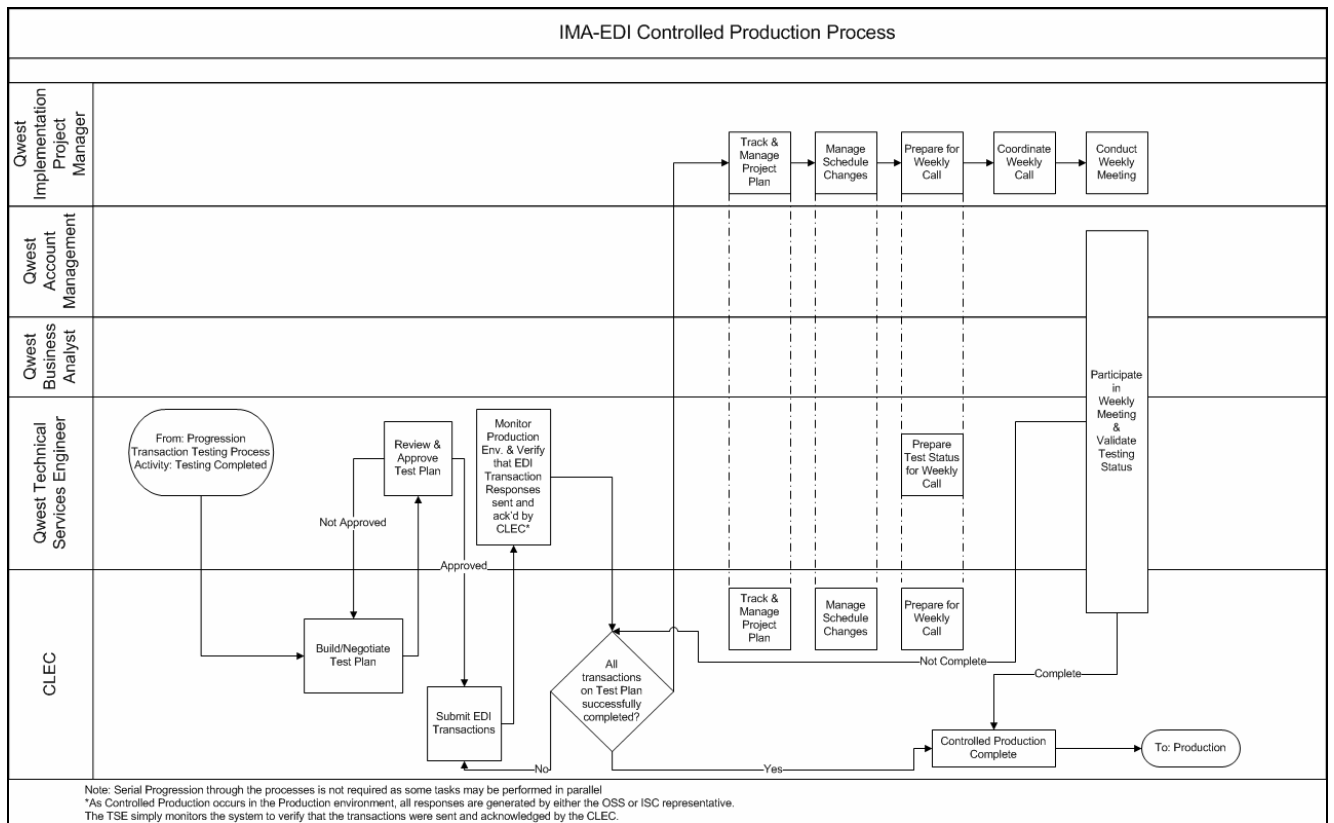
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Controlled Production Phase

Definition

Controlled Production is permitted after the successful completion of the Progression Testing Phase. The Controlled Production process is designed to confirm environment configuration and validate the ability of the CLEC to transmit EDI data that meets X12 standards. Controlled Production consists of the submission of requests to the Qwest production environment for provisioning as production Orders. Qwest and the CLEC use Controlled Production results to determine operational readiness for full Production turn-up.

Controlled Production Process Flow



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Controlled Production Activities

1. Test Plan Creation

The CLEC will need to create a Test Plan that meets the following minimum testing criteria for Controlled Production. Further information regarding the creation of the Test Plan can be found in the Test Plan Development and Approval section of this document.

IMA Pre-Order Transactions - Controlled Production minimum testing requirements:

1. The CLEC must test one 850 and 860 transaction for each Pre-Order function being implemented.
2. For every Pre-Order transaction tested, the CLEC must receive an 855 or 865 response, as applicable.

IMA LSR Order and Post-Order Transactions - Controlled Production minimum testing requirements:

1. The CLEC must test one 850 LSR Order transaction per product being implemented.
2. The CLEC must receive any 855 response [Local Response or DSRED (Any response value)]for every Product being implemented.
3. CLEC must receive at least one of any post-order subscriber response being implemented (836 Provider Notification (Line Loss), PSON, SU, BCN).

2. Executing the Controlled Production Test

Entrance Criteria – Controlled Production

To begin Controlled Production, each of the following criteria must be met:

- Progression Testing Phase has been successfully completed.
- A Controlled Production Test Plan is approved
- Qwest has ensured that the tested TPRs are loaded into Qwest Production environment.
- Qwest has ensured the Firewall rules are pushed to Production.

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Process – Controlled Production

The Controlled Production process will be as follows:

1. Qwest and the CLEC agree on a set time for testing, if attended testing is selected.
2. The Production environment will be available during IMA hours of operation, however if attended testing is selected, the TSE/SPOC will be available for testing only during negotiated times.
3. The CLEC sends the 850 (and 860 for IMA) transactions electronically to Qwest.
4. Qwest monitors the transaction flow for submitted transactions during the testing period, including confirmation of functional acknowledgements from the CLEC system.
5. A call will be scheduled (typically on a daily basis) to provide an opportunity for CLEC and Qwest testing representatives to interact and discuss the testing results. Testing communication may also be done via email.

Exit Criteria – Controlled Production

Controlled Production will be considered complete when the CLEC has met each of the following criteria:

- CLEC has completed all agreed upon Controlled Production scenarios as identified in the Test Plan.
- CLEC is able to send valid 850 and, when applicable, 860 transactions.
- CLEC can confirm their ability to receive from Qwest the 997, 855, and 865 transactions and appropriate pre-order response transactions.
- CLEC is able to generate 997 functional acknowledgements in response to all Qwest 855 and 865 transactions.
- CLEC can confirm their ability to notify users of responses generated by Qwest, to indicate whether the submitted transaction was successfully processed.
- CLEC can confirm their ability to detect transaction processing failure within any component of the EDI environment.
- The list of CLEC points-of-contact for after-hours and emergency issues is current.

The Controlled Production exit criteria listed above must be satisfied for a transaction type before it can be utilized by the CLEC in the Qwest production environment. When meeting the above requirements for Controlled Production, any given product can be phased into production, as CLEC client data becomes available to be provisioned. A CLEC can move into IMA Production with one or more products as each of the products being implemented for that release receives an 865 Completion and at least one product being implemented for that release has also received an 865 Local Response with the RT value of either B, C, D, or X for a Supplemental transaction.

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Controlled Production Phase Completion

This phase will be considered complete when the Controlled Production exit criteria are satisfied for each product that the CLEC desires to implement.

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Production

Phased Support Procedures/Contacts

EDI support to IMA CLECs who have recently been placed into production (either via a new implementation or migration process) will be provided as follows:

<u>IMA Timeframe</u>	<u>Technical Support</u>	<u>Contact Information</u>
After production 'turn-up' and migration - First five days	EDI SPOC or Implementation Team	Phone/Pager will be provided
After production 'turn-up' and migration – After First five days	Qwest IT Wholesale Systems Help Desk	1-888-796-9102, Option 3

Qwest IT Wholesale Systems Help Desk Roles and Responsibilities

Qwest IT Wholesale Systems Help Desk (WSHD) personnel will provide information and resolution for IMA EDI transaction processing problems that are caused by failure of Qwest EDI environment hardware or software components. This resolution may be in the form of direct action or through escalation to the appropriate individuals within Qwest.

If the WSHD cannot resolve the issue during the initial phone call, they will escalate to Tier 2 Production Support. The Tier 2 Support Team will then either resolve and close the issue directly with the person that reported the issue or provide the closure information to Tier 1 for communication and closure with the CLEC.

Limitations for Qwest EDI Support

The Qwest IT Wholesale Help Desk is not designed to provide assistance with transaction failure caused wholly or in part by failure of any component of the CLEC EDI processing environment.

Questions regarding Order content, Order writing procedures or transaction status should be referred to the Qwest Interconnect Service Center Help Desk or the CLEC Qwest Service Manager.

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CLEC Roles and Responsibilities

If CLEC resources cannot be contacted when EDI production problems arise, Qwest reserves the right to suspend the CLEC trading partner relationship until such contact can be made.

CLEC systems must be up to receive Qwest transmissions/responses during Qwest IMA EDI posted hours of operation in order to prevent backlog issues within Qwest systems.

IA Recovery Process

If Qwest is unable to deliver responses to a trading partner, then those transactions are queued in a Recovery Directory to be re-tried periodically. Once the configured threshold for the number of transactions permitted in the Recovery Directory has been reached, the trading partner is suspended until the receiving trading partner confirms that connectivity has been re-established. Upon receipt of such confirmation the trading partner is unsuspending and Qwest will retransmit the queued transactions over a period of time.

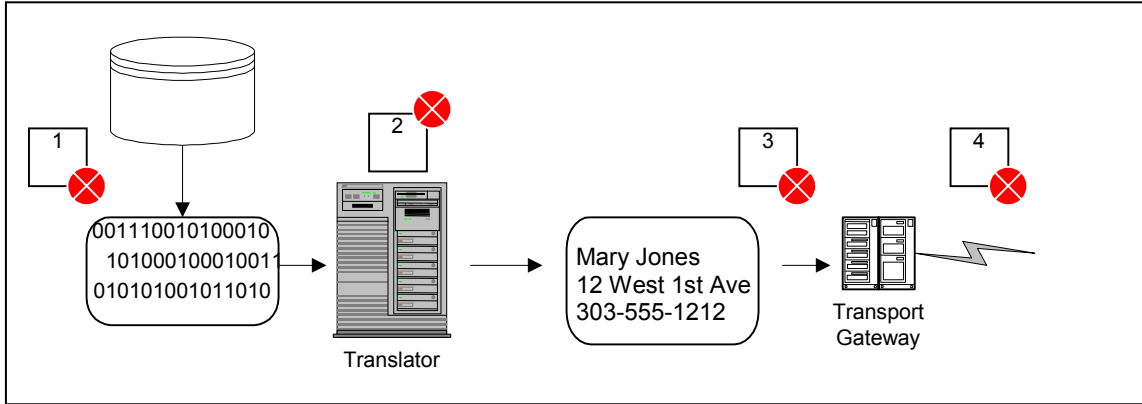
Each CLEC now has the ability to determine a unique threshold. The CLEC should base the decision on their unique system alerting and production support processes. A higher setting means that more transactions build up in recovery before Qwest production support personnel are alerted that there is a potential connectivity issue. Call the WSHD to request an increase to the threshold. It takes 5 business days to implement changes in the production environment.

Before contacting Qwest support, the CLEC should perform a thorough analysis of the components within their EDI environment (see Diagram below) to insure that transaction failure is not a result of anomalies within their system. The following EDI environment items should be verified before contacting Qwest:

- 1) Flat file generation
- 2) Successful translation
- 3) Successful hand-off to transport
- 4) Successful transport to Qwest

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The detailed steps for this verification are as follows:

- 1) Check the PON in the <CLEC internal OSS system>
 - Was the 850 sent successfully?
 - Was a 997 received for all messages sent to Qwest?
 - What is the error text in any return messages from Qwest?
- 2) Make sure the IA connection is operating properly.
- 3) Compare the response times to the limits set in the Interconnect Agreement.
- 4) Review all associated messages for the PON in Question.
- 5) Have the following information already gathered before contacting Qwest Help Desk:
 - TXNUM or PON #/Ver# and CCNA
 - Date and approximate time of transmission
 - Document/transaction type (e.g. 850CSRQ, 860SUPP, etc.)
 - Name, address and telephone number
 - Circuit ID information provided by Qwest at the time the Unbundled Loop was provisioned
 - IP and Port assignment information
 - Description of problem
 - List of all associated transactions/responses
 - <CLEC> Support Points of Contact

Further information is provided in the Qwest IMA EDI Troubleshooting Guide provided during the Progression Testing phase.

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Migrating to a New Release

Release Lifecycles

The Qwest EDI interface architecture provides the capability for multiple releases to be in production at a given time. This design allows a CLEC to continue production use of a particular release while performing the development necessary to migrate to a more current release. It is important that the CLEC be aware of the retirement date for the current release they are implementing, or currently using, and be prepared to migrate to a subsequent release as appropriate. EDI releases have predetermined sunset timeframes, after which point they will be unavailable for use. It is the CLEC's responsibility to be aware of these timeframes and plan accordingly. Release timeframes are updated and posted to the CMP website located at:

<http://www.qwest.com/wholesale/cmp/ossalendar.html>

Note: Use of the GUI interface, which is always the most current release, concurrently with a prior version of EDI may not be viable due to differences between the two releases.

Migrating to a New Release

Qwest supports a multi-release strategy for its EDI Interface. Information regarding the release schedule is posted on Qwest's Wholesale website. The Recertification memo for a new release is issued forty-five (45) days prior to the date the release is implemented in Production and contains specific EDI-related dates for the release.

Qwest currently uses the following guidelines regarding the availability and retirement of releases:

- Each new release is scheduled to be available in the Interoperability and SATE environment thirty (30) days prior to its implementation in the production environment.
- IMA EDI releases are supported six (6) months after the next release is implemented.
- Release guidelines in the Recertification memo are provided to the CLECs forty-five (45) days prior to a release. These include the dates by which a CLEC must begin Progression testing for a given release and when transactions on that release must be in Production by the CLEC. If these dates are not met by the CLEC, the CLEC must implement the next release instead.

These guidelines are designed to ensure the CLEC's successful implementation or migration and to minimize the risk associated with development and deployment of new software. Variations to this schedule may become necessary and any such changes will likewise be published to CLECs via the normal CMP communication channels.

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Recertification Requirements

Recertification is the process by which CLECs demonstrate the ability to correctly generate and accept transactions that were updated for the new release. For each release, Qwest will determine which transactions require the CLEC to perform recertification testing. For a given release, it is possible that only some of the transactions will require recertification by the CLEC. That decision by Qwest will be based upon the following factors:

- Mapping changes
- Changes to Qwest business rules enforced by the system

Transactions requiring recertification will be made known to the CLEC in the Recertification Memo, issued with the Disclosure Documents for the new release. As detailed in the minimum requirements below, a migration test will be required for each product.

IMPORTANT...Please note the following with respect to transmission of post order responses from Qwest to the CLECS for 17.0 and future releases (including: Provider Notification, Status Updates, Billing Completion Notifications, Pending Service Order Notifications and Batch Hot Cut Status Notifications):

If any one CLEC (identified as an individual RSID/ZCID) has elected to receive a given post-order response from Qwest (for either GUI or EDI responses), all other Trading Partners who also provision services using that RSID/ZCID will also be configured to receive those post-order responses. This applies to all DLEC arrangements as well as to any other Shared RSID/ZCID or LOA arrangements that CLECs might have in place for provisioning purposes.

For CLECs migrating from 15.0 or 16.0 to 17.0: The Main CLEC/Trading Partner must test the response transaction as part of the migration process if it is listed as a requirement on the Recertification Memo. Any other Trading Partners using the RSID/ZCID of the Main CLEC/Trading Partner may elect to do one of the following: 1. Migration test the subscriber response if they already have it in Production and it is listed on the Recertification Memo; 2. Test that post-order response transaction as a new product and certify receipt of that subscriber response in Controlled Production; or, 3. Elect in writing (e-mail okay) to waive testing of that subscriber response and acknowledge that they understand they will be still be receiving those transactions even though they have not implemented a map to translate the transaction.

At the time a CLEC migrates to a new release, any transaction(s) that the CLEC does not yet have in production using a current IMA EDI version is considered to be a new implementation effort. These transactions must be implemented using all Phases of the implementation lifecycle as defined in this document. In some releases, existing transactions are updated with significant additions that add business rules and/or large map changes. If the CLEC intends to use the new functionality, they will be required to perform a new product implementation of this transaction. This will entail Progression Testing and Controlled Production submittal of scenarios that reflect the new functionality. CLECs not intending to use the new functionality will be allowed to recertify existing functionality that is still available in the new release.

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Please note that point releases (i.e. 8.01) do not require recertification.

To recertify or migrate a given transaction, the CLEC must perform the following minimum test requirements in the Interoperability or SATE environment:

IMA Pre-Order Transactions - Recertification/migration minimum requirements:

Recertification or Migration:

The CLEC must successfully test every 850 and 860 transaction being migrated using at least one associated Query or Selection Type. A successful transaction is one that receives a positive 855 or 865 Response Type (i.e. ‘Good’ or ‘Exact Match’ response).

IMA LSR Order Transactions – Recertification/migration minimum requirements:

Recertification:

The CLEC must successfully test every 850 and 860 transaction for each product being migrated if the product is listed in the Recertification Notice. Transactions must use the associated activity types being migrated based on the ‘and’ vs. ‘or’ logic in the Recertification Notice. A successful transaction is one that passes the BPL (i.e. does not receive an 855 or 865 System Reject).

Migration Trading Partner Configuration Verification (TCV):

The CLEC must successfully test at least one 850 or 860 transaction for each product being migrated if the product is not listed in the Recertification Notice. Transactions must use at least one of the associated activity types being migrated. A successful transaction is one that passes the BPL (i.e. does not receive an 855 or 865 System Reject).

IMA Post-Order Transactions - Recertification/migration minimum requirements:

Recertification:

The CLEC must test every 836, 855 and 865 response type being migrated if listed in the Recertification Notice.

Migration:

The CLEC must test each response type (either the 836, 855 or 865 response) being migrated if not listed in the Recertification Notice. Please note that the 855 or 865 LR may be any RT Value.

There are many factors that will influence the CLEC’s migration plan. These influences and the process for migration are discussed further in the following section of this document.

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Migration Process

CLECs will be reminded in writing of their need to migrate to a new release prior to the next release being implemented. For migration, the CLEC will follow the same process as an initial implementation except that Controlled Production is not required on any EDI transaction that successfully completed Controlled Production testing in a prior release. Any product not successfully tested in Controlled Production in a prior release will not be migrated under this exemption.

When ready to begin the migration, the following steps will be followed by the CLEC:

1. Contact the Qwest-assigned EDI Single Point of Contact (SPOC).
2. Attend an initial migration meeting call to discuss Recertification, migration strategy, and 'mid-cycle' data conversion.
3. Develop a migration Project Plan and mutually agree to assist in the scheduling of appropriate resources. This plan will identify the mutually-agreed-upon migration date and acknowledge the 'blackout dates' during which resources and systems may be unavailable to the Recertification/migration project.
4. Complete a Test Plan that includes tests to comply with all minimum testing requirements for a new release.
5. Perform the Progression Testing Phase per the minimum testing requirements for those transactions that are to be migrated to the new release. The CLEC will be expected to execute the required minimum test case scenarios in the Interoperability or SATE environment and provide Qwest the PONs of the successful Scenarios. This will allow Qwest to verify during its Migration Readiness Assessment that the CLEC is ready to move into production on the new release.
6. Conduct Migration Readiness Assessment after the completion of testing.

Migration Exit Criteria

Migration will be considered complete when the CLEC has met all of the following criteria:

- CLEC has completed all agreed upon scenarios as identified in the migration Test Plan.
- CLEC has demonstrated the ability to send valid 850 and 860 transactions.
- CLEC can confirm their ability to receive from Qwest the 997, 855, and 865 transactions and appropriate preorder response transactions.
- CLEC has demonstrated the ability to generate 997 functional acknowledgements in response to Qwest 855 and 865 transactions.
- CLEC can confirm their ability to notify users of responses generated by Qwest, to indicate whether the submitted transaction was successfully processed.
- CLEC can confirm their ability to detect transaction processing failure within any component of the EDI environment.

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- The list of CLEC points-of-contact for after-hours and emergency issues is current.

IMA Data Conversion

As part of the IMA migration process, Qwest performs a ‘mid-cycle’ data conversion. With data conversion, any requests in the IMA database for the old release are converted to data compatible with the new release. Data conversion occurs at the same time as the migration to the new release. Qwest has blackout dates when data conversion cannot be performed, including the week before or after a new IMA release is deployed or during scheduled maintenance windows. Migration weekends cannot be scheduled during these blackout dates.

Qwest has the largest window for conversions on Saturday evenings (15 hours – 9 p.m. to Noon Sunday versus 6 hours – Midnight to 6 a.m. on weeknights) based on IMA hours of availability. This is why Qwest targets Saturday nights for conversions. If anything were to go awry during the conversion it is critical to have enough time to restore and restart the conversion process. As a result, Qwest will schedule migrations/data conversions only on Saturday evenings.

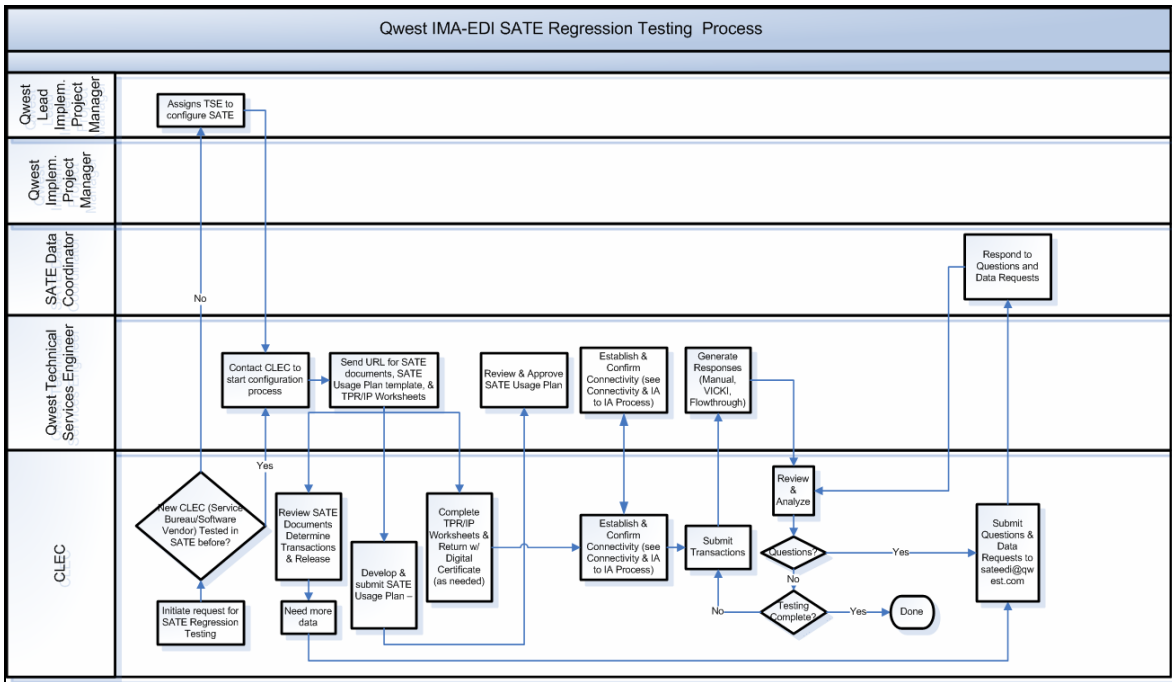
Regression Testing

For CLECs, Service Bureaus, and Third Party Software Vendors wishing to test EDI functionality without supervision or direct support, Qwest permits access to SATE for what is referred to as “regression” testing. Although SATE access and regression usage is permitted, Qwest provides no “certification” to Service Bureaus or Third-Party Software Vendors. The CLEC, Third-Party Software Vendor, or Service Bureau contacts the LPM to express an interest in regression testing. The LPM will assign a SPOC (if no relationship to Qwest exists). Access to SATE for this purpose then requires the Initial Discussion, negotiated regression Usage Plan, Requirements Review, Circuit Installation/Configuration, and Firewall and IA-to-IA Testing requirements as described in prior sections of this guide (see Typical Implementation Timeline). Regression testing is primarily for those with ‘no intent’ toward meeting any Qwest entry or exit criteria within an Implementation process. This testing approach is represented on a Usage Plan that indicates the intended testing activities and timeline. Qwest personnel resources are not tasked to directly support regression SATE users.

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Regression Testing Process Flow



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Regression Testing Activities

The process for regression testing in the Stand-Alone Test Environment is as follows:

1. The regression user account and identity are established in SATE by Qwest.
2. Qwest provides data documents that describe the test accounts and valid data.
3. The SATE user completes a Usage Plan indicating the EDI transactions that the regression user plans to submit during testing. The Usage Plan template will be provided to the regression user. The Usage Plan is intended to provide Qwest with an estimate of the number of each type of transactions that the regression user intends to test in regression testing. When completing a usage plan, regression users should remember that the SATE system is not designed to support volume or capacity testing.
4. Qwest will evaluate the Usage Plan to ensure that the SATE system will be able to support the regression user's proposed usage. All current usage plans will be evaluated together to ensure that the total planned usage by all regression users can be supported. If the Usage Plan changes by an order of magnitude (i.e. if 100 planned transactions were to change to 1000 transactions) during regression testing, the regression user must resubmit the Usage Plan, showing the increase, to the SPOC for approval.
5. Upon Qwest's approval of the Usage Plan, the SATE user can begin submitting EDI transactions to the Stand Alone Test Environment. Responses to order transactions should be requested using SATE's VICKI functionality. If VICKI is not used and the transaction does not flow through, a Qwest representative will manually send a maximum of 10 responses (FOCs) per day. Any additional manual responses will need to be requested via sateedi@qwest.com. Include the PON number and responses needed in your email request and a Qwest representative will send them out within 5 business days.
6. The SATE regression user monitors their testing results.
Determination of cause and effect relationships between submitted data and the results obtained is the responsibility of the SATE regression user. When a SATE regression user needs assistance, technical support will be provided via e-mail at sateedi@qwest.com. A reply will be provided within five (5) business days of the technical inquiry. Qwest will also address and publish common SATE user questions in the Frequently Asked Questions document, available via the Web site.

SATE regression users may escalate a technical inquiry request to their assigned SPOC or Implementation Project Manager as appropriate.

Appendix A depicts the comparison of IMA SATE Regression testing to Progression testing in SATE or the Interoperability environment.

Change Management Process

Qwest facilitates a regularly-scheduled forum in which Qwest and the CLECs communicate about Operational Support System (OSS) interface changes, release lifecycles, release notifications, and communication intervals. The Qwest CLEC Industry change management forum is referred to as the Change Management Process (CMP).

Qwest encourages CLECs implementing an IMA EDI interface to participate in the CMP process. Online registration can be found on the CMP website page. Release notifications, team meeting information, and change requests are also provided to all registered team members via e-mail. For further CMP information, please refer to the following website:

<http://www.qwest.com/wholesale/cmp/index.html>

During testing with CLECs, situations may occur that require Qwest to submit a Change Request internal to Qwest to fix an issue in Qwest's Test systems. When an issue is discovered that substantially impacts a CLEC's ability to use a transaction in EDI, notification will be distributed via e-mail within three (3) business-days. Notification of any production issues will follow the CMP guidelines section 2.0. Please refer to the following URL for more information: <http://www.qwest.com/wholesale/cmp/whatiscmp.html> Qwest will notify all CLECs that have subscribed to the unplanned event notifications and Test environment notifications. It is the CLEC responsibility to subscribe to those notifications they wish to receive. The notification will include a description of the problem and, if known, a potential fix date. If a fix date is not known, Qwest will update all impacted CLECs with the fix date when known. CLECs intending to implement new transactions will be informed of any known issues for that transaction during the Kickoff call.

If a transaction becomes unavailable in either SATE or the interoperability environment, Qwest will send an e-mail notification to all impacted CLECs within four (4) business hours. This e-mail will contain a description of the impacted environment or transaction and, when known, an estimated fix time. A second e-mail will be distributed informing the CLECs when the environment or transaction becomes available for testing.

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3. TECHNICAL INFORMATION

The technical information section of this document is organized in the same sequence as the Disclosure Documents (distributed with each release) according to the following outline:

IMA EDI Transaction Flow – Normal/Exception/Supplemental
FBDL EDI Transaction Flow – Normal/Exception/Supplemental

Trading Partner Access Information
 Overview – Functional Group Envelope – Routing Information
 ISA Table Information
 GS Table Information
 Mapping Example
Mapping Examples
Data Dictionary
Developer Worksheets

IMA EDI Transaction/Product Order Processing

The IMA Order process is initiated by the submission of a request transaction to Qwest. The CLEC transmits the request using the EDI 850 transaction set (or 860 transaction set for a supplemental request). Qwest will translate and forward the data to the appropriate Qwest internal system. The request will activate one of the following responses from Qwest:

NOTE: The following responses DO NOT apply to FBDL.

- 855 LR FOC (RT value B, C, D, or X) – This indicates that the 850 request was successfully received and has been posted to internal provisioning systems as an ‘order’ (one or many).
- 865 LR FOC (RT value B, C, D, or X) – This indicates that the 860 supplemental request was received and the original request was changed (or cancelled). The 865 LR FOC indicates that the request has posted to internal provisioning systems as an ‘Order’ (one or many) or a change to an Order, or the internal service Order originally created has been cancelled.
- “System Generated” 855/865 LR Reject (RT value Z) – This response from Qwest indicates that the BPL detected an error in the inbound transaction and did not post the transaction to internal Qwest databases. The “system-generated” LR reject response contains data fields that allow the CLEC to determine what type of error was generated in the BPL. To correct a request fatally rejected by the BPL, the CLEC must resubmit the original 850/860 transaction with the necessary changes/corrections. Qwest will acknowledge the successful receipt of the

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corrected LSR as a valid service request with an 855/865 LR FOC as described above.

- Interconnect Service Center (ISC) –generated 855/865 LR Non-Fatal (RT value E) errors are errors that occur after the order has successfully processed through the BPL. To correct a LR non-fatal error, the CLEC may send a corrected request with the same PON and incremented version to correct the errors or they may choose to call the ISC representative to discuss the errors.
- Interconnect Service Center (ISC)-generated 855/865 LR Reject (RT value Z) – This response from Qwest indicates that the request successfully passed BPL “system-generated” edit processing, but Qwest ISC personnel detected an error in the transaction that prohibited the request from being entered into the Qwest provisioning systems as a viable ‘order’. The ISC LR reject error response contains data fields that will allow the CLEC to determine what type of error the QWEST ISC generated. To correct a request rejected by the ISC, the CLEC must resubmit the request with an 860 transaction using the same PON and an incremented version number with the necessary changes/corrections. Qwest will acknowledge the successful receipt of the corrected LSR as a valid service request with an 855/865 FOC as described above.
- 855/865 LR Jeopardy (RT Value J) - If Qwest has a problem meeting the commitment on the local service request, and the CLEC has chosen to receive notification via IMA EDI, a Jeopardy Notification LR will be issued. If this occurs, an 855/865 Jeopardy Notification LR is sent. If the jeopardy is caused by Qwest conditions, Qwest will negotiate a new due date and send a new FOC LR. If the jeopardy is caused by non-Qwest conditions, the CLEC must submit a supplemental request to correct the condition with the same PON and incremented version number as the original request. If this jeopardy caused the due date to be missed, the supplemental request must include a revised due date. If an error is found after the FOC LR is sent, an 855/865 Jeopardy Notification LR will be sent.
- 836 Provider Notification (Line Loss) – Subscriber Transaction - Real-time EDI transaction identifying a lost line to the CLEC.
- Billing Completion Notification (BCN) – Subscriber Transaction
- Pending Service Order Notification (PSO) – Subscriber Transaction
- Status Update (SU) – Subscriber Transaction

NOTE: The CLEC can send an 860 Supplemental Request before the CLEC receives the FOC from Qwest, if necessary.

NOTE: If an LSR was submitted via EDI, all supplemental activities must be submitted via EDI.

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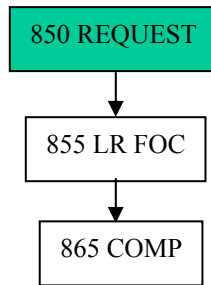
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IMA 850/860 Transaction Initiation/Responses/Resolution

The following diagrams illustrate typical EDI transaction flows between the CLEC and Qwest for IMA transactions. The Qwest BPL will perform mechanized validation edits upon receipt of the transaction. If the inbound transaction fails these edits, an error will be returned to the CLEC and the request will not be posted to Qwest systems. If the request successfully passes all mechanized edits, the request will either be posted to Qwest flow-through processing or will be passed to the Qwest ISC for review and manual processing.

Note: In the diagram below, transactions sent by the CLEC are shown in shaded boxes and transactions sent by Qwest are shown in white boxes. Functional Acknowledgements (997s) are not shown in this diagram but must be exchanged between Qwest and the CLEC in response to every transaction except a 997.

Normal Flow



The diagram above depicts the normal transaction flow of an 850 LSR. The 850 LSR is submitted to Qwest via EDI. If the 850 LSR passes all BPL edits it is written to the IMA database. The processing of the 850 LSR generates an 855 LR FOC and eventually an 865 Completion.

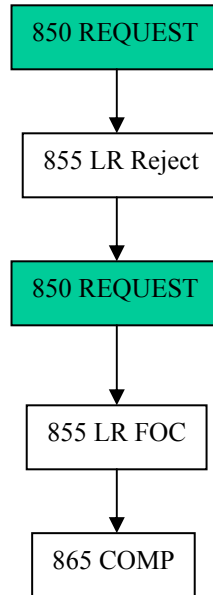
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The following diagram depicts the appropriate resolution for the failure of a request at the BPL:

Note: In the diagram below, transactions sent by the CLEC are shown in gray boxes and transactions sent by Qwest are shown in white boxes. Functional Acknowledgements (997s) are not shown in this diagram but must be exchanged between Qwest and the CLEC in response to every transaction except a 997.

Exception Flow (BPL Reject)



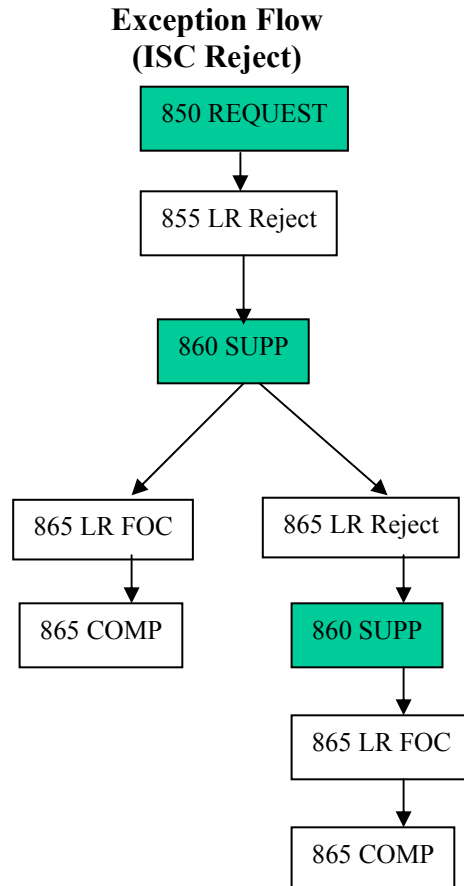
If the CLEC receives an 855 LR Reject error message generated by the system, the CLEC should review the message and determine the cause of failure. The CLEC must resubmit a corrected 850 transaction, as the original request was never posted to Qwest systems. The original PON should be sent with the corrected request. The version number should remain the same as the one used in the original transaction. If the corrected 850 LSR passes all BPL edits, it is written to the IMA database. The processing of the corrected 850 LSR generates an 855 LR FOC and eventually an 865 Completion.

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The following diagram depicts the flow of an 850 LSR that passes the BPL and is rejected to the CLEC by the Qwest ISC personnel.

Note: In the diagram below, transactions sent by the CLEC are shown in gray boxes and transactions sent by Qwest are shown in white boxes. Functional Acknowledgements (997s) are not shown in this diagram but must be exchanged between Qwest and the CLEC in response to every transaction except a 997.



In response to an 855 LR Reject generated by the ISC, the CLEC should submit an 860 supplemental to communicate the appropriate corrections to the original 850 request. The CCNA/PON combination that was contained in the original request must be used; the version number must be incremented by one and the SUP field must be populated.

If the CLEC receives an 865 LR Reject after the 860 supplemental request, the CLEC must review the 865 LR Reject and determine the cause of failure. The CLEC must then resubmit a corrected 860 with the same PON and an incremented version number.

The corrected 860 LSR passes all BPL edits and is written to the IMA database. The processing of the corrected 860 LSR generates an 865 LR FOC and eventually an 865 Completion.

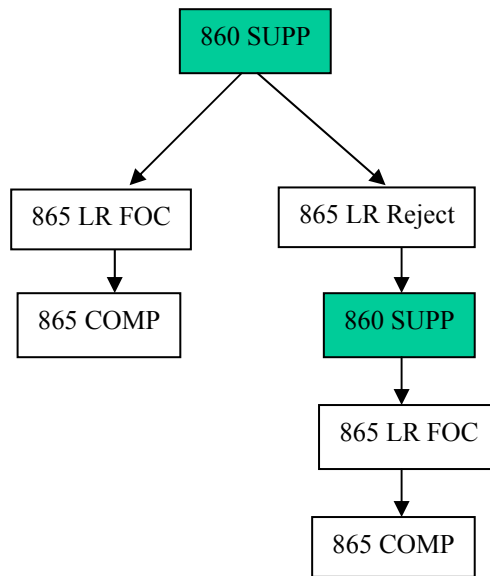
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The following diagram depicts the flow of an 860 Supplemental. An 860 Supplemental (SUP) is issued when the CLEC has a need to change an 850 Purchase Order before or after it is posted in Qwest's SOP. If an 860 SUP is sent prior to a response being received for the original 850 transaction (i.e. an 855 response) the 860 replaces the original 850, and only an 865 response will be sent. There will be no 855 response generated.

Note: In the diagram below, transactions sent by the CLEC are shown in gray boxes and transactions sent by Qwest are shown in white boxes. Functional Acknowledgements (997s) are not shown in this diagram but must be exchanged between Qwest and the CLEC in response to every transaction except a 997.

Supplemental Flow



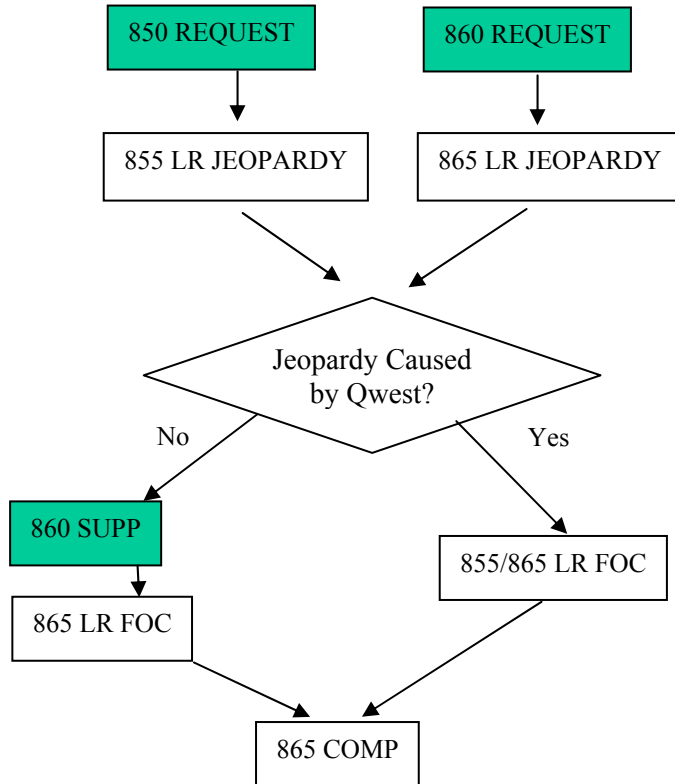
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The following diagram depicts the appropriate resolution for a Jeopardy:

Note: In the diagram below, transactions sent by the CLEC are shown in gray boxes and transactions sent by Qwest are shown in white boxes. Functional Acknowledgements (997s) are not shown in this diagram but must be exchanged between Qwest and the CLEC in response to every transaction except a 997.

Jeopardy Flow



If an error is detected after the LR FOC is sent, or if there is a problem meeting the commitment on the local service request, an 855/865 LR Jeopardy Notice will be sent. If the jeopardy is caused by Qwest conditions, Qwest will negotiate a new due date and send a new LR FOC. If the jeopardy is caused by non-Qwest conditions, the CLEC must submit a supplemental request to correct the condition with the same CCNA/PON combination and incremented version number as the original request. If this jeopardy caused the due date to be missed, the supplemental request must include a revised due date.

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FBDL EDI Transaction Processing

The FBDL EDI order process is initiated by the submission of an 850 request transaction to Qwest. The CLEC transmits the request using the EDI 850 transaction set. The Qwest BPL will perform mechanized validation edits upon receipt of the transaction. If the inbound transaction fails these edits, an error will be returned to the CLEC and the request will not be posted to Qwest systems. If the request successfully passes all mechanized edits, Qwest will translate and forward the data to the appropriate Qwest LSS system. The request will activate the following response from Qwest:

Functional Acknowledgements (997s) must be exchanged between Qwest and the CLEC in response to every transaction except a 997. A negative (-997) indicates that the entire PON has failed the X12 edits (translator level) and it has not been forwarded to the LSS Input Interface Validation Program for content edits.

855– If it is returned with either an “AT”, “AC or “AD” status, this indicates that the 850 request was successfully received and has been posted (AT), partially posted (AC) to the internal LSS provisioning systems as a listings ‘order’ (one or many) and Qwest will review the order and send an updated subsequent DSRED with an updated status, or partially posted (AD) to the internal LSS provisioning systems as a listings ‘order’ but will require review by the CLEC (no further action will be taken by Qwest). . An 855 with a status of “RF” indicates that the entire PON or request failed.

FBDL 850 Transaction Initiation/Responses/Resolution

The following diagrams illustrate typical FBDL EDI transaction flows between the CLEC and Qwest for the FBDL product. LSS will perform a batch job late in the evening. If the entire inbound transaction fails the X12 translator edits, a -997 error will be returned and the request will not be posted to Qwest systems. If all or part of the request successfully passes, the successful portion of the request will be posted to Qwest LSS Database and the incorrect section(s) will be returned to the CLEC with error codes noted, at the PON and line level, on each invalid item. Any subsequent re-submittal to correct/complete the listing request data will need to:

- Only include (recap) the main listing.
- Include/correct the data that was not already posted as indicated by the error codes.
- Have a different PON number (except on RF responses).

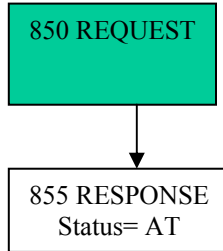
The following diagram depicts the normal transaction flow of an 850 FBDL request. The 850 FBDL request is submitted to Qwest via EDI. If the 850 FBDL request passes all X12 edits it will be passed to LSS. The processing of the 850 FBDL request generates an 855 DSRED response after the LSS processing and will be returned to the CLEC the following day.

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Note: In the diagram below, transactions sent by the CLEC are shown in gray boxes and transactions sent by Qwest are shown in white boxes. Functional Acknowledgements (997s) are not shown in this diagram.

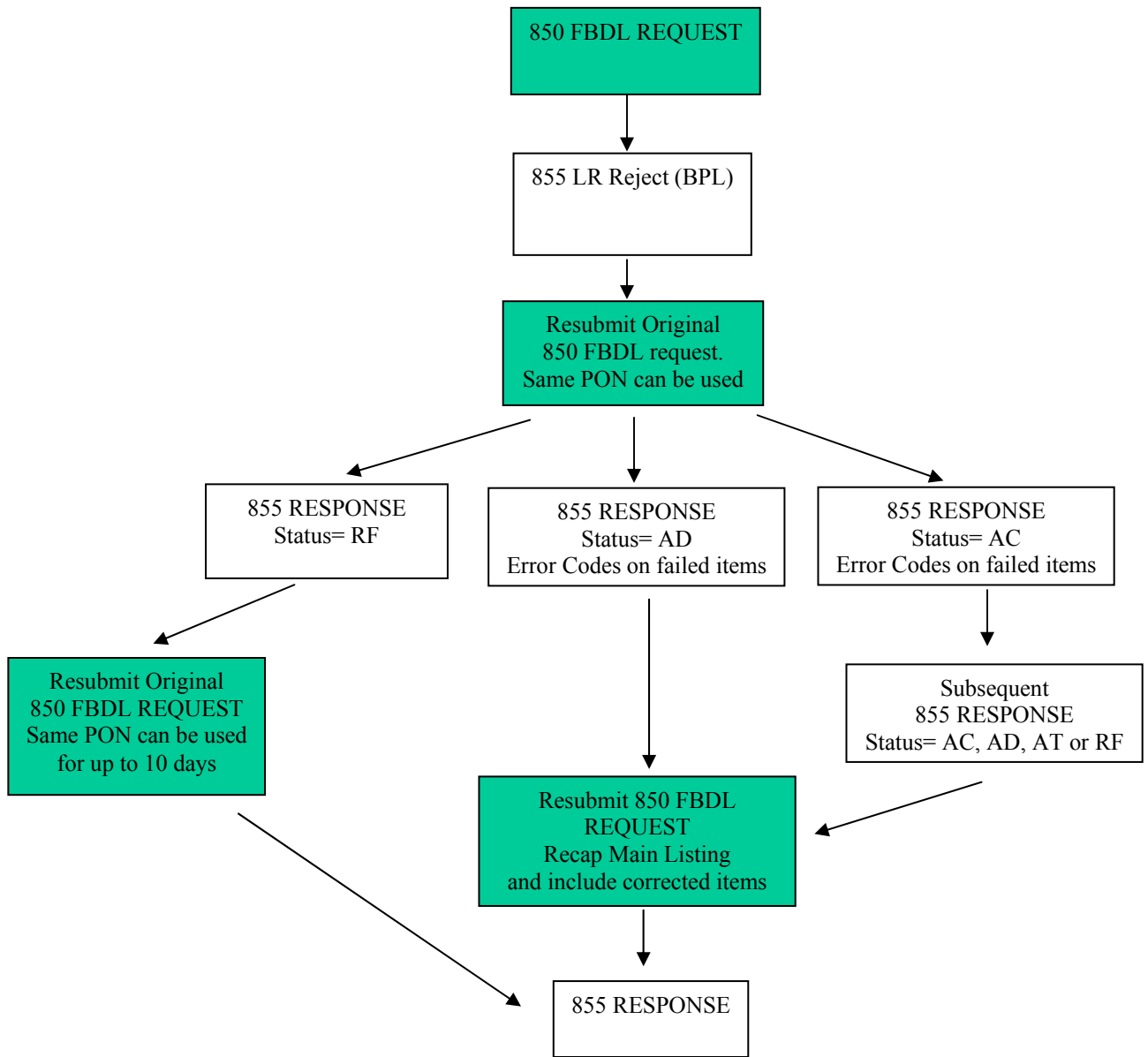
FBDL Normal Flow



The following diagram depicts the appropriate resolution of any failure of a FBDL request:

Note: In the diagram below, transactions sent by the CLEC are shown in gray boxes and transactions sent by Qwest are shown in white boxes. Functional Acknowledgements (997s) are not shown in this diagram but must be exchanged between Qwest and the CLEC in response to every transaction except a 997. Supplemental transactions are not permitted for FBDL requests.

FBDL Exception Flow



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When the CLEC receives an 855 DSRED response with error message(s) the next day after it was processed by the LSS system, the CLEC should review the message(s) and determine the cause of error. An “RF” response indicates that the entire PON has failed and it can be corrected and resubmitted using the same PON for up to 10 business days, since it has no data posted to the LSS database. For a status of “AD”, the CLEC must submit a corrected 850 transaction, correcting only the incorrect portions, since the some part of the request was posted to Qwest systems. A Status of “AC” indicates Qwest will further look at the order and send a subsequent 855 DSRED response with an updated status of AD, AT, RF or AC. Do not use the same PON as submitted on the original; if the CLEC desires to relate the corrected request with an original transaction version, the original PON can be incremented with an alpha and numeric suffix (a1, a2, etc.). If no errors are returned the following day on the 855 DSRED response then the submittal is correct, the 850 FBDL is processed, and the request data is written to the LSS database. LR FOCs and Completion notices are not generated on FBDL transactions.

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Trading Partner Access Information

Trading Partner Relationship/Transport

Before a CLEC can use the EDI interface, the initial communications with the Implementation Team must occur. Once this is in place, the CLEC identity, dedicated circuit, IP addresses, and Digital Certificates can be implemented to enable the electronic exchange of information.

Qwest uses the Interactive Agent (IA) as a means to support the exchange of EDI data between trading partners within the telecommunications industry. The Telecommunications Industry Forum (TCIF) has suggested the use of the IA as the method in which trading partners exchange EDI data because it allows for an open architecture, is simple to design, is easy to implement, and provides for a secure transaction environment. Please be advised that Qwest will require the following to be performed annually:

- Re-exchange of Digital Certificates
- Reconfiguration of IA (Interactive Agent)
- Firewall and IA-to-IA Testing

The IA functions as an interface between the EDI translator and the network firewall. It can best be described as added functionality to the Transmission Control Protocol/Internet Protocol (TCP/IP) with Secure Sockets Layer Version 3 (SSL3). TCP/IP with SSL3 is the actual transport mechanism whereby data is physically sent from one network server to another within a secured context. TCP/IP with SSL3 offers:

- confidentiality, through the use of user-specified encryption algorithms
- integrity, through the use of user-specified cryptographic hash function
- authentication, through the use of X.509 v3 public key certificates
- non-repudiation, through the use of cryptographically-signed messages²

The IA controls the transport process and performs the following functions:

- Directs and maintains the transport session
- Determines where the EDI data is being sent to or being received from

² Garfinkel, Simson and Gene Spafford. Web Security and Commerce, O'Reilly Nutshell, June 1997, Pg. 215.

- Encodes EDI files that are to be transmitted to a CLEC
- Decodes EDI files that are received from a CLEC
- Initiates and terminates the TCP/IP with SSL3 processes
- Logs the transmission status for auditing and/or trouble-shooting purposes
- Allows for error handling and recovery, in the event an Interactive Agent session is terminated due to technical failures

An additional benefit of the IA is that it allows for the transport mechanism to listen for incoming data on two ports. This allows for high priority data to be sent to one port for immediate processing and normal priority data to be sent to another port for scheduled processing. TCIF has defined pre-Order request transactions as high priority data and Order request transactions as normal priority data. TCIF has designated port number 6998 for high priority transactions and port number 6999 for normal priority transactions. The IA listens on these two ports for incoming data. TCIF does not recommend which port numbers should be used for outgoing data.

The Electronic Communications Interactive Agent Functional Specification details the technical requirements needed to design and implement the Interactive Agent. The final Issue 2 document was approved as “TCIF-98-006 Issue 2” dated 12/06/98. Qwest is compliant with this standard and is currently using this in production. The TCIF document can be found in the “Document Center” at <http://www.atis.org>. The following section references the Trading Partner Access Information (TPA) section of the Disclosure Document. It also describes the usage and formulation of:

- ISA and IEA Interchange Control Header and Trailer segments
- GS and GE Functional Group Header and Trailer segments.

The typical transaction data sequence (indented by segment) is exemplified by the following outline:

ISA – sender/receiver identity

GS – functional group/routing/Order type/industry standard version

ST – LSR, EUI, Order detail

SE – end of ST segment

GE – end of GS segment

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IEA – end of ISA segment

The TPA section of the Disclosure Document defines the Qwest requirements for Date and Time fields, EDI delimiters, and fields used in the EDI transactions that are specific to Qwest. Included in the Disclosure Document is an Industry Standards Table illustrating OBF and SOSC issues and the X12 Standard related to each OBF Form.

The following is an example of the ORDERING FUNCTION / PRODUCT ID matrix for the POTS product transaction. The Product ID column indicates the typical transaction set that may be passed between the Qwest Business Processing Layer (BPL) and the EDI Translator at Qwest.

ORDERING FUNCTION	PRODUCT ID
POTS Service Request	850POTS
POTS Service Request Supplemental	860POTS
Local Response	855LR
Local Response on Supplemental	865LR
Status Update	855SU
Completion	865COMP
Pending Service Order Notification	865PSON

The Product ID field (suffixed with the proper IMA Version) will appear in the GS segments that are passed between the CLEC and Qwest. Examples of the Functional Group Envelope and Routing Information GS segments appear in the next section.

Overview: Functional Group Envelope/Routing Information

Separate maps have been created for the individual transactions. EDI envelopes are used for the initiation of translation processing and to invoke the correct map in Qwest systems. The Functional Group Header segment (GS) and the Functional Group Trailer segment (GE) are wrapped around the transaction data. In order to optimize interactive performance, only one EDI Transaction can be included within each Functional Group Envelope. The following is an example of an EDI transaction received at Qwest for a POTS Order that complies with this policy. In the example (see next page), the transaction information for one single item is represented by the data that begins with the ST segment and ends with the SE segment

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EXAMPLE EDI TRANSACTION:

850 Transaction

ISA|00|00|ZZ|GENERIC|ZZ|QWEST1|990122|1231|<00305|424801007|0|P|>
GS|PO|GENERIC|POTS16|20010312|1231|0879|X|004030
ST|850|2345
BEG|00|SS|GENERIC||20040912
REF|11|303-436-0100-101|AN
REF|SU|C|RTR
REF|12|303-Z01-1111-111|BAN1
PAM|EZ|1|EA
DTM|097|20041008|1117
DTM|150|20041029
SI|TI|RE|EB
SI|TI|AA|C
SI|TI|OX|C12345
SI|TI|OY|D12346
SI|TI|TY|1AF
PID|S||TI|CP|||SO-RSQ|Y
N9|H7|ORI|LSR|||2W>N
MTX||Do SUPP1
N9|H7|ORI|RESALE|||2W>N
MTX||Do SUPP1
N9|H7|ORI|EU|||2W>N
MTX||
N1|78|R01
PER|AG|John Doe|TE|303-298-2131|FX|303-965-1481|EM|jdoe@qwest.com
PO1|1|1|EA|||ZZ|EU_SA
REF|IX|1|LOCNUM
N1|IT|LOC_ACC
N2|Roy Keane
N4||CO|80209||RJ|DNV
NX2|01|436
NX2|02|Fedorowych
NX2|07|Denver
NX2|62|Dr
PO1|2|1|EA|||ZZ|RE
SI|TI|SA|C
SI|TI|TN|303-436-0105
REF|IX|1|LNUM
N1|P9||41|0288
N1|8V||41|5123
SI|TI|FD|TN 303 436-0104
CTT|2
SE|40|2345
GE|1|424801007
IEA|1|424801007

The CLEC must always refer to the appropriate issue of the Disclosure Document for release-specific formatting rules.

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ISA TABLE

At the outer levels of the envelope are the ISA (Interchange Control Header) and the IEA (Interchange Control Trailer) segments. The ISA identifies the sender and receiver of this document, and Qwest and the CLEC will have agreed upon the values used for these. In this example, the sender is CLECO and the receiver is QWESTO.

ISA and IEA definitions:

The ISA segment is the Interchange Control Header
 The IEA segment is the Interchange Control Trailer

The following table outlines data to be included in the ISA Header used between the CLEC and Qwest. (Please refer to the appropriate Disclosure Document for release-specific ISA Table information.) Each element, or field, in the ISA segment has a fixed length, indicated in the column labeled “Length”. Alpha fields should be padded with blanks, and numeric fields should contain leading zeroes.

	SENT TO QWEST	RECEIVED FROM QWEST	LENGTH
ISA01	'00' (No Authorization information present)	'00' (No Authorization information present)	02
ISA02	Spaces (Authorization information)	Spaces (Authorization information)	10
ISA03	'00' (No Security information is present)	'00' (No Security information is present)	02
ISA04	Spaces (Security Information)	Spaces (Security information)	10
ISA05	CLEC TP qualifier	'ZZ' (Mutually Defined)	02
ISA06	CLEC TP ID	'QWESTO' (Note: This Trading partner ID is used only for Qwest Order and post-Order transactions. The “O” is the unique identifier.)	15
ISA07	'ZZ' (Mutually Defined)	CLEC TP qualifier	02
ISA08	'QWESTO' (Note: This Trading partner ID is used only for Qwest Order and post-Order transactions. The “O” is the unique identifier.)	CLEC TP ID	15
ISA09	Date of the interchange. YYMMDD	Date of the interchange. YYMMDD	06
ISA10	Time of the interchange. HHMM (24 Hour Clock)	Time of the interchange. HHMM (24 Hour Clock)	04
ISA11	'0x1d' (Repetition Separator)	'0x1d' (Repetition Separator)	01
ISA12	'00403' (Interchange Version ID)	'00403' (Interchange Version ID)	05
ISA13	Sender's translator assigned sequential control number (must be unique)	Sender's translator assigned sequential control number (must be unique)	09
ISA14	'0' (No acknowledgment requested)	'0' (No acknowledgment requested)	01
ISA15	'P' (Production data)	'P' (Production data)	01
ISA16	'0x1f' (Sub-element Separator)	'0x1f' (Sub-element Separator)	01

The CLEC and Qwest agree to the following (example) routing information:

Note: The ISA element is NOT a variable length.

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This is an example of how the ISA Header will look in the EDI transaction:

ISA|00| |00| |ZZ|CLECO |ZZ|QWESTO |991210|0900| |00403|000000019|0|P| |

*NOTE: The non-printable characters Ox1d and Ox1f in the ISA11 and ISA16 fields may be represented as a printable character () within the example above.

GS Table Information

GS and GE Segment Definitions

The GS segment is the Functional Group Header

The GE segment is the Functional Group Trailer

The third field, or element, within the GS segment (represented in the GS Table example below) by the data (POTS16) is the Receiver Code. This identifies the transaction as a POTS Order and this transaction is then routed to the proper map for this business function based on that value. To designate a different transaction, for example Loop Service with Number Portability, this value will change to the unique value defined for that transaction or product, in this case LSNP16. In this manner, the proper map will be triggered to accommodate the business function being requested. The CLEC and Qwest agree to the routing information that is defined in the IMA EDI Disclosure Document.

The following tables provide an example of the GS Segments that are used within the POTS ordering function.

The CLEC and Qwest agree to the following (example) routing information:

	SENT TO QWEST	RECEIVED FROM QWEST
GS01	SEE GS TABLE BELOW	SEE GS TABLE BELOW
GS02	CLEC TP ID	SEE GS TABLE BELOW
GS03	SEE GS TABLE BELOW	CLEC TP ID
GS04	Date of the functional group. CCYYMMDD	Date of the functional group. CCYYMMDD
GS05	Time of the functional group. HHMM (24 hour clock)	Time of the functional group. HHMM (24 hour clock)
GS06	Sender’s translator assigned sequential control number (must be unique)	Sender’s translator assigned sequential control number (must be unique)
GS07	‘X’ (Accredited Standards Committee X-12)	‘X’ (Accredited Standards Committee X-12)
GS08	‘004030’ (Version)	‘004030’ (Version)

GS Table – POTS Resale 16.0 (850)

The CLEC and Qwest agree to the following (example) routing information:

ORDERING FUNCTION	QWEST SEND/RECEIVE	DOCUMENT	GS01 VALUE	GS02 VALUE	GS03 VALUE
POTS Service Request	Receive	850POTS	PO	CLEC TP ID	POTS16
Completion	Send	865COMP	CA	COMP16	CLEC TP ID
Local Response	Send	855LR	PR	LR16	CLEC TP ID

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GS Table – POTS Resale 16.0 (860)

The CLEC and Qwest agree to the following (example) routing information:

ORDERING FUNCTION	QWEST SEND/ RECEIVE	DOCUMENT	GS01 VALUE	GS02 VALUE	GS03 VALUE
POTS Supplemental Service Request	Receive	860POTS	PC	CLEC TP ID	POTS16
Completion	Send	865COMP	CA	COMP16	CLEC TP ID
Local Response	Send	865LR	CA	LR16	CLEC TP ID

GS Table – LSNP 16.0 (850)

The CLEC and Qwest agree to the following (example) routing information:

ORDERING FUNCTION	QWEST SEND/ RECEIVE	DOCUMENT	GS01 VALUE	GS02 VALUE	GS03 VALUE
LSNP Service Request	Receive	850LSNP	PO	CLEC TP ID	LSNP16
Completion	Send	865COMP	CA	COMP16	CLEC TP ID
Local Response	Send	855LR	PR	LR16	CLEC TP ID

The following is an example of the GS Segment for each of the POTS ordering functions:

POTS Service Request:

Field GSnn:

01 02 03 04 05 06 07 08
 GS|PO|CLECO|POTS16|20030210|0900|01|X|004030

Local Response:

Field GSnn:

01 02 03 04 05 06 07 08
 GS|PR|LR16|CLECO|20030210|0905|01|X|004030

Mapping Example and Data Dictionary Items:

Time Code

The Developer Worksheet time code fields, for every transaction, (i.e., D/T SENT) are assumed as follows:

- Transaction set(s) originating from the Co-Provider - time code should be consistent with your time zone.
- Transaction set(s) originating at Qwest - time code is Mountain Time.

4030 Exceptions

Transaction sets 850, 855, 860 and 865 are used with the following exception:

- SLN loop maximum use has been changed to >1

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Delimiters

The following delimiters will be used:

- Element Separator: HEX 7C = | (vertical bar or pipe)
- Sub-Element Separator: HEX 1F = (non-printable characters of '0x1f')
- Segment Separator: HEX 0A = linefeed
- Repetition Separator: HEX 1D = (non-printable characters of '0x1d')

Fields Specific to Qwest

Order fields that are specific to the Qwest implementation were added to selected OBF forms and are indicated by an alpha character following the field number, i.e., EU-25a (AHN). These fields are not defined in the OBF form for the corresponding LSOG issue.

Qwest does provide information regarding proper use of these fields on the Developer Worksheets.

Industry Standards Table (example from 16.0 POTS Resale chapter):

OBF FORM	OBF ISSUE	ESOC ISSUE	ANSI ASC X12 STANDARD
End User	LSOG6	ELMS6	004030
Local Service Request	LSOG6	ELMS6	004030
Resale	LSOG6	ELMS6	004030
Directory Listing	LSOG6	ELMS6	004030
Hunt Group Information	LSOG6	ELMS6	004030
Local Response	LSOG6	ELMS6	004030
Completion			004030

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997 Acknowledgements

When Qwest receives and processes the transaction a 997 Functional Acknowledgement will be returned to the CLEC (as previously discussed in the Transaction Flow Diagrams). The purpose of the 997 is to acknowledge the receipt and translation status of a transaction set at the EDI translator/gateway. The translator will return a positive (+997) acknowledgement to the sender when an inbound transaction passes EDI edits. The translator will return a negative (-997) acknowledgement to the sender when the inbound transaction set does not meet the ANSI ASC X12 syntax rules. The sender of the transaction set being acknowledged with a '-997' is responsible for correcting any errors and resubmitting the transaction.

The following is an example of a 997 for the POTS Order that passed the EDI edits.

```
ISA|00|      |00|      |ZZ|QWESTO      |ZZ|CLECO      |030618|0822|□|00403|000000161|0|P|
GS|FA|POTS16|CLECO|20030618|0822|152|X|004030
ST|997|1520001
AK1|PC|76
AK2|860|0001
AK5|A
AK9|A|1|1|1
SE|6|1520001
GE|1|152
IEA|1|000000161
```

It is required that all transactions received by Qwest or by the CLEC are acknowledged in this manner. The only exception to this is that 997 Functional Acknowledgements are not acknowledged. The level of the acknowledgment will stay at the AK1 and AK2 level as shown; the AK3 and AK4 segments, which provide detail acknowledgement reporting, will not be used for positive acknowledgements but may be utilized for a negative acknowledgement. Please refer to the appropriate IMA EDI Disclosure Document for release-specific formatting information.

Qwest has implemented a 997 Functional Acknowledgement Reconciliation Process. The purpose of this process is to ensure that CLECs are receiving and acknowledging Qwest IMA EDI outbound transactions. If Qwest has not received a 997 Functional Acknowledgement within 48 hours of sending a transaction from IMA EDI, the Qwest Technical Support Engineer will contact the CLEC to initiate an investigation to determine whether there is a problem on either the Qwest or CLEC side of the interface.

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Mapping Examples

Qwest will provide the CLEC with mapping examples of all EDI transactions in the Disclosure Document. It is expected the CLEC will use the mapping examples as a reference when developing their internal interactive EDI system.

The body of each EDI Mapping Example consists of three sections:

- Header: The Header identifies with which transaction the mapping example is associated.
- Legend of Symbols: The Legend of Symbols provides the CLEC with definitions of the symbols Qwest uses throughout the body of the mapping example.
- EDI mapping example: This section details the transaction in an EDI format that is consistent with Qwest business requirements.

The following diagram and legend explain the mapping example information (as also provided in the IMA EDI Disclosure Document). Please refer to the appropriate Disclosure Document for release-specific mapping information at the following web site:

<http://www.qwest.com/disclosures/netdisclosure409.html>

Mapping Example

Legend of Symbols for the transaction example that follows

Symbol/Definition	Example
{ } = Valid Format	{CCYYMMDD}
Bold/Italics = I-Chart Element	PON
Superscript = I-Chart Ref #	^{LSR-2}
Italics = Literal	<i>GOOD</i>
<u>Underline</u> = Apply code conversion, used with Bold/Italics and Italics. Code conversion tables can be found in the data dictionary of this disclosure.	<u>RESPONSE</u>
[] = Segment notes for this line	[SI Segment repeats ...]
() = Element notes for this line	(This element states ...)
n	Counter 1...N
* = Element separator in this example and related data dictionary.	= Actual element separator in an EDI transaction.

LEGEND of SYMBOLS for Mapping Examples

A. The header includes the title of the transaction. Each individual transaction Qwest supports has its own Mapping Example.

B. If the need arises, the appropriate format for the data contained by the element can be found within curved braces after the field name. An example would be the standard date format, with two places each for the century, year, month, and day: {CCYYMMDD}.

C. **Bolded and italicized** field names correspond to the field name in the developer worksheets associated with this transaction.

D. The ^{superscripted} identifier following a field name that is **bolded and italicized** indicates the developer worksheet to be referenced and the field number to be referenced for clarification.

E. Italicized text indicates that the field should contain the text exactly as shown. For instance, *GOOD* indicates that the word “GOOD” should be placed in the field.

F. Field names that are underlined indicate that a code conversion is occurring in the Qwest EDI system. Please refer to the Data Dictionary of the appropriate Disclosure Document for release-specific code conversion information.

G. Square brackets [segment info...] surround notes that pertain to a particular segment.

H. Element Notes (element info...) appear inside regular parenthesis and immediately follow the element to which they pertain.

I. A lower case “n” in an element denotes that the element should contain an integer value that increments by one each time the loop is repeated. The first PO1 loop should have a counter value of 1, the second should have a counter value of 2, and so on.

J. Asterisks are generally accepted as an element delimiter for EDI data, so they have been used in the Mapping Examples for readability. However, the element delimiter will be the pipe symbol (|) in the actual EDI transactions that are exchanged.

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POTS Mapping Segment Example

Note: This is only a partial example – see Disclosure document for full Mapping Example

ST*850*TRAN SET CONTROL #
BEG*00*SS***PON**_{LSR-2}**PO Date (See Trading Partner Access Information)
REF*11***AN**_{LSR-7}***AN**
REF*12***BAN1**_{LSR-68}***BAN1**
REF*1V***RORD**_{LSR-59}***RORD**
REF*AO***APT CON**_{LSR-17a}
REF*CO***RPON**_{LSR-58}***RPON**
REF*JB***PROJECT**_{LSR-22}
REF*SU***RTR**_{LSR-34}***RTR**
PAM*47***PG_of**_{LSR-12}(2nd 2 Bytes)*EA
PAM*48***PG_of**_{LSR-12}(1st 2 Bytes)*EA
PAM*63***LQTY**_{LS-5}*EA
SAC*N**TI*EEH [If this segment appears then **AENG**_{LSR-38} = "Y"]
SAC*N**TI*OAC [If this segment appears then **ALBR**_{LSR-39} = "Y"]
DTM*097***D/TSENT**{CCYYMMDD}_{LSR-14}***D/TSENT**{HHMM}_{LSR-14}
DTM*150***DDD**{CCYYMMDD}_{LSR-16}***TM/RTM***APPTIME**{HHMM[-HHMM]}_{LSR-17}
DTM*270***DATED**{CCYYMMDD}_{LSR-42}
SI*TI*AA***ACT**_{LSR-28}
SI*TI*NC***NC**_{LSR-53}
SI*TI*NI***NCI**_{LSR-55}
SI*TI*NJ***SEC NCI**_{LSR-57}
SI*TI*OE***LSRRO**_{LSR-6a}
SI*TI*RE***REQTYP**_{LSR-25}
SI*TI*TY***TOS**_{LSR-51}
PID*S**TI*AH***SO-RSQ***CHC**_{LSR-24}
PID*S**TI*AN***SO-RSQ***SCA**_{LSR-40}
PID*S**TI*AO***SO-RSQ***AGAUTH**_{LSR-41}
PID*S**TI*PENDING***SO-RSQ***PENDING ORDER**_{LSR-116b}
N9*H7*ORI***LS******2W>**MANUAL IND**_{LS-47a}
MTX****REMARKS**_{LS-47}
N9*H7*ORI***LSR******2W>**MANUAL IND**_{LSR-116a}
MTX****REMARKS**_{LSR-116}
N9*H7*ORI***EU******2W>**MANUAL IND**_{EU-68a}
MTX****REMARKS**_{EU-68}
N1*2C***DLEC CCNA**_{LSR-7b}
N1*78***CCNA**_{LSR-1}
NX2*90***ACTL**_{LSR-45}
PER*AG***INIT**_{LSR-89}*TE***TEL NO**_{LSR-90}*FX***FAX NO**_{LSR-92}*EM***EMAIL**_{LSR-91}
PER*CN***IMP CON**_{LSR-99}*TE***TEL NO**_{LSR-100}*BN***PAGER**_{LSR-101}
N1*BT**92***ACNA**_{LSR-71}

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Data Dictionary

Each transaction or product-specific chapter within the Qwest IMA EDI Disclosure Document contains a Data Dictionary describing the individual fields and appropriate values in an EDI transaction set.

The Data Dictionary is divided into two sections. The first section illustrates the segments used in the EDI transaction in the order they appear and indicates which segments are included in the Header, the Detail, and the Summary sections of the transaction set to be sent to Qwest. Segments that are part of the ANSI X12 transaction set, but that are not used by Qwest, are not included in the Data Dictionary. Below is a partial example of this section:

1.1.1 850 POTS Resale (850POTS)

Functional Group ID=PO

Introduction:

The 850POTS service request will be used by the Co-Provider to initiate a service request for POTS to Qwest.

This implementation guideline references the following:

1. ANSI ASC X12 Version 4030
2. LSOG 6, when applicable, and Qwest assigned fields
3. TCIF/ESOC Guidelines, ELMS 6

Notes:

This 850 Transaction includes the mappings for Local Service Request, End User, Resale and Directory Listing.

Heading:

Pos. No.	Seg. ID	Name	Req. Des.	Max.Use	Loop Repeat	Notes and Comments
M	0100	ST	Transaction Set Header	M	1	
M	0200	BEG	Beginning Segment for Purchase Order	M	1	
	0500	REF	Reference Identification	O	>1	
	0950	PAM	Period Amount	O	10	
					25	
	1200	SAC	Service, Promotion, Allowance, or Charge Information	O	1	
	1500	DTM	Date/Time Reference	O	10	
	1850	SI	Service Characteristic Identification	O	>1	
	1900	PID	Product/Item Description	O	200	
					1000	
	2950	N9	Reference Identification	O	1	
	3000	MTX	Text	O	>1	

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LOOP ID - N9			1000
2950	N9	Reference Identification	O 1
3000	MTX	Text	O >1
LOOP ID - N9			1000
2950	N9	Reference Identification	O 1
3000	MTX	Text	O >1
LOOP ID - N1			200
3100	N1	Name	O 1
3600	PER	Administrative Communications Contact	O >1
LOOP ID - N1			200
3100	N1	Name	O 1
LOOP ID - N1			200

This section of the Data Dictionary also documents the four major references from which the configuration and data values are based. The four references are Local Service Ordering Guidelines (LSOG), Qwest specific fields, ANSI ASC X12, and TCIF Customer Service Guidelines. Together, these documents provide the means necessary for the CLEC to understand and prepare the transaction sets used to pass information between Qwest and CLECs.

This second section of the Data Dictionary repeats the segments and displays them broken down into their respective elements. Only elements that are used in sending information to Qwest are shown. This section includes the Segment Identification, its Level, Usage, Max Use, Purpose and any Semantic Notes. Accompanying the segment's element description is the Reference Designation, the ANSI X12 Data Element reference number, and the Element Name with its attributes. The element description includes notes that will enable the CLEC to understand what type of information and what code values Qwest expects within the element. The diagram below is an example of the information found in this section:

Segment: **BEG** Beginning Segment for Purchase Order
Position: 020
Loop:
Level: Heading
Usage: Mandatory
Max Use: 1
Purpose: To indicate the beginning of the Purchase Order Transaction Set and transmit identifying numbers and dates
Syntax Notes:
Semantic Notes: 1 BEG05 is the date assigned by the purchaser to purchase order.
Comments:
Notes: BEG*00*SS*PON(LSR-2)**PO Date (See Trading Partner Agreement)

Data Element Summary				
Ref. Des.	Data Element	Name	Attributes	
>>	BEG01	353	Transaction Set Purpose Code	M ID 2/2
			Code identifying purpose of transaction set	
			00	Original
>>	BEG02	92	Purchase Order Type Code	M ID 2/2
			Code specifying the type of Purchase Order	
			SS	Supply or Service Order
>>	BEG03	324	Purchase Order Number	M AN 1/22
			Identifying number for Purchase Order assigned by the orderer/purchaser	
			PON(LSR-2) = Purchase Order Number	
>>	BEG05	373	Date	M DT 8/8
			Date expressed as CCYYMMDD	
			PO Date = Purchase Order Date (See Trading Partner Agreement)	

Each pertinent segment is illustrated in this fashion and each element description includes notes pertaining to its use. For example, in the **BEG01** description, the code '00' is shown as the value to be used. A reference to the relevant developer worksheet is indicated when the element's code value is further defined in the developer worksheets provided to the user. The **BEG03** description, for example, includes the following reference:

PON (LSR-2) = Purchase Order Number

In this reference, LSR-2 refers to the LSR developer worksheet field that describes the PON field.

Please refer to the appropriate Disclosure Document for release-specific Data Dictionary Information at the following website:

<http://www.qwest.com/disclosures/netdisclosure409.html>.

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Developer Worksheets

The Qwest Developer Worksheets contain the Qwest business rules that identify how the CLEC is to correctly format and populate Qwest EDI requests. The Developer Worksheets summarize the business rules for each field on a request and within each transaction or Order form segment. Qwest LSOG forms used for a transaction are described with the rules regarding how each field is used including:

- Business rules,
- Field length, field characteristics
- Valid values.

The following pages explain the layout and content of a Qwest Developer Worksheet, (Figure 3) and an explanation of each component identified on the example layout.

The Pre-Order Developer Worksheets contain an additional column. This column, 'LSOG 6 Ref', indicates the LSOG 6 reference number for all OBF supported fields. Where this column is blank, the field can be construed as Qwest-specific.

Developer Worksheet Legend

- A. This is the field reference number that corresponds to the associated EDI mapping field. On Order and Post-Order worksheets, the field number corresponds to the LSOG field number. For instance, if the value from the Qwest Developer Worksheet is LSR-7, then the user could reference the OBF Guideline for the LSR form, field 7, for additional information. However, if the reference number is a number followed by a letter, such as LSR-7a, the field is a Qwest specific field and will not be found in the LSOG.
- B. This is the name of the field from the LSOG or as defined by Qwest, and, if applicable, the associated Qwest EDI Mapping. It will be in bold and italicized text on the EDI Mapping.
- C. Action Type: This field defines the actions (activities) that are valid for the transaction or product.
- D. The indicators found here signify whether the field is required (R), conditional (C), optional (O), prohibited (P), or not applicable (N). A required field (R) must be present for the transaction to be valid. A conditional (C) field indicates that the field's population is based upon specific business rules as defined in the worksheets and/or LSOG. Optional (O) means the transaction will still be valid even if this field is not populated. Prohibited (P) means that population/use of that field is not allowed for certain situations defined in the business rules and will result in a system (BPL) reject. Not applicable (N) means that this field is not used for the given activity. If the indicator is (N) for all activities, Qwest does not map the field and may return a -997 if populated.
- E. The Negotiated Business Rules field defines the Qwest business rules. If this field is blank, consult the LSOG for the appropriate business rules. Otherwise, the rules specified in this field take precedence over those in OBF.
- F. Field length dictates the accepted data length for that field.
- G. Field Characteristics denote the appropriate data type for the field. Valid formats include
A=Alpha, N=Numeric, and A/N=Alphanumeric (allows for alpha, numeric, or a combination of characters, to be used unless otherwise stated in the business rules for that field).
- H. Valid Values identify any specified values or formats for the field.

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Appendix A: Comparison of Regression Testing and Progression Testing via Interoperability -vs- Stand-Alone Test Environment

IMPLEMENTATION AREAS	PROGRESSION Interoperability Environment	PROGRESSION Stand Alone Test Environment	REGRESSION Stand Alone Test Environment
Initial Communication	SAME*	SAME*	SAME*
Kickoff Call	SAME*	SAME*	Not Applicable
Security	SAME*	SAME*	SAME*
Connectivity	SAME*	SAME*	SAME*
Negotiation	Project Plan	Project Plan	Usage Plan
Support Team	PM; BA; TSE or a SPOC fulfilling multiple roles	PM; BA; TSE or a SPOC fulfilling multiple roles	SPOC through Negotiations phase then via e-mail (sateedi@qwest.com) within 5 business days of e-mail
Progression Testing Phase			
Test Plan	CLEC indicates intended scenarios and receives guidance and approval of the Test Plan before completing the scenario templates	CLEC indicates intended scenarios and receives guidance and approval of the Test Plan before submitting EDI transactions or Orders	NONE SATE user indicates desired scenario volume/types and schedule in Usage Plan – must be approved by Qwest
Scenario Data	CLEC supplies all data and populates valid values as required by Qwest business rules	Qwest provides valid values for specific fields via the IMA EDI SATE Data Document; CLEC selects valid values and integrates them with user-supplied data in submitted scenarios	Qwest provides valid values for specific fields via the IMA EDI SATE Data Document; CLEC selects valid values and integrates them with user-supplied data in submitted scenarios
Scenario Templates	NOT USED CLEC submits EDI transactions	NOT USED CLEC submits EDI transactions	NOT USED SATE regression user submits EDI transactions

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IMPLEMENTATION AREAS	PROGRESSION Interoperability Environment	PROGRESSION Stand Alone Test Environment	REGRESSION Stand Alone Test Environment
Testing Process	CLEC submits approved scenarios to Interoperability environment	CLEC creates/submits scenarios to SATE environment until successful and notifies Qwest of successful PONs	SATE regression user creates and submits scenarios; reviews the responses; corrects and resubmits until successfully processed
EDI Response	Provided by TSEs Qwest provides responses as negotiated in the Project Plan	Provided by TSEs, Flow Through and VICKI Qwest provides responses automatically through VICKI or Flow Through function. See SATE VICKI Path Document for further information.	Provided by SPOC, Flow Through and VICKI Qwest provides responses automatically through VICKI or Flow Through function. See SATE VICKI Path Document for further information
Testing Calls	As scheduled in Project Plan	As scheduled in Project Plan	NONE
Testing Success	Monitored and verified by Qwest TSE during Test Calls with CLEC	CLEC corrects/submits scenarios until successful and notifies Qwest of PONs to be used for documenting correct testing success; Qwest verifies user-indicated PONs/INQNUMs as successful and indicates successful completion on the Test Plan	Determined by SATE regression user.
Number of Transactions Permitted	As negotiated in Project Plan	As negotiated in Project Plan	As negotiated in Usage Plan
Technical Support	CLEC is provided technical support as negotiated in the Project Plan	CLEC is provided technical support as negotiated in the Project Plan	Technical support provided via e-mail FAQs posted on website
Controlled Production	SAME*	SAME*	Not Applicable

(* Requirements are same as in adjacent column marked SAME* - see requirement details in this Guide)

NOTE: Before entering the Controlled Production Phase, TPR configuration verification (TCV) is required for those transactions being implemented.

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Appendix B: Service Bureau EDI Implementation Guidelines

Version Updates:

Version 1.0 – Original Version

Version 2.0 – Incorporates Stand Alone Test Environment (SATE) references

Version 3.0 - Defined Trading Partner Configuration Verification testing (TCV) and clarifies circuit sharing LOA requirements. Changed 'CLEC' to 'CLEC'

Version 4.0 – Modification of Definition of a Service Bureau and to Physical Connectivity

Version 5.0 – Modification of Definition of the Lead CLEC to allow for Service Bureau testing as a pseudo-Lead CLEC

Objective:

This document will establish Qwest's definition of a service bureau from a service and product perspective in relation to the sending and receiving of data with Qwest's IMA EDI systems. In addition, this document will provide the criteria for the implementation and operating procedures for CLECs using IMA and FBDL EDI, and the Service Bureaus that support them.

Contents:

- I.** Definition of a Service Bureau
- II.** The Role of the CLEC
- III.** Service Level Agreements
- IV.** CMP Participation
- V.** Qwest Release Sunrise/Sunset Dates
- VI.** Requirements Review
- VII.** Physical Connectivity
- VIII.** EDI Progression Testing Process
 - (a) New Product Implementation Testing Requirements
 - (b) Release Migration Testing Requirements
- IX.** Production Support/Help Desk

TABLE A: Summary – Role of the Service Bureau in a CLEC Implementation

TABLE B: Progression Testing Requirements for Service Bureau Implementations

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Definition of a Service Bureau:

Qwest considers a third party vendor to be a Service Bureau when the following criteria are met:

1. The third party vendor uses the same IMA EDI mapping software, version, and configuration for all CLECs actively using its software in production.
2. The third party has a signed Letter of Agency (LOA) between themselves and each CLEC which meets the requirements outlined in the Proof Of Authorization/Letter Of Agency V2.0 (<http://www.qwest.com/wholesale/preorder/index.html>) document.
3. The third party vendor must have more than one CLEC implementing or in production with IMA EDI on a single release of IMA EDI.

The third party vendor must have a single, dedicated circuit in place between their central location and Qwest, which must be used by all CLECs with that Service Bureau. (This may be a leased circuit)
4. The third party vendor must obtain a unique, signed-authorized digital certificate for the Service Bureau. [Please refer to the requirements of TCIF/ Authorizing Agency for further explanation regarding the use of digital certificates.]
5. The third party vendor ensures that each CLEC working with the Service Bureau has either:
 - One IP address with utilization of the standard designated port assignments outlined by TCIF (6998 and 6999) for all CLECs.
 - A unique IP for each CLEC, and standard designated port assignments outlined by TCIF (6998 and 6999).
6. Provides a unique IP/Port configuration between test and production.

Qwest does not have an agreement with the Service Bureau and therefore must treat the CLEC utilizing a Service Bureau as an individual entity. However, the Service Bureau is an Agent for the CLEC and acts on behalf of the CLEC for the CLEC's initial Qwest EDI implementation, as well as all subsequent release migrations or new product implementations.

The Role of the CLEC:

For a new implementation, the CLEC must make initial contact with Qwest's IMA EDI Implementation Team directly. Upon the CLEC's completion of the Initial Contact Questionnaire, the Service Bureau may act on behalf of the CLEC during their implementation effort. However, the CLEC must be present for all Implementation Kickoff and Controlled Production and Production Readiness Assessment calls, must participate in the development and finalization of an agreed upon project implementation plan, and must be present for all subsequent discussions related to revision of the project plan. In addition, the CLEC conducts all Controlled Production activities from their facilities.

For an existing CLEC working toward a migration project only (no new products, etc.), the Service Bureau may completely represent the CLEC (ie the CLEC does not need to contact Qwest nor need to participate in any calls. It is the CLEC's choice as to how involved they get with the migration project and each CLEC may choose to participate fully in calls and in testing.

The following sections elaborate on the IMA EDI specific implementation areas. Additionally, TABLE A summarizes the role of a Service Bureau during a CLEC's implementation.

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Service Level Agreements:

Outside of the Qwest Interconnect Agreement, Qwest does not maintain separate service level agreements with CLECs, nor will Qwest have a service level agreement with any Service Bureau directly. However, a CLEC may have specific contractual date and time frames for service delivery stated in their Interconnection Agreement with Qwest. In this situation, those contractual date and time frames for service extend to the Service Bureau, who is acting as an Agent for the CLEC.

CMP Participation:

Service Bureaus are welcome to attend the CLEC Industry Change Management Process forum (CMP) meetings and participate in this forum. Additionally, CLECs may solicit advice from their Service Bureau regarding their CMP votes at any time. Service Bureaus may also vote on behalf of the CLEC if the requirements outlined in section 17.0 of the CMP Redesign Process are met

Qwest Release Sunrise/Sunset Dates:

In an effort to avoid impact to Qwest's release dates and to provide parity amongst CLECs, Qwest's IMA EDI Release sunrise and sunset dates will be the same for CLECs whether or not they utilize a Service Bureau arrangement. These release dates are published on the CMP web page located on Qwest's Wholesale web-site at <http://www.qwest.com/wholesale/cmp/calendar.html>.

Requirements Review:

Qwest expects that the CLEC will be aware of Qwest's business rules and processes associated with ordering various product types. Qwest also expects that the Service Bureau will define the processes and business rules that apply to their software, which will affect the CLEC, and will keep the CLEC informed of these impacts.

Physical Connectivity:

The Service Bureau's circuit will provide for a secure network to send and receive data between Qwest and the CLEC, as well as providing an efficient means to transport high volumes of data. This circuit must terminate in either Qwest's Denver (Zuni) or Omaha Data Centers. For redundancy purposes, a Service Bureau may install a circuit at both data center locations. Access to the Qwest network is granted from the external registered IP addresses on this circuit through to the Qwest firewall. Please refer to the "EDI Implementation Guidelines" for further technical information on connectivity.

EDI Testing Process:

The EDI testing process must address two considerations: (1) New Product Implementations and (2) Release Migrations. The testing requirements for these two efforts are addressed in this section. Additionally, TABLE B serves to provide a high-level summary of Service Bureau progression testing requirements for New Product Implementation and Release Migrations.

The Service Bureau may use a **Lead** CLEC to test the products and activity types that the Service Bureau plans to offer to all CLECs subsequent to the Lead CLEC (herein referred to as the **subsequent** CLEC). The **Lead** CLEC tests for the first time a unique set of products and activity types for a given release in the Qwest Interoperability environment and/or Stand Alone Test Environment (SATE), as described below [see Progression Testing Phase (Interoperability and/or SATE)]. Following this testing, the **Lead** CLEC will perform Controlled Production for specific products/activities.

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All **subsequent** CLECs wishing to implement the **Lead** CLEC's tested products/activity types have the option to progression test these products, as noted below [see Progression Testing Phase (Interoperability and/or SATE)]. If this testing is skipped, the **subsequent** CLECs must perform Trading Partner Configuration Verification (TCV), also noted below. After the Lead CLEC completes the Progression Testing exit criteria in the Controlled Production Readiness Assessment, any **subsequent** CLEC using the Service Bureau's same products/activity types may move directly into Controlled Production once TCV has been completed, as applicable for the given testing process.

A Service Bureau may use multiple **Lead** CLECs for testing different products/activity types or use one **Lead** CLEC for all product testing. A Service Bureau, established for Regression testing in SATE, may use that trading partner name and configuration to act as the Lead CLEC for purposes of Progression and Migration testing. Regardless of the number of **Lead** CLECs utilized, the testing phases required for CLEC implementations are the same as those used for a non-Service Bureau implementation. [For further explanation of these phases, please refer to the Qwest "EDI Implementation Guidelines" document.]

(1) New Product Implementations:

This section identifies the requirements for new product implementation testing that are unique to a Service Bureau arrangement, highlighting the differing roles of the **Lead** CLEC and **subsequent** CLECs.

Firewall/IA-to-IA Testing Phase:

- This testing is required for both the **Lead** and **subsequent** CLEC.
- This testing can be performed with Qwest from the Service Bureau site or the CLEC's location.
- This testing will be performed in the Interoperability and/or SATE environment, as well as in the Production environment.

Progression Testing Phase (Interoperability or SATE):

- The **Lead** CLEC's progression testing can be performed with Qwest from the Service Bureau site or the CLEC's location. If progression testing is performed from the Service Bureau site, the Service Bureau may use either the CLEC's Trading Partner configuration that will be used in production or the Service Bureau's SATE Trading Partner configuration.
- Any **subsequent** CLEC may choose to Progression test in the Interoperability and/or SATE environment; however, this is not a requirement.
- Any **subsequent** CLEC Progression Testing in either Interoperability and/or SATE environments may be performed from the Service Bureau or CLEC's site.

Trading Partner Configuration Verification (TCV):

- This configuration verification is not applicable to the **Lead** CLEC when their Trading Partner Relationships are verified, as part of the Progression Testing Phase, in either Progression Test environment.

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- This verification is applicable to **subsequent** CLECs who opt not to test in a Progression Test environment. This will validate Qwest's Trading Partner Relationship (TPR) set up prior to exporting the TPRs to Qwest's production environment.
- This verification is performed in either SATE or Interoperability Test environment and entails testing one successful transaction per line item on the CLEC's TPR Worksheet. One order transaction plus one supplemental Order transaction must pass Qwest's Business Process Layer (BPL) to verify the Order responses, which allows Qwest to confirm the TPR configuration.
- This verification can be performed from either the Service Bureau or CLEC's location, but must be progression tested using the CLEC's TPR data.
- No Test Plan is required for this verification. The TPR Worksheet will outline the transactions required.

Controlled Production Phase:

- Every CLEC must perform Controlled Production from the CLEC's location. The Service Bureau cannot perform this effort.
- As stated previously, any **subsequent** CLEC may begin Controlled Production when the **Lead** CLEC testing the same product/activity has completed the Progression Testing exit criteria in the Controlled Production Readiness Assessment (that is, the **Lead** CLEC has exited the Progression Testing Phase).

(2) Release Migrations:

The determination of the necessity to re-certify a product will be made by Qwest and specified in Qwest's release-specific Recertification memo, which will be provided to all CLECs with the issuance of Disclosure. The complexity and number of tests necessary will be based upon the complexity of changes to the release. If there are no changes to a product for a release, recertification of that product is not required, but may be tested at the CLEC's discretion.

To re-certify a product, the Service Bureau must perform a suite of tests in either Interoperability or SATE with their **Lead** CLEC and Qwest; however, recertification does not require Controlled Production for any migration regardless of whether a CLEC uses a Service Bureau. This section identifies the process requirements for release migration testing that are unique to a Service Bureau arrangement, highlighting the differing roles of the **Lead** CLEC and **subsequent** CLECs.

Firewall/IA-to-IA Testing Phase:

- This testing is not required for either the **Lead** or **subsequent** CLEC, unless their Interactive Agent (IA), Trading Partner (TP) Name or Firewall Rules change.
- If required, this testing can be performed with Qwest from the Service Bureau site or the CLEC's location.
- If required, this testing will be performed in the SATE and/or Interoperability test environment and the Production environment.

Progression Testing Phase (Interoperability or SATE):

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- The **Lead** CLEC will need to test those products that Qwest determines need recertification, as noted above, and will follow the **Lead** CLEC process described under “(a) New Product Implementation Testing Requirements – Progression Testing Phase (Interoperability and/or SATE)”.
- Any **subsequent** CLEC may choose to test in SATE and/or the Interoperability environment; however, this is not a requirement.
- Any **subsequent** CLEC Progression Testing in either Interoperability and/or SATE may be performed from the Service Bureau or CLEC’s site.

Trading Partner Configuration Verification (TCV):

- This configuration verification is applicable to the **Lead** CLEC for each product change on the TPR Worksheet when that product does not require recertification by Qwest. For products requiring recertification, this verification is not applicable to the **Lead** CLEC who tested in SATE and/or Interoperability test environment, as their Trading Partner Relationships were verified as part of this testing phase.
- This verification is applicable to **subsequent** CLECs who opt not to re-certify products through testing in a test environment. This will validate Qwest’s Trading Partner Relationship (TPR) set up prior to exporting the TPRs to Qwest’s Production environment.
- If required, each **subsequent** CLEC must test one successful transaction per line item on the CLEC’s TPR Worksheet. One order transaction plus one supplemental Order transaction must pass Qwest’s Business Process Layer (BPL) to verify the Order responses, which allows Qwest to confirm the TPR configuration.
- This verification is performed in a test environment, whenever possible. Please be aware that if the TCV cannot be performed in a test environment, a five-day interval for TPR changes applies in Production.
- This verification can be performed from either the Service Bureau or CLEC’s location, but must be tested using the CLECs TPR data.
- No Test Plan is required for this verification. The TPR Worksheet will outline the transactions required.

Production Support/Help Desk:

It is strongly recommended that a Service Bureau have an established Help Desk process to support CLECs with production issues. Qwest is willing to assist Service Bureaus with establishing processes and guidelines that are consistent with Qwest’s established Production and Help Desk support processes. Qwest’s current help desk process allows a Service Bureau to work directly with its Wholesale Systems Help Desk (that is, represent the CLEC in lieu of the CLEC’s participation in help desk calls). As a result, Qwest strongly encourages CLECs to complete the CLEC Trouble Shooting Guide with both CLEC and Service Bureau points of contact for emergency, weekend, holiday, and after-hour production support issues. Qwest also recommends that the CLEC contact the Service Bureau for support prior to contacting Qwest – to more accurately determine the source and nature of the issue.

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Summary – Role of the Service Bureau in a CLEC Implementation

IMPLEMENTATION AREAS	A SERVICE BUREAU’S ROLE...
Service Level Agreements	The Service Level Agreement is located within Qwest’s Interconnect Agreement for CLECs. Neither a Service Level Agreement nor an Interconnect Agreement exists between a Service Bureau and Qwest; however, Qwest and the CLEC will have a signed Interconnect Agreement. Additionally, the requirements outlines in the Proof of Authorization/Letter of Agency V2.0 must be satisfied for the Service Bureau to represent the CLEC.
CMP Participation	Service Bureaus may vote on behalf of the CLEC providing the requirements outlined in section 17.0 of the CMP Redesign Process are met. Additionally, CLECs may solicit advice from their Service Bureau regarding their CMP votes at any time.
Release Sunrise/Sunset dates	This process follows the Qwest documented process (see “EDI Implementation Guidelines”).
Requirements Review	Service Bureaus should perform a review of Qwest’s requirements, keeping CLECs informed of all impacting changes. Additionally, Qwest expects that the CLEC will review all business processes and business rules associated with ordering various product types.
Firewall/IA to IA (Connectivity)	<p>Two options are available to Service Bureaus:</p> <ul style="list-style-type: none"> • One IP address using the standard designated port assignments out lined by TCIF (6998 and 6999) for all CLECs. • Unique IP addresses for each CLEC using the standard designated port assignments out lined by TCIF (6998 and 6999). <p>Service Bureaus need to provide a unique IP/Port combination for test and production.</p> <p>Qwest relies on the Service Bureau to stop unauthorized transactions being submitted to CLECs when all CLEC transactions are transmitted across the same IP address. The Service Bureau must differentiate messages by Trading Partner ID to accomplish this goal.</p>
EDI Progression Testing Process	Refer to TABLE B “Testing Requirements for Service Bureau Implementations” within this document.
Production Support/Help Desk	Service Bureaus may place calls to Qwest’s Wholesale Systems Help Desk on behalf of CLECs (see EDI Implementation Guidelines for further details on the overall process).

February 25, 2005

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New Product Implementations

Progression Testing Phase (Interoperability and/or SATE environment):

	Firewall/IA to IA	TCV	New Products/Activity Types
Lead CLEC	Testing required	Not Applicable	Testing required; see minimum testing requirements ¹
Test Parties:	Qwest to Service Bureau	Not Applicable	Either Qwest to CLEC or Qwest to Service Bureau
Subsequent CLECs	Testing required	Testing is required unless the CLEC decides to test in either the Interoperability and/or SATE environments.	Testing is optional when implementing a product that has already been tested and in production by a lead CLEC.
Test Parties:	Qwest to Service Bureau	Qwest to Service Bureau or Qwest to CLEC	Qwest to CLEC

Controlled Production Phase:

	Firewall/IA to IA	TCV	New Products/Activity Types
Lead CLEC	Testing required	Not Applicable	Testing required; see minimum testing requirements ¹
Test Parties:	Qwest to Service Bureau	Not Applicable	Qwest to CLEC
Subsequent CLECs	Testing required	Not Applicable	Testing required; see minimum testing requirements ¹
Test Parties:	Qwest to Service Bureau	Not Applicable	Qwest to CLEC

Footnotes:

¹ Refer to the “EDI Implementation Guidelines” document for minimum test scenario requirements.

Release Migrations

Progression Testing Phase (Interoperability and/or SATE environment):

	Firewall/IA to IA	TCV	Existing Qwest EDI Certified Products
Lead CLEC	Testing not required, unless the Firewall, IA or the TP Name changed.	Applicable for all products not requiring Recertification.	Testing required; see Qwest's release specific Recertification memo ¹
Test Parties:	Qwest to Service Bureau	Not Applicable	Qwest to Service Bureau
Subsequent CLECs	Testing not required, unless the Firewall, IA or the TP Name changed.	Testing required, if CLEC opts not to test in either <u>Interoperability and/or SATE test environments</u> .	Testing optional
Test Parties:	Qwest to Service Bureau	Qwest to CLEC or Qwest to Service Bureau	Not Applicable

Footnotes:

¹ Refer to the Qwest's release specific Recertification memo for a determination of the products

Appendix C: IMA EDI Minimum Test Requirements

Testing Phase	Pre-Order Testing	Order Testing	Post-Order Testing
New Implementation (Progression)	<ul style="list-style-type: none"> • Every 850 and 860 transaction being implemented • Every associated 855 and 865 response type 	<p><u>Overall Implementation Requirements:</u></p> <ul style="list-style-type: none"> • All three 860 supplement types • One transaction correcting a System Reject and one correcting an ISC Reject <p><u>Requirements per Product:</u></p> <ul style="list-style-type: none"> • Every 850 transaction and associated activity type being implemented • One supplement type (any) per product being implemented 	<p><u>Overall Implementation Requirements:</u></p> <ul style="list-style-type: none"> • Every 836, 855 and 865 response type being implemented <p><u>Requirements per Product:</u></p> <ul style="list-style-type: none"> • One 855 or 865 positive response [LR FOC (RT = B, C, D, or X) or DSRED (AT, AC)] per product/ activity being implemented • One 865 Completion per product being implemented <p>Additional requirement for FBDL: CLEC must demonstrate the ability to receive a second DSRED after AD/AC for a given PON.</p>
New Implementation and Additional Implementation after Initial Progression Testing (Controlled Production)	<ul style="list-style-type: none"> • One 850 and 860 transaction per preorder function being implemented • One associated 855 and 865 response type 	<ul style="list-style-type: none"> • One 850 transaction per product being implemented 	<ul style="list-style-type: none"> • One 855 response per product being implemented <p>NOTE: The LR or DSRED could be any value.</p> <ul style="list-style-type: none"> • Any additional post-order responses being implemented (836 PN, PSON, SU, BCN, etc.)
Additional Implementation after Initial Progression Testing (Progression)	<p><u>Additional products:</u> Same as New Implementation (Progression) and Controlled Production requirements noted above.</p>	<p><u>Additional products:</u></p> <ul style="list-style-type: none"> • Every additional 850 transaction and associated activity type being implemented • One 860 supplement per additional product being implemented <p><u>Additional activity types for Progression tested products:</u></p> <ul style="list-style-type: none"> • Every additional activity type being implemented 	<p><u>Additional products:</u></p> <ul style="list-style-type: none"> • One 855 or 865 positive response [LR FOC (RT = B, C, D, or X) or DSRED (AT, AC)] per product/ activity being implemented • One 865 Completion per product being implemented <p><u>Additional activity types for Progression tested products:</u></p> <ul style="list-style-type: none"> • One 855 or 865 positive response [LR FOC (RT = B, C, D, or X) or DSRED (AT, AC)] per additional activity being implemented

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Testing Phase	Pre-Order Testing	Order Testing	Post-Order Testing
Re-certification (Progression)	<ul style="list-style-type: none"> • Every 850 and 860 transaction being re-certified • One associated query and selection type • One associated positive 855 and 865 response type ('Good' or 'Exact Match') 	<ul style="list-style-type: none"> • Every 850 and 860 transaction needing re-certification • Any associated activity types needing re-certification based on the 'Any', 'and', 'or' logic in the Re-certification Notice 	<ul style="list-style-type: none"> • Every 836, 855 and 865 response type needing re-certification • One successful transaction per product needing re-certification (meaning it passes the BPL)
TCV - Migration Products not tested per the Recertification Notice and minimum testing criteria above. For subsequent CLECs with a Service Bureau for all products.	<ul style="list-style-type: none"> • One Transaction per product being migrated 	<ul style="list-style-type: none"> • One Transaction per product being migrated 	<ul style="list-style-type: none"> • Each response type (either the 836, 855 or 865 response). NOTE: The LR and DSRED can be any Response Value.
TCV – Progression For Subsequent Service Bureau CLECs only	<ul style="list-style-type: none"> • Every 850 and 860 transaction needing TCV using any associated query and selection type • Any associated response type 	<ul style="list-style-type: none"> • Every 850 and 860 transaction needing TCV using any associated activity previously Progression tested 	<ul style="list-style-type: none"> • Every 836, 855 and 865 response type needing TCV

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