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SECOND NOTICE

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TO: All Parties on the Qwest Section 271
Service List

FROM: Maureen A. Scott *MAS*
Attorney, Legal Division

DATE: October 5, 2001

SUBJECT: Qwest's OSS Test – Workshop on Final
Relationship Management Report

Arizona Corporation Commission
DOCKETED

OCT 05 2001

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The Workshop on Cap Gemini Ernst & Young Telecom Media & Network's ("CGE&Y") Final Relationship Management Report will be held on October 9 through October 12, 2001. An agenda for the Workshop and a copy of the Final Relationship Management Report are attached. On October 9, 2001, the Workshop will be held at Qwest's facilities at 20 East Thomas Street. For the remainder of the Workshop, October 10 through October 12, 2001, the Workshop will be held at Qwest's facilities at 5090 North 40th Street, Phoenix, Arizona.

The underlying and supporting data for this Report, including the back-up reports by Hewlett-Packard ("HP") continue to be available to any interested parties for inspection at CGE&Y's headquarters located at 1438 W. Broadway Road, Suite B-250, Tempe, Arizona. The hours of availability are from 8:00 a.m. to 5:00 p.m. Monday through Friday, by appointment only. Parties desiring to review the underlying data or make copies of it should call Twila Wright at 480-736-8500.

For parties unable to attend the Workshop in person, there will be a conference bridge available. The call-in number numbers are as follows: 602-542-9007 (Tuesday); 602-542-9009 (Wednesday and Thursday); and 602-542-9006 (Friday). The State Conference Operator has asked us to inform parties who intend to participate telephonically, not to press any buttons on your phones after you dial in to the call or you will preclude other parties from being able to obtain access to the call.

We look forward to seeing everyone at the Workshop. If you have any questions or would like directions to the Hewlett-Packard facilities, please feel free to contact me at 602-542-6022, or my secretary Vi Kizis at 602-542-3402.

**Arizona Corporation Commission
Qwest's Application To Obtain Section 271 Authority
Docket Number T-00000B-97-0238**

**Relationship Management Evaluation Report
Workshop
October 9 - October 12, 2001**

AGENDA

TUESDAY, OCTOBER 9, 2001

- 9:30 - 9:45 Welcome, Introductory Remarks, Roll Call
- 9:45 - 10:00 Purpose and scope of this workshop: ACC
- Governing Rules
 - Schedule
- 10:00 - 10:30 Overview of Relationship Management Evaluation Report: CGE&Y
- 10:30 - 10:45 Break
- 10:45 - 12:00 Introductory Comments by Parties: AT&T, WCOM, Qwest, others.
- 12:00 - 1:30 Lunch Break
- 1:30 - 3:00 Account Establishment and Account Management (Includes HP's 12 Step Process Report and Help Desk Report)
- Review of CGE&Y and HP Responses
 - Additional Follow-up Questions by the CLECs and Qwest
- 3:00 - 3:15 Break
- 3:15 - 5:00 Account Establishment and Account Management (continued)
- Additional Follow-up Questions by the CLECs and Qwest

WEDNESDAY, OCTOBER 10, 2001

- 9:00 – 9:15 Welcome, Introductory Remarks, Roll Call
- 9:15 – 10:30 Account Establishment and Account Management (Continued)
- CGE&Y and HP Responses to “Take-backs”
 - Additional Follow-up Questions by the CLECs
- 10:30 – 10:45 Break
- 10:45 – 12:00 CLEC Training (Includes Relevant Provisions of HP’s 12 Step CLEC Process Report)
- Review of CGE&Y and HP Responses
 - Additional Follow-up Questions by Qwest and the CLECs
- 12:00 – 1:30 Lunch Break
- 1:30 – 3:00 CLEC Training (Continued)
- Additional Follow-up Questions by Qwest and the CLECs
- 3:00 – 3:15 Break
- 3:15 – 5:00 Interface Development (Includes HP’s EDI Certification Report, the IMA-GUI Initiation Report, and the EB-TA Report)
- Review of CGE&Y and HP Responses
 - Additional Follow-up Questions by Qwest and the CLECs

THURSDAY, OCTOBER 11, 2001

- 9:00 – 9:15 Welcome, Introductory Remarks, Roll Call
- 9:15 – 10:30 Interface Development (Includes HP’s EDI Certification Report, the IMA-GUI Initiation Report and the EB-TA Report)
- Responses by CGE&Y and HP to “Take-backs”
 - Additional Follow-up Questions by the CLECs and Qwest
- 10:30 – 10:45 Break

10:45 - 12:00 Interface Development (Continued)

- Additional Follow-up Questions by CLECs and Qwest

12:00 - 1:30 Lunch Break

1:30 - 3:00 Interface Development - LSOG 3 Comparison

- Review of CGE&Y and HP Responses
- Additional Follow-up Questions by CLECs and Qwest

3:00 - 3:15 Break

3:15 - 5:00 Qwest Co-Provider Industry Change Management Process (Continued)

- Review of CGE&Y and HP Responses
- Additional Follow-up Questions by CLECs and Qwest

FRIDAY, OCTOBER 12, 2001

9:00 - 9:15 Welcome, Introductory Remarks, Roll Call

9:15 - 10:30 Qwest Co-Provider Industry Change Management Process (Continued)

- Additional Follow-up Questions by CLECs and Qwest

10:30 - 10:45 Break

10:45 - 11:30 Qwest Co-Provider Industry Change Management Process (Continued)

- Additional Follow-up Questions by CLECs and Qwest

11:30 - 12:00 Summary and Workshop Conclusion

- Next Steps
- Adjourn



Final Report Relationship Management Evaluation

September 11, 2001
DRAFT Version 3.0
Prepared For:

Arizona Corporation Commission

Cap Gemini Ernst & Young
2301 N. Greenville Av.
Suite 400
Richardson, TX 75082

Document Control Sheet

Version	Date	Reason
0.01	6/17/01	Draft Version 0.01 distributed to internal CGE&Y for peer review
0.02	6/25/01	Draft Version 0.02 distributed to ACC for review
1.0	7/13/01	Draft Version 1.0 distributed to TAG for review
2.0	8/24/01	Draft Version 2.0 distributed to TAG for review
3.0	9/11/01	Draft Version 3.0 distributed to TAG for review

Final Report Relationship Management Evaluation

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5. Relationship Management Evaluation

The Relationship Management Evaluation examined the Qwest business processes, procedures, communications and communications methods that involve direct contact with, or otherwise impact, the Competitive Local Exchange Carrier (CLEC) community.

Scope

Per the Master Test Plan (MTP) Section 7.2 and the Test Standards Document (TSD) Section 6.1, this business relationship was evaluated in the five following functional areas:

- CLEC Account Establishment
- CLEC Account Management
- CLEC Training
- Interface Development
- Co-provider Industry Change Management Process (CICMP)

Some of these areas overlap, but they are separated in this report for the sake of clarity. These areas are described in detail in their respective sections.

Approach

Each functional area was evaluated using the following methods and tools:

- **Questionnaires:** Questionnaires were sent electronically to CLECs that have customers or intend to conduct business in the state of Arizona. CLECs were encouraged to participate in the survey; however, the completion of all questionnaires was strictly voluntary. The surveys were not intended as any kind of statistical tool, and therefore did not follow any established development methodology. They were intended solely to collect anecdotal information on the experiences of the CLECs in dealing with Qwest. As such, they took the place of in-person interviews in many instances where in-person or telephone interviews were either impractical or impossible due to scheduling problems.
- **Interviews:** Cap Gemini Ernst & Young (CGE&Y) conducted in-person interviews with Qwest personnel representing the CLEC account establishment, account management, Electronic Data Interchange (EDI)/Interconnect Mediated Access (IMA) interface development, and the CICMP processes. CGE&Y also attended a meeting of the CLEC Forum, a group of representatives of the CLECs that participate in the CICMP, which afforded the opportunity to interview those present regarding CICMP

and other matters. Informal interviews were conducted with certain CLECs throughout the duration of the evaluation.

- ❑ **Documentation Review:** Documentation relating to each of the evaluated areas was extensively reviewed and is summarized in the appropriate sections of this report. Documentation for the evaluation was obtained from all available sources, including the Qwest website, the Pseudo-CLEC through its account management team, Qwest's technical publications source, and through the information request process established for this 271 proceeding.
- ❑ **Observation:** CGE&Y observed many of the processes discussed in this evaluation. This observation was primarily accomplished by the monitoring, established in conjunction with the Arizona 271 evaluation, of Qwest's interactions with the Pseudo-CLEC. CGE&Y also made observations during its participation in CICMP meetings and focus discussions, participation in Qwest's Release Notification process, attendance at various Qwest wholesale training classes, and through meeting with Qwest personnel involved in the various processes.

The following is a brief description of the five evaluation areas and their respective findings:

1) CLEC Account Establishment

The CLEC account establishment evaluation consisted of review of the entire process by which a CLEC becomes certified to do business in Qwest territory, interconnects its network with Qwest's, if applicable, and establishes systems and processes to order various Qwest products. The evaluation examined:

- Methods and procedures established by Qwest for a CLEC to become a Qwest wholesale customer
- Documentation regarding CLEC account establishment accessible to CLECs via web, hard copy, public documents obtainable through the state commission, etc.
- The Qwest CLEC account management organization, including its processes, procedures, and personnel
- The CLECs' experiences with the account management organization

CGE&Y found that Qwest's CLEC account establishment processes are generally good. During the course of the evaluation, Qwest continued its efforts to improve its processes and the quality of information available to the CLEC community related to account establishment, and CGE&Y was able to track the progress of these efforts. Adverse findings related to Qwest's account establishment processes are summarized below. It is important to note, however, that many of these findings have been, or are in the process of being, closed.

This portion of the evaluation concluded with the following findings:

- The Qwest Interconnect/Resale Resource Guide (IRRG) contained erroneous, inconsistent, and confusing information regarding CLEC account establishment
- The Qwest IRRG contained erroneous, inconsistent, and confusing information regarding products available for resale and as Unbundled Network Elements (UNE)
- Many areas of the Qwest wholesale website contained out-of-date information
- Qwest does not have a coherent process for controlling the over-all content of its wholesale website

2) CLEC Account Management

The CLEC account management evaluation included an examination of the methods, procedures and actions of Qwest in managing its business relationships with the CLECs. The evaluation considered the following functions and processes:

- Qwest account team responses to CLEC queries, problems, issues, etc.
- Help desk call processing, procedures, and business rules involved with the closing of CLEC trouble tickets
- Problem escalation
- Forecasting, including Local Interconnection Service (LIS) trunks, UNE, and collocation facilities
- Ongoing communications between Qwest and the CLECs

CGE&Y found that Qwest's account management processes were generally sound, although these processes appear to require reinforcement and/or improvement due to the many negative comments received from CLECs on this subject. As with the account establishment process, CGE&Y was able to track improvements to many of these processes during the course of this evaluation.

Specific findings related to account management are summarized below:

- Qwest's contract amendment process, while sound in theory, appears to be inconsistently followed, based upon the experiences of the Pseudo-CLEC in the Arizona 271 proceeding and the feedback received from CLECs during the Relationship Management Evaluation
- Qwest's Account Maintenance Service Center (AMSC) procedures, while sound in theory, appear to be inconsistently followed, based upon the feedback received from CLECs during the Relationship Management Evaluation
- Responses to CLEC account inquiries, particularly ones dealing with billing-related issues, are not consistently provided in a prompt manner

3) CLEC Training

The training evaluation assessed the adequacy of the Qwest wholesale training effort. The evaluators considered the following:

- The availability of training (i.e., frequency and geographic location)
- Curriculum offered to CLECs
- Content and structure of available training
- Quality of available training
- Effectiveness of the training as assessed by the participants

During the course of the Relationship Management Evaluation, Qwest's CLEC training effort progressed from unsatisfactory to satisfactory. When the evaluation began, Qwest's formal CLEC training program consisted of only two instructor-lead classes and some self-paced online training. In February 2001, Qwest began offering an extensive catalog of product, systems, and process-related courses to CLECs. This catalog continues to grow.

Adverse findings related to training all occurred prior to Qwest's 2001 roll-out of its new training program, and specifically related to the lack of available courses and the quality of one of the two existing courses. These findings have all been closed.

4) Interface Development

The interface development evaluation assessed the processes, procedures, documentation, and consultative assistance that Qwest makes available to CLECs while developing and implementing their interfaces. It also evaluated the methods by which cooperative certification testing takes place between the CLEC and Qwest, as well as the platforms/environments involved in the testing. The specific systems encompassed by this evaluation were:

- IMA – EDI
- IMA – Graphical User Interface (GUI)
- Electronic Bonding – Trouble Administration (EB-TA)

Since development methods for both IMA-EDI and EB-TA systems are substantially similar, they were both covered in the same questionnaires and interview questions.

CGE&Y found Qwest's interface development process to be generally sound in most areas. Feedback from CLECs was positive regarding the knowledgeability of the staff and the project management processes Qwest uses to manage individual CLEC development efforts.

The major finding in this area is Qwest's lack of an EDI testing environment that mirrors its production environment. Qwest's current test process involves a controlled use of its actual production environment. This process imposes stringent restrictions on the use of the system, as it requires tight coordination of order submission between the CLEC and Qwest's EDI test personnel.

Qwest has begun work on what it calls its "Stand-Alone Test Environment," which may satisfy this deficiency, and plans to have it operational in August, 2001. CGE&Y was therefore unable to make any evaluation of this environment.

5) Co-Provider Industry Change Management Process

The CICMP is Qwest's methodology for identifying, clarifying, prioritizing, scheduling, implementing and communicating changes to its pre-order, order, trouble administration, and billing systems interfaces and associated business processes requested by the CLEC community. These systems are:

- IMA-EDI
- IMA-GUI
- EB-TA
- CLEC billing interfaces
- Held, Escalated, and Expedited Tool (HEET)
- Customer Terminal Access System (CTAS)
- Telecommunications Information System (TELIS)

The issues evaluated in the CICMP assessment included:

- The overall documentation of the CICMP process, including roles, responsibilities, and instructions for completing a change request (CR) form
- The process for, and timeliness of, notifications of upcoming system upgrades, "point releases," etc. These are called "Release Notifications" in the CICMP process.
- The timeliness and content of release notes for upcoming releases
- Communications between Qwest and the CLECs for resolving problems that arise in relation to system upgrades
- The existence of test environments, documentation, and other tools necessary to prepare and test changes before they are implemented
- The process for, and timeliness and effectiveness of, Qwest's notifications of planned and unplanned system down times
- The soundness and effectiveness of these processes

Like many of Qwest's other processes, the CICMP continues to evolve over time. During the course of this evaluation a new manager was appointed to CICMP, and a second CICMP was chartered to specifically handle product and process CRs. While these changes represented an improvement over what had preceded them, CGE&Y found Qwest's CICMP to be deficient in three areas:

- Qwest's CICMP is not a truly collaborative process for effecting changes to the various interfaces mentioned above. In examining the upgrades to Qwest's IMA system during the course of the evaluation, CGE&Y found that CLEC-requested changes made up a

relatively small percentage of the total changes added to the system compared with those initiated by Qwest.

- Qwest's CICMP process does not provide CLECs with an opportunity to present CRs and have them evaluated, approved, and prioritized in a reasonable length of time. In examining IMA Release 6.0, which took place in December 2000, CGE&Y found that the few CLEC-originated changes included in the release had taken an average of 12.5 months to complete the process.
- While Release Notifications were found to be very prompt in most respects, Qwest's "final" EDI design documentation is only released to the CLECs an average of 21 days before an upcoming release. Because CLECs must program their own systems to match the changes made by Qwest, it is CGE&Y's opinion that 21 days is too short a period of time.

It is important to note that Qwest is currently taking steps to rectify all three of these findings. As of the writing of this report, CGE&Y was unable to make any assessments of these efforts.

5.1 CLEC Account Establishment

The CLEC account establishment evaluation consisted of review of the process by which a CLEC becomes certified to do business in Qwest territory, interconnects its network with Qwest's, if applicable, and establishes systems and processes to order various Qwest products. Per the MTP Section 7.2 and the TSD Section 6.1, the evaluation examined:

- Methods and procedures established by Qwest for a CLEC to become a Qwest wholesale customer
- Documentation regarding CLEC account establishment accessible to CLECs via web, hard copy, public documents obtainable through the state commission, etc.
- The Qwest CLEC account management organization, including its processes, procedures, and personnel
- The CLECs' experiences with the account management organization

In order for CGE&Y to arrive at conclusions about the above topics, its first task was to send questionnaires¹ to CLECs with customers in Arizona or that intended to establish service there. These questionnaires asked the CLECs to relate their experiences in dealing with Qwest throughout all phases of the account establishment process, using questions set forth in CGE&Y's TSD.

CGE&Y then conducted formal interviews² with personnel from Qwest representing each of the functional areas involved in the process. These interviews were conducted

¹ CGE&Y Archive File: RME #1 – CLEC Account Establishment Questionnaires

² CGE&Y Archive File: RME #2 – Qwest Personnel Interviews

on the basis of questions and objectives outlined in CGE&Y's TSD. Additionally, informal interviews were conducted with the CLECs throughout the evaluation process.

Finally, CGE&Y undertook a comprehensive review of all documentation available to CLECs regarding the account establishment process. This documentation was obtained from Qwest's wholesale website,³ from the Pseudo-CLEC (HPC 12-Step CLEC Process Report), and ordered through Qwest's technical publications vendor (technical publications were later available from the Qwest wholesale website). The documentation was evaluated for the following:

- Organization
- Availability
- Accuracy
- Clarity
- Completeness
- Usefulness

5.1.1 Questionnaires

Questionnaires regarding the Qwest account establishment process were sent to all of the CLECs that participate in the Qwest CLEC Forum, and those that actively participate in the Arizona 271 Test Advisory Group (TAG), including the Pseudo-CLEC. Formal responses were received from only seven CLECs, although informal responses were received via telephone calls and e-mails throughout the evaluation process. Most respondents could only give general answers to the questions posed in the questionnaires due to the length of time that had elapsed since they had completed their account establishment process.

Questionnaire responses generally agreed with the results of the overall evaluation. Specifically, participants felt that the process, as it has evolved, is generally good. They felt that the initial negotiation process is a bit cumbersome at times, and that the associated documentation did not always provide the answers that they are looking for. However, all respondents were in general agreement that the account management staff, while at times overworked, is competent and generally seems to be an advocate for the CLECs.

The relevant points highlighted by the questionnaires are summarized below:

- The smaller CLECs that "opted into" existing interconnection agreements found the process to be relatively easy compared with negotiating their own agreements.
- The larger CLECs that negotiated their own interconnection agreements from scratch, "paving the way," so to speak, for the smaller CLECs agreed that the process was long and painful. One medium-size CLEC that

³ <http://www.qwest.com/wholesale/pcat/interconnection.html> and <http://www.qwest.com/wholesale/pcat/resale.html>

attempted to negotiate its own agreement was stymied in its effort and ended up opting into an existing agreement just to get into the market.

- All respondents found numerous problems with Qwest's wholesale website. They pointed out problems related to missing information, inconsistent and conflicting information, and difficulty navigating the site.

5.1.2 Interviews

CGE&Y conducted interviews with Qwest personnel responsible for the CLEC account establishment process. The interviews covered the following functions:

- Interconnection agreement negotiation
- Account management assignment
- Network interconnection

Interconnection Agreement Negotiation

Qwest personnel presented an overview of the process by which a CLEC initially contacts Qwest and negotiates an interconnection agreement. Options available to CLECs when negotiating an interconnection agreement are:

- a) Negotiating an agreement from scratch
- b) "Opting Into" an already approved interconnection agreement between Qwest and another CLEC
- c) Using Qwest's Statement of Generally Acceptable Terms (SGAT) as a "model" or template for an interconnection agreement

They indicated that approximately 80 percent of CLECs opt into an agreement rather than pursuing the other two options.

CLECs can begin many processes, including the interconnection negotiation process, before state certification is complete. While it is clearly stated on the Qwest wholesale website that a CLEC must be certified by the state commission before it can provide service, it is not stated that a CLEC can begin the account establishment process before state certification is complete.

Account Management Assignment

CGE&Y interviewed several Qwest account managers:⁴ managers of a large account (WorldCom), medium-size accounts, and small accounts. Additionally, CGE&Y interviewed the individual in charge of the account management function, who is responsible for assigning account managers to accounts. These personnel described the account management assignment process as well as the initial responsibilities of an account manager. Although the processes involved

⁴ CGE&Y Archive File: RME #3 – Qwest Account Manager Interview

for the management of large CLECs differ somewhat from those of a small CLEC, most processes are substantially the same.

The main points made during the interview were as follows:

- Qwest account managers are selected in part by virtue of their breadth of experience within the Qwest business. All of the account managers CGE&Y interviewed had been with the company at least 10 years.
- An account manager's workload is dependent on the size of the accounts he/she manages.
- The most important thing the account manager does during the initial meetings is to help the CLEC complete the CLEC customer questionnaire, a copy of which is available on the Qwest wholesale website.
- During the initial account team interview, the account manager will ask the CLEC about its business plan, what business segment it plans to fit into, what types of services it intends to offer and in what geographic areas. The account manager will point the CLEC to the appropriate Qwest wholesale website addresses.
- The account manager will also, at these early meetings, determine billing arrangements, media, etc. At this point, the account manager will connect the CLEC with another Qwest representative to work on billing interfaces.
- During the initial account establishment meetings, CLECs are asked to provide forecasts of order volumes to determine what processing center they'll be assigned to, and to help Qwest determine staffing levels in those centers.
- Large accounts are assigned more than one account manager. The managers assigned to a large account are often divided to handle the different geographical regions in which the CLEC does business.
- The Qwest account managers for large CLECs spend far less time in these initial meetings on things like guiding the CLEC through the questionnaire process, account set-up, etc.

Network Interconnection

One of the most important steps in the account establishment process for facilities-based carriers is the network interconnection process. This primarily consists of completing the collocation application and build-out process; ordering entrance facilities, Interconnect Distribution Frame (ICDF) cables, and other corollary collocation products; and forecasting for interconnection trunks. The Qwest State Interconnection Managers (SICMs) assist the CLEC during this process, and act as an extension of the account management team.

CGE&Y had the opportunity to interview the SICM for Arizona, as well as the overall manager of SICMs. The interview brought out the following points:

- SICMs function as an extension of the account management team.
- They specifically handle in-depth technical issues surrounding the physical interconnection of CLEC-Incumbent Local Exchange Carrier (ILEC) facilities.
- They act as the single point-of-contact for CLECs for all issues regarding ILEC Central Office (CO) security, access, badges, and operating procedures
- When a CLEC makes a collocation application and Qwest determines that sufficient floor space in the CO is not available, it is the SICM's job to physically tour the facility to verify the space-exhaust condition before the notification letter is sent to the CLEC.
- When a CLEC receives a space-exhaust notification letter in response to the collocation application and wants to dispute it, the CLEC will coordinate with the SICM if it wants to tour the facility.
- There are currently nine SICMs. Each is responsible for a state or region. Each is resident in the region for which he/she is responsible.
- The average level of engineering and other telecommunications experience of each of the nine SICMs is currently about 30 years.
- SICMs are very actively involved in the product definition process, primarily in helping to determine the technical feasibility of the proposed product.
- Following the introduction of new network products to the CLEC community, the SICMs are the focal point for technical questions from the CLECs regarding the products.

5.1.3 Documentation

CGE&Y conducted a review of all documentation related to account establishment. The primary source of this information was the Qwest wholesale website, where CLECs are directed by Qwest to obtain much of their needed information. The primary guide for prospective CLECs wishing to do business with Qwest is the IRRG.⁵ CGE&Y also obtained information from the Pseudo-CLEC, from Qwest's technical publications vendor (technical publications were later available for download directly from Qwest's wholesale website), and through the information request process set up by the Arizona 271 TAG.

CGE&Y examined every document available in the IRRG several times. During the course of the evaluation, substantial changes were made to the look, feel, and content of the Qwest website overall, and to the IRRG in particular. It was still possible, however, to identify several consistent weaknesses throughout the documentation.

⁵ The name IRRG was changed to "Product Catalog" or "PCAT" late in this evaluation. It is referred to as IRRG throughout this document.

The documentation relating to account establishment ran the gamut from very good to very inadequate. The main weaknesses encountered were:

- Lack of organization
- Lack of a consistent style
- Out-of-date information
- No recognizable process for review and update of information

During the face-to-face interviews, Qwest personnel indicated that there was no central point of responsibility for the information contained in the IRRG, or any other web content, nor was there any formal change management process for these documents. There is a web group that oversees certain stylistic matters. Likewise, Qwest's legal department reviews certain content to make sure the information is accurate or at least does not violate any regulatory guidelines. Each subject, be it a product, process, etc., is written by its individual business owner. This has resulted in all of the effects described in the paragraphs that follow.

The lack of organization mentioned above refers to the manner in which the website was designed, and includes navigability and overall page layout. Many of the pages are not designed in a logical, consistent, or user-friendly manner. The information contained on the pages is not cross-referenced (hyperlinked) in an efficient manner, making the navigation of the pages a hit-or-miss process.

The information also suffers from the lack of a consistent style. This lack of consistent style is most evident in the product descriptions contained within the IRRG. These product descriptions are of utmost importance to a CLEC when deciding which products to offer and how to structure its own internal systems to be able to offer them. Without a single editing authority for all product descriptions, the information isn't presented in a consistent manner.

For instance, many product descriptions have consistent headings (e.g., Basic Product Features, Pricing, Installation Intervals) while many do not. Descriptions of some very technical products (e.g., Resale Centrex) contain only basic information, while other relatively simple products (e.g., Resale Residential Exchange Service) are described in great detail.

Some of the information contained in the IRRG, particularly the pages dealing with repair center contact names and telephone numbers, appears to be out of date. When CGE&Y first began reviewing this documentation, almost every page had a date when the information was last reviewed. In many cases, that date was more than two years old. In almost no case, except for some new product descriptions, was the review date any more recent than February of 1999.

During the summer of 2000, after CGE&Y began its evaluation, Qwest completely re-designed its website. The look of the information after the re-design was completely different. Re-examination of the information, however, revealed that the content of the pages had not changed at all. Textual editing was evident on some pages, and the format had been changed throughout. The actual content, however, was the same except that Qwest had now simply removed all review dates from the pages. While it is possible that during the website re-design process all content owners reviewed the information contained on their respective pages and found it to still be valid, there is no evidence of this.

During the interview process, CGE&Y asked if there was a consistent process by which information contained on the wholesale website, and particularly in the IRRG, was reviewed and updated. This was asked as a follow-up to the question already mentioned above about the existence of a central editing authority for web information. Qwest responded that each content owner was responsible for updating his or her own information when it changed and that there was no written policy on the matter. [(Arizona (AZ)Incident Work Order (IWO)1086]

Examples of problems found with account establishment documentation, specifically product descriptions, are given below. Please note that this is not a comprehensive listing of all documents, but serves to illustrate trends found in the documentation review. Other specific comments related to the account establishment documentation can be found in the TSD reference table located in Section 5.1.4, "Results" of this document. Findings related to Qwest's online product documentation have resulted in the issuance of AZIWO1086.

Document Title	Source	Date Updated	Observations (AZIWO1086)
Resale Products			
Business Exchange Service – Resale	http://www.qwest.com/wholesale/pcat/exchange/eservbus.html	February 15, 1999*	<p>The date of last update is more than a year old.</p> <p>* Document was updated by Qwest on June 23 and a couple of hyperlinks (i.e., cross-references) added. No changes were made to the content. There is no indication that the actual content was reviewed for accuracy; the date was simply changed.</p> <p>Section titled "Installation Intervals" states "Normal installation intervals apply," but doesn't refer the reader to where these "normal installation intervals" can be found.</p>



Document Title	Source	Date Updated	Observations (AZIWO1086)
Residence Exchange Service	http://www.qwest.com/wholesale/pcat/exchang eservres.html	February 15, 1999*	<p>The date of last update is more than a year old.</p> <p>* Document was updated by Qwest on June 23 and a couple of hyperlinks (i.e., cross-references) added. No changes were made to the content. There is no indication that the actual content was reviewed for accuracy; the date was simply changed.</p>
Centrex Plus, Centrex/Centron	http://www.qwest.com/wholesale/pcat/centrex.html	February 15, 1999*	<p>The date of last update is more than a year old.</p> <p>* Document was updated by Qwest on June 23 and a couple of hyperlinks (i.e., cross-references) added. No changes were made to the content. There is no indication that the actual content was reviewed for accuracy; the date was simply changed.</p> <p>The document states that this product cannot be ordered through IMA. Since the document was last updated over a year ago it is impossible to tell if this statement is still true, especially since multiple upgrades have been made to IMA since then.</p> <p>Since, according to the document, the product cannot be ordered through IMA, the only option left is the submission of manual LSOG forms. The manual ordering instructions in the document state that the only forms required for ordering this fairly complex service are a Local Service Request (LSR) and an End User form.</p> <p>Centrex resale is one of the more complicated and also one of the most common services ordered by CLEC resellers. This product description, however, only contains very basic information on functionality and ordering compared to other services such as basic residential exchange service, a comparatively easier service for a CLEC to understand and order.</p>
Direct Inward Dialing	http://www.qwest.com/wholesale/pcat/did.html	February 15, 1999*	<p>The date of last update is more than a year old.</p>



Document Title	Source	Date Updated	Observations (AZIWO1086)
			<p>* Document was updated by Qwest on June 23 and a couple of hyperlinks (i.e., cross-references) added. No changes were made to the content. There is no indication that the actual content was reviewed for accuracy; the date was simply changed.</p> <p>The document states that this product cannot be ordered through IMA. Since the document was last updated over a year ago it is impossible to tell if this statement is still true, especially since multiple upgrades have been made to IMA since then.</p> <p>Since, according to the document, the product cannot be ordered through IMA, the only option left is the submission of manual LSOG forms. The manual ordering instructions in the document state that the only forms required for ordering this fairly complex service are an LSR and an End User form.</p>
Frame Relay Service	http://www.qwest.com/wholesale/pcat/framerelay.html	February 15, 1999*	<p>The date of last update is more than a year old.</p> <p>* Document was updated by Qwest on June 23 and a couple of hyperlinks (i.e., cross-references) added. No changes were made to the content. There is no indication that the actual content was reviewed for accuracy; the date was simply changed.</p> <p>The document states that this product cannot be ordered through IMA. Since the document was last updated over a year ago it is impossible to tell if this statement is still true, especially since multiple upgrades have been made to IMA since then.</p> <p>Frame Relay, even in its resale form, is one of the more complicated services to understand. This product description, however, only contains very basic information on</p>



Document Title	Source	Date Updated	Observations (AZIWO1086)
			<p>functionality and ordering compared to other services such as basic residential exchange service, a comparatively easier service for a CLEC to understand and order.</p> <p>Also, unlike many of the other product descriptions there is virtually no discussion of how this product is billed to the CLEC. There is simply the canned reference/link to the Tariff Library.</p>
PBX Service	http://www.qwest.com/wholesale/pcat/pbx.html	February 15, 1999*	<p>The date of last update is more than a year old.</p> <p>* Document was updated by Qwest on June 23 and a couple of hyperlinks (i.e., cross-references) added. No changes were made to the content. There is no indication that the actual content was reviewed for accuracy; the date was simply changed.</p> <p>The document states that this product cannot be ordered through IMA. Since the document was last updated over a year ago it is impossible to tell if this statement is still true, especially since multiple upgrades have been made to IMA since then.</p> <p>Since, according to the document, the product cannot be ordered through IMA, the only option left is the submission of manual LSOG forms. The manual ordering instructions in the document state that the only forms required for ordering this fairly complex service are an LSR and an End User form.</p> <p>Minor comments:</p> <p>Page erroneously has comment on it regarding availability of Frame Relay Service. This should be removed.</p> <p>The entire product description only mentions PBX trunks being available for hotel/motel use. If customers order this service for other business</p>



Document Title	Source	Date Updated	Observations (AZIWO1086)
			applications as well, these scenarios should also be mentioned.
Single Line/Centrex 21 ISDN	http://www.qwest.com/wholesale/pcat/isdn.htm 1	February 15, 1999*	The date of last update is more than a year old. * Document was updated by Qwest on June 26 and hyperlinks (i.e., cross-references) added. No changes were made to the content. There is no indication that the actual content was reviewed for accuracy; the date was simply changed.
Voice Messaging Service (VMS) and Business Voice Messaging Service (BVMS)	http://www.qwest.com/wholesale/pcat/vms.htm 1	February 15, 1999*	The date of last update is more than a year old. * Document was updated by Qwest on June 23 and hyperlinks (i.e., cross-references) added. No changes were made to the content. There is no indication that the actual content was reviewed for accuracy; the date was simply changed.
Wire Maintenance and Pre-Wire	http://www.qwest.com/wholesale/pcat/wiremaintenance.html	February 15, 1999*	The date of last update is more than a year old. * Document was updated by Qwest on June 23 and hyperlinks (i.e., cross-references) added. No changes were made to the content. There is no indication that the actual content was reviewed for accuracy; the date was simply changed.
Interconnect Products			
Advanced Intelligent Network (AIN) Interconnection	http://www.qwest.com/wholesale/pcat/ain.html	December 12, 2000*	When this document was reviewed in November 2000, there were several deficiencies noted. Specifically, the paragraphs under most of the major headings still read "Not Available." *This document was revised on December 12, 2000 and, while the areas mentioned above were removed, the document is still deficient. The product description on this page is three paragraphs long, each paragraph containing only a single sentence. There is very little information about the product on this page.
Central Messaging Detail Service	http://www.qwest.com/wholesale/pcat/cmds.html	February 15, 1999*	This document appears to have been rewritten since the February 15, 1999 date, but the "reviewed on" date has



Document Title	Source	Date Updated	Observations (AZIWO1086)
(CMDS) Hosting and In-Region Hosting			not been changed.
Dedicated Internet Access	http://www.qwest.com/wholesale/pcat/dia.html	N/A	<p>Very little information about this product is contained in this description.</p> <p>There is also no "last updated" date.</p> <p>It appears that this product is one that was available from Qwest as a "wholesale" product to businesses prior to the U S WEST merger. As such, it is not necessarily a CLEC-type interconnection product. Without further information, this is difficult to determine.</p>
Digital Data Service	http://www.qwest.com/wholesale/pcat/dds.html	January 31, 2001	
Domestic Asynchronous Transfer Mode (ATM)	http://www.qwest.com/wholesale/pcat/datm.html	N/A	<p>Basic information is contained in the description, but the description does not contain any of the basic headings (i.e., sections) of most of the other product descriptions.</p> <p>This document has no "last updated" date.</p> <p>It appears that this product is one that was available from Qwest as a "wholesale" product to businesses prior to the U S WEST merger. As such, it is not necessarily a CLEC-type interconnection product. Without further information, this is difficult to determine.</p>
Toll-Free Origination	http://www.qwest.com/wholesale/pcat/dtfo.html	N/A	<p>Very little information about this product is contained in this description.</p> <p>There is also no "last updated" date.</p>
DS1	http://www.qwest.com/wholesale/pcat/ds1.html	January 31, 2001	This product description is well written, but does not appear to have been written with a CLEC perspective. Specifically, it describes the DS-1 product in terms of a Private Line type service, and not as an Unbundled Network Element. Consequently, the ordering instructions and pricing sections may not be correct for a CLEC.

Document Title	Source	Date Updated	Observations (AZIWO1086)
			This document does not contain the same side navigation bar as nearly all the other product descriptions.
DS3	http://www.qwest.com/wholesale/pcat/ds3.html	January 31, 2001	<p>This product description is well written, but does not appear to have been written with a CLEC perspective. Specifically, it describes the DS-3 product in terms of a Private Line type service, and not as an Unbundled Network Element.</p> <p>This document does not contain any ordering information.</p> <p>This document does not contain the same side navigation bar as nearly all the other product descriptions.</p>
Electronic Directory Assistance	http://www.qwest.com/wholesale/pcat/qsearch.html	February 9, 2001	It appears that this product is one that was available from Qwest as a "wholesale" product to businesses prior to the U S WEST merger. As such, it is not necessarily a CLEC-type interconnection product. Without further information, this is difficult to determine.
Field Connection Point	http://www.qwest.com/wholesale/pcat/fcp.html	N/A	This document does not contain a "last updated" date.
Enhanced Extended Loop	http://www.qwest.com/wholesale/pcat/eel.html	February 22, 2001	This document does not contain the same side navigation bar as nearly all the other product descriptions.
Interim Number Portability	http://www.qwest.com/wholesale/pcat/inp.html	February 15, 1999	The "last updated" date is over two years old.
LIDB data storage	http://www.qwest.com/wholesale/pcat/lidbdatastorage.html	N/A	This document does not contain a "last updated" date.
Local Interconnection Service	http://www.qwest.com/wholesale/pcat/lis.html	N/A	This document does not contain a "last updated" date.
Local Number Portability	http://www.qwest.com/wholesale/pcat/lnp.html	March 1, 2001	This document does not contain the same side navigation bar as nearly all the other product descriptions.
Private Line	http://www.qwest.com/wholesale/pcat/privateline.html	N/A	<p>Basic information is contained in the description, but the description does not contain any of the basic headings (i.e., sections) of most of the other product descriptions (e.g., ordering, pricing).</p> <p>This document has no "last updated" date.</p>



Document Title	Source	Date Updated	Observations (AZIWO1086)
			It appears that this product is one originally offered by Qwest prior to its acquisition of the former U S WEST (i.e., to ISP backbone customers), and as such is not a CLEC service offering per se.
Qwest Control	http://www.qwest.com/wholesale/pcat/qcontrol.html	N/A	Basic information is contained in the description, but the description does not contain any of the basic headings (i.e., sections) of most of the other product descriptions (e.g., ordering, pricing). It appears that this product is one originally offered by Qwest prior to its acquisition of the former U S WEST (i.e., to ISP backbone customers), and as such is not a CLEC service offering per se. This document has no "last updated" date.
Qwest Frame Relay	http://www.qwest.com/wholesale/pcat/qframerelay.html	N/A	Basic information is contained in the description, but the description does not contain any of the basic headings (i.e., sections) of most of the other product descriptions (e.g., ordering, pricing). It appears that this product is one originally offered by Qwest prior to its acquisition of the former U S WEST (i.e., to ISP back-bone customers), and as such is not a CLEC service offering per se. This document has no "last updated" date.
Shared Loop	http://www.qwest.com/wholesale/pcat/sharedloop.html	February 26, 2001	This document does not contain the same side navigation bar as nearly all the other product descriptions.
Sub Loop	http://www.qwest.com/wholesale/pcat/subloop.html	January 31, 2001	This document does not contain the same side navigation bar as nearly all the other product descriptions.
Unbundled Dark Fiber	http://www.qwest.com/wholesale/pcat/udf.html	N/A	This document has no "last updated" date.
Unbundled Loop	http://www.qwest.com/wholesale/pcat/unloop.html	February 6, 2001	This document is inconsistent with the format of most of the other product descriptions. The document, instead of containing the product description



Document Title	Source	Date Updated	Observations (AZIWO1086)
			itself, contains hypertext links to the product descriptions. These are offered in both MS Word and Adobe Acrobat.
Unbundled Network Elements Platform (UNEP)	http://www.qwest.com/wholesale/pcat/unep.html	N/A	This document has no "last updated" date. This document does not contain the same side navigation bar as nearly all the other product descriptions.

Qwest undertook another comprehensive update of its wholesale website during the evaluation period, releasing it to customers at the end of January 2001. As with previous updates to the website, the changes were largely concentrated in the user interface and the overall organization of the site.

However, there was a great deal of new content added. A large number of new documents were added, and some new content and cross-references added to existing documents. It must be noted, however, that although new portions were *added* to existing documents, the existing information contained therein was not altered. As a result, the majority of the discrepancies found in the documents remains.

Another minor finding related to the Qwest wholesale website is that it mixes wholesale products from Qwest's former data-related business with wholesale interconnection products from its ILEC business. While it makes sense to have all wholesale products on the same website, the current design with all wholesale products listed under the heading "Interconnection" is incorrect and confusing.

In summary, the Qwest wholesale website is a "work-in-progress" as Qwest works to merge the content of the former U S WEST site with that of the former Qwest site. Qwest is clearly making great strides in this area, and the quality of the site has vastly improved since the beginning of CGE&Y's evaluation.

Pseudo-CLEC Experience

The following summary is based upon the final report of the CLEC account establishment process given by High Performance Communications (HPC), the Pseudo-CLEC for the Arizona 271 evaluation. This report was released in its entirety to the Arizona TAG in May 2001. Given that HPC conducted its account establishment activities in late 1999 and early 2000, it is important to note that much of the information and process provided by Qwest at that time has since been updated and improved.

HPC started the interconnection negotiation process on November 19, 1999. Using Qwest's "Model Interconnection Agreement" as a basis, HPC was able to approve and sign its Interconnection Agreement on January 7, 2000. That agreement was later approved by the Arizona Corporation Commission (ACC) on March 1, 2000. HPC was assigned its account manager on January 28, 2000 and held its first meeting on February 16, 2001.

While completing the Interconnection Agreement, HPC experienced the following issues:

- It was unclear as to what the first step should be in the CLEC process. The information from one location on Qwest's website indicated that the CLEC should request an account manager who would then assemble a team to assist the CLEC through the interconnection agreement negotiations. In another location it indicated that the CLEC must negotiate an Interconnection Agreement before it would be assigned an account manager. HPC followed the latter for this test.
- During the first negotiation session with Qwest, the negotiation team indicated that HPC should have provided some sort of background information before the negotiation session. HPC, on the other hand, had asked several times if it was required to provide Qwest with any specific information before the negotiation session. On every occasion, HPC was told that it only needed to review the Model Interconnection Agreement and come prepared with a list of questions.
- HPC tried to fax a signed Confidentiality Agreement to Qwest seventeen times over a five day period because it was given a wrong number for the fax machine at Qwest.

HPC began discussion to establish connectivity between its OSS and Qwest's Operations Support Systems (OSS) on February 23, 2000. This connectivity included dial-up modem access for the IMA-GUI, and dedicated T1 lines for the IMA-GUI and EDI applications. HPC established application-to-application connectivity to the IMA-GUI through the dial-up on April 5, 2000 and through the dedicated T1 Lines on May 4, 2000. HPC acquired four T1 lines from Qwest for use with the EDI, Billing and IMA-GUI application interfaces. HPC experienced several documentation issues with IMA documents used to establish that connectivity. All issues were resolved through the account manager. Information on the EDI interface connectivity is covered separately in the HPC EDI Connectivity Report.

HPC experienced the following issue in regard to establishing connectivity to the IMA-GUI system:

- The SecurID form requests the user’s Social Security Number and their mother’s maiden name for initializing the card. HPC indicated to its account manager that it does not wish to provide that information for privacy reasons. While the account manager indicated that this could be dealt with, it proved to be a challenge when HPC attempted to initialize the SecurID Cards. Qwest Help Desk representatives indicated that it would need that information to troubleshoot card issues. It took almost three months for the account manager to provide a resolution to the issue. HPC submitted an updated SecurID form to its IMA system administrator on March 23, 2000. When HPC personnel attempted to access the IMA-GUI on March 29, 2000, they were not allowed because the IMA Help Desk had not received the new form. It took almost two weeks for the new form to get to the IMA Help Desk so that HPC could establish its IMA-GUI accounts.

5.1.4 Results

The following table presents individual findings cross-referenced to objectives listed in CGE&Y’s Arizona 271 TSD.

TSD Objective and Section Reference	Objective Satisfied?	Source	Comments
1) Is it clear whom the CLEC should contact to get started doing business with Qwest? (6.2.3.2)	Y	http://www.qwest.com/wholesale/clecs/clec_index.html	The IRRG details information for the initial contacts that a CLEC is to make at Qwest to begin the account establishment process, interconnection negotiation, account management assignment, etc., for both facilities-based CLECs and resellers.
2) Is the process for becoming a Qwest wholesale CLEC customer clearly presented and explained? (6.2.3.2)	Y - With Exception	http://www.qwest.com/wholesale/clecs/clec_index.html	The IRRG details a 5-step process for facilities-based CLECs and a 12-step process for resellers. The collateral information obtained from the account management personnel was very well constructed and easy to follow. Exceptions: Most of the steps in the Reseller process are also applicable to facilities-based CLECs. These steps for facilities-based carriers are either omitted, or several steps are combined into a single step. (AZIWO1064)
3) Are the steps for the CLEC clearly documented? If so, is the information required to complete each step reasonable? (6.2.3.2)	Y - With Exception	http://www.qwest.com/wholesale/clecs/clec_index.html	The IRRG details a 5-step process for facilities-based CLECs and a 12-step process for resellers. These step-by-step instructions also include the Qwest contact from whom to obtain information. Exceptions:

TSD Objective and Section Reference	Objective Satisfied?	Source	Comments
			<p>In addition to the exception in item 2) the following exceptions were noted:</p> <ul style="list-style-type: none"> • Step #3 of the reseller process reads, in part, "...Additional facilities would have been determined as you and your account manager completed the New Customer Questionnaire..." None of the previous steps, however, detail how to go about requesting or receiving an account manager from Qwest. • Existing Step #12 should be made Step #11, and Step #11 moved down the list to #12. (AZIWO1064)
4) Does the documentation provided to CLECs by Qwest clearly delineate the responsibilities of the CLEC-Qwest business relationship? (6.2.3.2)	Y	http://www.qwest.com/wholesale/clecs/clec_index.html	The IRRG details the 5-step process for facilities-based CLECs and the 12-step process for resellers. These step-by-step instructions also inform the facilities-based CLECs and resellers where to obtain the information needed.
5) Does the startup documentation available to CLECs provide adequate contact information? (6.2.3.2)	Y	http://www.qwest.com/wholesale/clecs/clec_index.html	The IRRG provides the initial contact information and the proper call center contacts on the page titled "CLEC & Reseller Customer Contacts."
6) Does the startup documentation available to CLECs identify escalation processes? If so, are these processes useable? (6.2.3.2)	Y - With Exception	http://www.qwest.com/wholesale/clecs/clec_index.html	<p>The IRRG provides the escalation criteria in the section titled "Criteria and Expectations for Calls, Escalations and Queries" and provides the escalation contacts in the section titled "Interconnect Service Delivery Centers Status, Query and Escalation Process."</p> <p>Exceptions:</p> <ul style="list-style-type: none"> • The section titled "Interconnect Service Delivery Centers Status, Query and Escalation Process" does not contain status, query, or escalation process. • The section titled "Interconnect Service Delivery Centers Status, Query and Escalation Process" contains names of Qwest personnel responsible for CLEC contact and escalations and their phone numbers; however, the list does not appear to have been updated since December 9, 1998.
7) Does the startup documentation available to CLECs clearly outline the	Y	http://www.qwest.com/wholesale/clecs/clec_index.html	The IRRG provides detailed information on the Meet Point Billing process, applicable regulations and guidelines, and the role of Qwest in the process.



TSD Objective and Section Reference	Objective Satisfied?	Source	Comments
work activities required in order to bill IXCs for jointly provided switch access? (6.2.3.2)			
8) Does the startup documentation available to CLECs clearly outline the responsibilities of both CLECs and Qwest in regard to pre-ordering activities? (6.2.3.2)	Y	http://www.qwest.com/wholesale/clecs/orderprocess.html	<p>The IRRG provides adequate instructions for such activities as:</p> <ul style="list-style-type: none"> • Interconnection agreement negotiation • Collocation application and build-out • Letters of authorization
9) Does the startup documentation available to CLECs clearly outline the steps for processing orders of various types? (6.2.3.2)	Y-with exception	http://www.qwest.com/wholesale/pcat/interconnection.html	<p>The product descriptions available within the IRRG, where most of the pertinent ordering information should be contained, are poorly written, inconsistent in their content, and difficult to navigate. The information contained within these descriptions may very well be out of date. See Section 2.4.1.3, titled "Documentation Summary" for more information, particularly regarding documentation update histories and procedures. AZIWO1086 covers this finding.</p> <p>Additionally, various ordering scenarios are contained in the IMA user documentation. The scenarios contained in this guide are essentially correct. However, the scenarios constitute only a small percentage of the products/combinations that can be ordered through IMA.</p>
10) Does the startup documentation available to CLECs thoroughly identify and explain all reasons for rejects? (6.2.3.2)	Y – with exception	http://www.qwest.com/wholesale/clecs/orderprocess.html	<p>The IRRG contains a list of Reject Reasons. The page does not explain if the list is complete, nor does it inform the CLEC what steps to take to rectify the reject.</p> <p>Exception:</p> <p>The page does not explain if the list is complete.</p>
11) Does the startup documentation available to CLECs clearly set expectations on service intervals for resale and interconnection services? (6.2.3.2)	Y – with exception	http://www.qwest.com/wholesale/downloads/010612/SIG_Interrconnection_061201.doc	<p>The Qwest SIG is satisfactory overall.</p> <p>Exceptions:</p> <ul style="list-style-type: none"> • The Service Interval Guide (SIG) does not give any indication of FOC intervals for orders issued through Mediated Access. • Further, the SIG makes no mention of the ordering method assumed (i.e., manual ordering) when giving Firm Order Confirmation (FOC) intervals, therefore leaving it to the reader to infer it from the material presented.

TSD Objective and Section Reference	Objective Satisfied?	Source	Comments
12) Does the startup documentation available to CLECs sufficiently document the types of customized bills available for their use? (6.2.3.2)	Y	http://www.qwest.com/wholesale/downloads/010403/CLEC_Billing_Usage_Update040301.doc	The IRRG contains a comprehensive discussion of all available billing formats and their application.
13) Is Tariff (SGAT) pricing information made available to CLECs? (6.2.3.2)	Y	http://tariffs.uswest.com/	The IRRG provides the CLECs with contact lists (by state) to use to gather tariff information. This section of the IRRG also contains links to both a Qwest Tariff Library (sorted by state) and a Qwest Tariff activity bulletin board (viewable by date or jurisdiction (state)). The IRRG also contains a Universal Service Order Code (USOC) Search and Field Identifier (FID) Finder that allows interactive searching of available USOCs and FIDs.
14) Does the startup documentation available to new CLECs clearly explain how to report troubles, create trouble tickets, obtain status on troubles, escalate and close trouble tickets? (6.2.3.2)	Y	http://www.qwest.com/wholesale/clecs/escalations.html	The documentation provides new CLECs with the repair center contact numbers to report troubles. The documentation also explains what information the repair center will need to report repair issues and create trouble tickets.
15) Does the startup documentation available to CLECs have a clear process for misdirected repair calls? (6.2.3.2)	Y	http://www.qwest.com/wholesale/clecs/escalations.html	The IRRG explains that when a CLEC end user mistakenly calls Qwest for a repair, that end user will be given the CLEC's repair number to the extent that Qwest has an updated list of CLEC repair numbers.
16) Does the startup documentation available to CLECs provide repair contact telephone numbers for each major type of service? If documented, do these include appropriate contacts for the full collection of services utilized by CLECs? (6.2.3.2)	Y	http://www.qwest.com/wholesale/clecs/escalations.html	The contact repair matrix includes: -Resale – Simple Res (IFR) -Resale – Simple Bus (IFB) -Resale – Complex POTS -Resale (Designed Services) -Unbundled Loop -Unbundled Switch -LIS Trunking -Unbundled Transport -Number Portability
17) Are the calling card and Line	Y	http://www.qwest.com/wholesale/cle	Qwest documentation explains that a new CLEC must arrange a LIDB storage data contract with Qwest, if it

TSD Objective and Section Reference	Objective Satisfied?	Source	Comments
Information Data Bases (LIDB) implications for customers switching from Qwest to a CLEC clearly explained? (6.2.3.2)		cs/callcardlidb.html	wishes to pursue such an option, and informs the CLEC to contact the account manager for additional information regarding a LIDB data storage contract. The documentation also explains the LIDB implications with regard to Calling Cards, Collect Calling, Bill-to-Third Number Calling, and Fraud monitoring.
18) Are the media for receiving billing outputs and reports clearly defined and accurate? (6.2.3.2)	Y	http://www.qwest.com/wholesale/downloads/010403/CLEC_Billing_Usage_Update040301.doc	The IRRG defines the media types that are available. These are: CRIS Summary Bill, IABS Summary Bill, IABS Sub Account Bill Detail, Daily Usage Feed, Loss Report, and Completion Report.
19) Does the startup documentation available to CLECs provide processes allowing the CLEC to escalate issues in the event Qwest doesn't respond appropriately to CLEC needs? (6.2.3.2)	Y	http://www.qwest.com/wholesale/clecs/complaint.html	The IRRG contains the formal complaint process for the CLECs to follow in the event that a complaint or issue has not been resolved by the responsible Qwest department in a satisfactory manner.
20) Does the documentation available to CLECs provide clear tax exemption information? (6.2.3.2)	Y	http://www.qwest.com/wholesale/clecs/taxexempt.html	The IRRG clearly states that it is the CLEC's responsibility to claim any exemption. The IRRG further details what forms are required to be submitted to Qwest for both federal and state exemption.
21) Does the documentation available to CLECs provide a clear explanation of the interfaces available to the CLEC for OSS functions? (6.2.3.2)	Y - With Exception	http://www.qwest.com/wholesale/clecs/electronicaccess.html	<p>The IRRG explains options for the CLEC to interface with Qwest OSS. The options are via Fax or IMA for pre-order, order and post-order activities, and via Customer Electronic Maintenance and Repair (CEMR) and EB-TA for maintenance and repair. The electronic connection options available to CLECs are dial-up, direct connect via a dedicated circuit, and through web access.</p> <p>Exceptions:</p> <p>The terms "Mediated Access" and "Interconnect Mediated Access (IMA)" are used throughout Qwest's documentation, and often it is not clear to which system they are referring. Interconnect Mediated Access, or simply Mediated Access, is the generic term Qwest uses to refer to the electronic interfaces to its pre-order, order, post-order and maintenance and repair systems. This interface can be accessed via the web, using the IMA – GUI system (a proprietary</p>

TSD Objective and Section Reference	Objective Satisfied?	Source	Comments
			system of Qwest's) or through EDI. If EDI is employed, of course, the CLEC must develop its own front end for entering orders. Throughout Qwest's documentation, however, the terms IMA and Mediated Access are used and it is often not clear whether the writer is referring to the IMA – GUI product or EDI. This is important because even though they may both be considered forms of "mediated access," they are really two entirely different systems, each with its own associated process, notifications, etc.
22) Does the documentation available to CLECs provide detailed information as to the means available for OSS access, available data files, and connectivity options? Is the method for ordering each clearly explained, and are the timeframes listed for acquiring each type of access options? (6.2.3.2)	Y - With Exception	http://www.qwest.com/wholesale/clecs/electronicaccess.html	<p>The IRRG provides instructions for CLECs to follow to gain OSS access and gives connectivity options. The forms required are outlined and provided for the CLEC to submit to the account manager.</p> <p>Exceptions:</p> <ul style="list-style-type: none"> • Timelines are not listed for every connection method. • Relevant comments from the previous question apply to this question as well.
23) Does the documentation available to CLECs clearly identify Qwest's SS7 certification requirements? (6.2.3.2)	Y	http://www.qwest.com/wholesale/pcat/ccsacs7.html	The IRRG provides the worksheets the CLEC must use to prove compliance and compatibility with network standards. The worksheets contain the criteria the CLEC switch must meet to gain SS7 certification.
24) Does the documentation available to CLECs clearly identify the Qwest directory listing options available to CLECs including the features and functionality that can be made available to CLEC customers? Are the changes, if any, for these services clearly explained? (6.2.3.2)	Y	http://www.qwest.com/wholesale/pcat/whitepagedirlist.html	The IRRG details the options that a CLEC has for directory listings. The section explains what the CLECs responsibilities are for its customers' directory listings.
25) Does the	Y - With	http://www.qwest.com/wholesale/pcat/whitepagedirlist.html	The IRRG contains a process for the CLEC to follow

TSD Objective and Section Reference	Objective Satisfied?	Source	Comments
<p>documentation available to CLECs contain a process allowing CLECs to request new services? Is the process for requesting the new services clear and are the steps required and timeframes for response clearly delineated? (6.2.3.2)</p>	<p>Exception</p>	<p>com/wholesale/preorder/bfrsrprocess.html</p>	<p>and the form for the CLEC to submit when requesting new services (the New Services Request Application).</p> <p>Exceptions:</p> <ul style="list-style-type: none"> • The documentation states, "Specific requirements and timeframes for evaluating your request are based on applicable legal or regulatory requirements, and will be identified upon receipt of the completed request application form." The documentation does not, however, state a timeframe during which Qwest will inform the CLEC of receipt of the application nor who will be contacting the CLEC. • The website contains three separate processes for making a request for new products and services <ol style="list-style-type: none"> 1) The Special Request (SR) Process/New Services Request Application 2) The Bona Fide Request (BFR) Process/New Services Request Application 3) The Open Network Architecture (ONA) New Services Request Application • It is not clear which of the three processes above should be used for the request. The stated purposes for the three, respectively, are: <ol style="list-style-type: none"> 1) SR Process: "...to receive and analyze requests from co-providers for new local interconnection and/or unbundled network elements that <i>do not require a technical feasibility analysis.</i>" (Italics added) 2) BFR Process: "...to receive and analyze requests from wholesale local markets customers for new local interconnection and/or unbundled network elements." 3) ONA Process: "...to evaluate your request for interconnection or access to unbundled network elements." • From the above, it can be deduced that a CLEC is to use the SR Process for requests that do not require a technical feasibility analysis, and the BFR Process for those that do. However, the verbiage about the technical feasibility is only contained in the SR Process description and not in the BFR Process description. The SR Process, in fact, states clearly that a CLEC must use the BFR Process for requests requiring technical analysis and even provides a link to the BFR page. The BFR page, on the other hand, says nothing at all



TSD Objective and Section Reference	Objective Satisfied?	Source	Comments
			<p>about the other two processes and nothing about it being only for those requests requiring technical analysis.</p> <ul style="list-style-type: none"> The third process, the ONA New Service Request Process, gives no indication whatsoever of its relation, if any, to the other two processes. In fact, there is no indication, apart from the text quoted above, describing for what this request is used. The SR Process does include timeframes for responding to the request; the other two, however, do not. <p>These findings resulted in the issuance of AZIWO1065.</p>
26) Does the documentation available to CLECs contain clear information and rules for the handling of long distance carrier information – Primary Interexchange Carrier/Local Primary Interexchange Carrier (PIC/LPIC) changes? (6.2.3.2)	Y	http://www.qwest.com/wholesale/preorder/ldselection.html	The IRRG clearly states that only PIC/LPIC changes initiated by the CLEC on behalf of the end-user will be processed. Qwest will reject any PIC/LPIC changes by Interexchange Carriers (IXCs) on CLEC accounts.
27) Does the documentation available to CLECs contain appropriate rules for handling customer switches from CLEC to CLEC? (6.2.3.2)	Y	IRRG	The IRRG informs the CLEC of its responsibility for obtaining all information needed to process the disconnect order and re-establish the service on behalf of the end user. The documentation also provides instructions for the CLEC to follow in order to resolve disputes (e.g., slamming).
28) Does the documentation available to CLECs contain detailed information regarding the products available for resale? (6.2.3.2)	N	http://www.qwest.com/wholesale/picat/resale.html	The product descriptions available within the IRRG are poorly written, inconsistent in their content, and difficult to navigate. The information contained within these descriptions also may be out of date. See Section 2.4.1.3, titled “Documentation Summary” for more information, particularly regarding documentation update histories and procedures. These findings resulted in the issuance of AZIWO1086.
29) Does the documentation available to CLECs contain detailed information about	Y – with exception	http://www.qwest.com/about/policy/sgats/#arizona	The SGAT contains language relating to monthly service performance reporting, and each CLEC is free to negotiate whatever modifications to the SGAT language it wishes.

TSD Objective and Section Reference	Objective Satisfied?	Source	Comments
Qwest Performance Measurement system? (6.2.3.2)			Exceptions: The section within the SGAT dealing with service performance gives the general categories in which performance is measured and reported, but does not give any detailed information about the specific measures involved (i.e., what kinds of triggers are used within the databases to capture time and date related information).
30) Does the documentation available to CLECs contain detailed information about the Qwest CICMP? (6.2.3.2)	Y	http://www.qwest.com/wholesale/cicmp/index.html	The CICMP website contains a full explanation of the CICMP process. See Section 5.6 of this document for CICMP information.

5.2 CLEC Account Management

The CLEC account management evaluation included an examination of the published and actual methods and procedures provided by Qwest for managing on-going business relationships with the CLECs. Per the MTP Section 7.2 and the TSD Section 6.1, the evaluation examined:

- The timeliness, accuracy, and completeness of Qwest responses to account inquiries
- The timeliness and responsiveness of help desk call processing
- The appropriateness and methods applied to help desk call closures
- The frequency and appropriateness of problem escalation efforts that are taken in response to CLEC inquiries
- The reasonableness of forecasting requests and the extent to which forecast information is applied by Qwest into its various planning activities
- Communications avenues that are made available to CLECs by Qwest, and the extent that these are effective

Activities

The activities performed in conducting the CLEC account management evaluation included:

- Gathering of Qwest CLEC help desk, forecasting, communications, and other account management process documentation
- Review and evaluation of the account documentation provided by Qwest
- Interviews of Qwest personnel

- Distribution of questionnaires to participating CLECs⁶
- Documentation of observations

5.2.1 Questionnaires

Questionnaires regarding Qwest account management were sent to all of the CLECs that participate in the Qwest CLEC Forum, and those that actively participate in the Arizona 271 TAG, including the Pseudo-CLEC. Formal responses were received from only seven CLECs, although informal responses were received via telephone calls and e-mails throughout the evaluation process.

Questionnaire responses generally agreed with the results of the overall evaluation. Specifically, participants feel that the process as it has evolved is generally good, with some weak areas.

The relevant points highlighted by the questionnaires are summarized below:

- Most respondents felt that Qwest's contract amendment process was inconsistent and sometimes needlessly time-consuming. Numerous instances were cited, such as companies engaging in lengthy contract negotiations only to find that no amendment was necessary, different companies experiencing substantially different negotiation timeframes for the same product, and several disputes surrounding whether an amendment was necessary in the first place. Qwest also appeared to lack a consistent document change control process for contracts. Several instances were cited by CLECs and the Pseudo-CLEC of red-lined changes being ignored upon subsequent issuance of various amendments.
- All respondents were dissatisfied with AMSC procedures. Specific areas of reported deficiency were the AMSC's closing of trouble tickets without proper notification to CLEC, the AMSC's closing of trouble tickets without clearing the trouble, and inconsistent escalation experiences.
- Most respondents were dissatisfied with the responsiveness of Qwest's wholesale systems help desk.
- All respondents agreed that their account managers/teams can be very responsive and prompt at times, but this is not a consistent pattern. They feel that, on the whole, account inquiries are not handled in a timely manner.
- Most respondents felt that workforce reductions within Qwest have hampered the account managers' ability to quickly and efficiently respond to CLEC inquiries.

⁶ CGE&Y Archive File: RME #8 – CLEC Account Management Questionnaires

- Most respondents expressed dissatisfaction with the information available on the Qwest wholesale website. This topic is discussed in more detail in Section 5.2.3.
- The smaller CLECs expressed concern over the apparently heavy workload of their account managers. Account managers of small CLECs manage up to six accounts at a time, and some small CLECs reported less than satisfactory experiences in getting responses from their account managers.
- Many CLECs were unhappy with Qwest's forecasting process. The two primary concerns were that Qwest's forecasts were required too far in advance of most CLECs' business plans to support, and that they felt that their forecasts were often ignored by Qwest even when provided.

5.2.2 Interviews

CGE&Y conducted in-person interviews with Qwest personnel involved in account management, forecasting, network and collocation augmentation and build-out, training, and network interconnection. The results are summarized below.

Account Management

For the account managers, the account management phase consists largely of the following:

- Fielding questions and educating the CLECs about new products as they become available.
- Answering calls from many of the small to medium-sized CLECs about "what if" scenarios mainly dealing with products, combinations of products, ordering scenarios, etc.
- Handling escalations of installation problems/disputes and Maintenance and Repair (M&R) tickets. There is a published procedure for escalations on the Qwest wholesale website, but very often the CLECs, the smaller ones at least, don't follow it and go through the account manager for all escalations.
- Proactively selling services to the CLECs

Information Available to CLECs on the Web

The IRRG is the primary source of information for CLECs, at least during the account establishment process. It contains most of the information a CLEC requires to initiate its business plan as a CLEC with Qwest, including the 12-step account establishment process, product descriptions, pre-ordering business

procedures, etc. Qwest indicated during CGE&Y's interview that there is no central organization within Qwest that oversees the quality, consistency, content, and style of any of the information contained on the Qwest wholesale website. While there is a webmaster that is responsible for the on-screen appearance and format of the information, no one person is responsible for coordinating the content.

CGE&Y believes the fact that Qwest does not have a single coordination point for this information is a weakness in the system, and is shown by the disorganization of the site overall. This topic is described in more detail in Section 5.1.3 of this document.

Forecasting

CGE&Y discussed forecasting briefly with the account management teams. The account managers participate in and facilitate the forecasting process, but are not an integral part of it. The account managers interviewed offered the following observations:

- ❑ It is felt that many CLECs, particularly the smaller ones, do not have the innate expertise to accurately forecast network element needs.
- ❑ Many CLECs, particularly the smaller ones, may not understand the types of information Qwest is looking for in these forecasts.
- ❑ Qwest feels that many CLECs are reluctant to provide detailed forecasts because they are afraid that they would be "revealing their business plans," which could then be shared with competitors. Qwest assured CGE&Y as an aside that there are ample procedures in place to ensure that this never occurs.
- ❑ Another source of inaccuracy of CLEC forecasts, in Qwest's opinion, is the fluid nature of CLECs' business models and the attendant changes it brings. For instance, a CLEC may forecast X number of lines to be installed in a particular Metropolitan Service Area (MSA), only to change the focus to a different MSA and never inform Qwest of this change.

The account managers briefly explained the process that Qwest follows:

- ❑ All CLEC interconnection agreements call for quarterly forecasting; however, these quarterly forecasts are only for LIS trunking, according to Qwest. Once per quarter the account managers, Qwest network capacity planners, and CLEC representatives meet, usually over the phone, and conduct a forecasting meeting. Depending on the size of a CLEC's network, these meetings can be lengthy.
- ❑ Collocation forecasts, according to Qwest-supplied documentation, are submitted semi-annually by the CLECs.

- ❑ An organization within Qwest monitors compliance with the CLECs' quarterly forecasting requirement and notifies the account managers of CLECs that haven't completed their forecasts.
- ❑ Once CLEC forecasts are received by the network capacity planning group, a forecast is issued internally.

5.2.3 Documentation

Since, from a documentation perspective, the account establishment and account management processes are interchangeable, the findings detailed in Section 5.1.3 apply equally to this section.

Pseudo-CLEC Experience

The summary below is based upon the following reports issued by HPC, the Pseudo-CLEC for the Arizona 271 evaluation:

- "CLEC 12-Step Process Report for 271 Test Generator" – Version 2.0
- "Help Desk Relationship Report for 271 Test Generator" – Version 3.0

Amendment Process

HPC pursued two amendments to its Interconnection Agreement. The first was to add UNE-P capability. HPC received a Mailout (e-mail notification service provided by Qwest) describing UNE-P on February 22, 2000. HPC requested the amendment and went through four revisions of the amendment before signing the final copy on June 6, 2000. HPC received its final, signed copy from Qwest on July 12, 2000. The second amendment was for Local Number Portability (LNP) Managed Cuts. HPC received a Mailout on that product on July 9, 2000. HPC requested the amendment on July 10, 2000, and received it on August 2, 2000. HPC reviewed and returned the signed copies on August 10, 2000. On September 12, 2000, HPC followed up with its account manager to determine the status of the amendment.

Between that date, and October 30, 2000, HPC continued to follow up with the account manager on the status. On that date, Qwest indicated that it did not know where the amendment was and sent out a replacement copy. HPC signed and returned that copy on November 12, 2000. HPC received its final signed copy on February 9, 2001.

HPC uncovered the following issues regarding amendments to its Interconnection Agreement:

- The UNE-P amendment took four revisions, and three months to complete

- The amendment for LNP Managed cuts took over seven months, and one replacement copy to complete

Help Desk Relationship

The Qwest help desks contacted by HPC and the types of issues they handle are as follows:

- Qwest Wholesale Systems Help Desk - Connectivity issues, billing files issues, software issues
- Qwest Interconnect Service Center - Order status, order information receipt
- Qwest Account Maintenance Service Center - End-user complaints, end-user line trouble, repair call issues

Contact was made to all of the above help desk functions at Qwest during the 271 test process. Contact occurred by phone, voice-mail, e-mail and fax. Contact between Qwest and the HPC Customer Service Center (CSC) occurred in both inbound and outbound directions. The following matrix provides an unofficial sample of some of the contact activity that took place between Qwest and the Pseudo-CLEC.

Type of Call	Call Direction	Number of Occurrences	Percentage
Call to Qwest-FOC	Outgoing	23	6.89%
Call to Qwest-IMA GUI Outage	Outgoing	6	1.80%
Call to Qwest-Jeopardy	Outgoing	1	1.80%
Call to Qwest-LSR Reject	Outgoing	42	12.57%
Call to SSOP Helpdesk	Outgoing	11	3.29%
Calls Regarding CEMR	Incoming	3	0.90%
Calls Regarding CEMR	Outgoing	13	3.89%
Customer Call-Installation Iss	Incoming	25	7.49%
Customer Call-Installation Iss	Outgoing	6	1.80%
Customer Call-Trouble	Incoming	2	0.60%
Customer Call-Trouble	Outgoing	2	0.60%
Customer Complaint	Incoming	6	1.80%
DDTS Outage	Incoming	1	0.30%
DDTS Outage	Outgoing	2	0.60%
Order Status	Incoming	5	1.50%
Order Status	Outgoing	21	6.29%
Qwest call about LSR	Incoming	41	12.28%
Qwest Call In Other	Incoming	30	8.98%
Qwest Helpdesk	Incoming	1	0.30%
Qwest Helpdesk	Outgoing	26	7.78%

Type of Call	Call Direction	Number of Occurrences	Percentage
Repair Call	Incoming	3	0.90%
Repair Call	Outgoing	6	1.80%
Qwest Technician Call In	Incoming	58	17.37%

The following help desk issues were uncovered during the course of the Arizona 271 project:

1. HPC attempted to contact the Qwest Help Desk on May 8, 2001 (12:10 p.m.). The Qwest phone rang 40 times and there was no answer. (AZIWO1147)
2. When a call had to be transferred to another Help Desk group, calls occasionally took several rings and in some instances were not answered. The following are two instances where this was observed:
 - HPC was placed on hold when transferred to the escalation department for 17 minutes 57 seconds (150 rings) before HPC hung up. HPC called Help Desk back. Help Desk could not reach the escalations department and told HPC that they had no other way to reach them. Qwest did not call back on this escalation. ([ClearDDTS ticket number redacted] - escalation ticket 802160). (AZIWO1147)
 - HPC was placed on hold when transferred to the escalation department for 13 minutes 53 seconds (65 rings). ([ClearDDTS ticket number redacted] - escalation ticket 830112). (AZIWO1147)
3. On several HPC calls to the Qwest Help Desk, HPC was placed on hold multiple (two or more) times. (AZIWO1147)
4. HPC could not find documented Help Desk procedures that stated the process for escalation of Help Desk issues. (AZIWO1148) However it was HPC's experience that Qwest Help Desk personnel consistently provided a two-hour call back commitment.
5. When issues were escalated, HPC's experience was that calls were not returned within the quoted two-hour time frame. HPC also experienced instances where calls were not returned at all. (AZIWO1145)
6. Escalation tickets were closed without notification to the Pseudo CLEC ([ClearDDTS ticket number redacted] – escalation ticket 754013; [ClearDDTS ticket number redacted] - escalation ticket 773927; [ClearDDTS ticket number redacted] – escalation ticket 754609). (AZIWO1145)

7. Escalation tickets were closed without comments to indicate the reason for the closure. ([ClearDDTS ticket number redacted] – escalation ticket 754013). (AZIWO1145)
8. Qwest Help Desk personnel were not familiar with Service Order Completions (SOCs) notifications. HPC had to call the account manager for resends and questions concerning the generation of SOCs. (AZIWO1146)
9. HPC received the following error message “Invalid action code error” on UNE-P order. HPC contacted the Qwest Help Desk to resolve the error condition. HPC was told the order was issued correctly and an error should not have been generated. Qwest agreed to check further and call back with additional information. ([ClearDDTS ticket number redacted] - escalation ticket 754013).
 - HPC was told issue had to be resolved by a Qwest process coach
 - Contact required four calls to resolve
10. Qwest comments on notifications are confusing. HPC received a FOC on a UNE Loop cancel order with the following remark: “ca n41464044 per lsr sup 1, c41464043 not canceled due to order already cmp sdc kim n [Phone number redacted].” HPC called to clarify the meaning of the remark. The Qwest representative explained the following:
 - The existing service was disconnected on 3-1-01.
 - The new connect (which should have been worked at the time of the disconnect) was not completed. The new connect was rescheduled for 3-31-01.
 - The problem was that Qwest should not have cancelled (rescheduled) the new connect unless the disconnect order was also rescheduled. The call was transferred to the escalation department. The representative in the escalation group reviewed the issue and agreed to call HPC back with the resolution within the next 24 hours. The call ended at 3:10 p.m. on 03-27-01. ([ClearDDTS ticket number redacted] - escalation ticket 773927). HPC had not received a call back as of 3-29-01 at 4:00 p.m. HPC subsequently received a SOC on the new connect to establish service as a UNE Loop.
 - On a follow-up call, HPC contacted Qwest to verify the entries required on a UNE-P order. Qwest Help Desk advised that he was confused as he was told three different things from three different people within Qwest.
11. The following LSR notification issue was encountered by HPC:

- LSR Reject notification received by HPC - Qwest Help Desk representative could not determine what the Reject comments meant which were entered previously by another Qwest representative. Call was escalated and the representative responding to the escalation could not determine what was meant by the comment. The comment in question was "DO ORDER CREATED TO CANCEL." Representative agreed to contact original representative in Dallas office. Representative called later and advised HPC the order was correct and a FOC would be sent to HPC.
12. HPC called Qwest Help Desk to seek clarification of a Reject error message received. HPC was given escalation ticket 802693 at 4:41 p.m. Qwest returned call at 12:34 the following day. HPC was told the order was issued correctly and a Reject should not have been received. A FOC was later received on the order.
13. HPC called Qwest regarding an LSR Reject notification. Qwest was unsure if converting a Qwest line or adding an additional line. The HPC order contained the remark "do not disturb existing service." No call received on the escalation ticket. FOC later received, same day (approximately 3 hours 20 minutes later).
14. HPC received LSR Rejects on the following CENTREX LSRs:
F60E281S030416 VER 00, F60E211S020416 VER 00, F60E271S020416 VER 00, F60E311S030416 VER 00, F60E301S030416 VER 00, F60E291S030416 VER 00, F60E071S110416 VER 00.
- HPC called the Qwest Help Desk to discuss the reason for the Rejects and to clarify the entries required for successful submission of the orders. The Qwest representative advised HPC that she could only discuss a couple of the LSRs, that she had several calls in queue and could not spend a lot of time on this call. The representative later advised that she did not know why the orders were rejected. HPC was given escalation ticket # 808158.
 - HPC was transferred to the escalation department. The escalation representative advised that she thought HPC had used the wrong form. HPC advised that the CENTREX resale form was used. The representative then stated that she did not know why the LSR Reject was sent.
 - HPC was then provided the Minnesota office number. HPC was informed that the Minnesota office was responsible for Centrex orders. HPC called [Phone number redacted] and reached a recording that advised the hours of operation were 7:30 a.m. to 7:00

p.m. PST. When the recording ended, HPC was not given an option to leave a message (call was dropped and a message to “hang up and try your call again” was received.)

15. Qwest technician called HPC regarding a UNE-P service installation. Technician asked HPC what type of service UNE-P is. HPC advised Qwest technician. Technician then replied, “OK, I know what to do now.” (AZIWO1149)
16. A Qwest representative called HPC to ask what type of service UNE-P was. HPC explained the service. He said ok, he knew what that was and would tell his people what to do. (AZIWO1149)
17. HPC received a call from a representative in the Qwest “Working Left-Ins” group to advise HPC that someone was moving into an apartment where there was an HPC account ([Phone number redacted]). The incoming Qwest customer wanted service installed on 04-06-01. HPC called CGE&Y to determine if the service could be disconnected. CGE&Y advised HPC that the service could be disconnected, but that it would be several days (04-09-01) before they could get a script to HPC. HPC advised Qwest that it could issue a disconnect order on 04-09-01. Qwest asked if they could disconnect the service, HPC advised yes, Qwest then disconnected the service and forwarded a FOC to HPC. HPC did not submit an LSR for the disconnect order. ([ClearDDTS ticket number redacted])
18. HPC issued a cancellation on a UNE-Loop order (PON F51E1189060220). The service was disconnected 03-01-01, but only the new service was cancelled resulting in an out of service condition for the customer. The new service was rescheduled for 03-31-01. Qwest agreed to resolve within 24 hours. HPC was not contacted. However, a SOC was later received on the new service installation.
19. HPC issued LSR to convert a 1FR to UNE-P. Due to confusing Qwest documentation and inconsistent information received from the Qwest Help Desk, an HPC customer’s service was disconnected ([Phone number redacted]). HPC contacted Qwest to resolve issue. Escalation ticket – 830112. Call was transferred to escalation department. HPC was on hold for 4 minutes and 43 seconds (65 rings). HPC hung up and recalled Help Desk. The phone rang 40 times before HPC hung up. HPC called again and was transferred to escalations, reached voice mail and left a message. HPC called again and asked to speak with a manager and was given a duty pager. Qwest manager called back, advised HPC it was a Qwest error and agreed to have customer service reinstalled before the close of business.

20. HPC called the Qwest Help Desk to determine why an HPC customer's second line was disconnected. Qwest provided an escalation number-830112, and attempted to transfer the call to the escalation department. The escalation department could not be reached.
21. Qwest technician called HPC, said they had talked to the HPC customer and the customer advised that he did not order service. The remarks on the LSR were "do not disturb customer." (AZIWO1149)
22. Qwest technician called HPC regarding a conversion installation visit. The technician spoke to the HPC customer. The technician spoke to someone who was the subscriber who said that the HPC customer of record did not live there. (AZIWO1149)

5.2.4 Results

CGE&Y finds that Qwest's account management processes, while requiring improvement and/or reinforcement, adequately meet the needs of the CLEC community.

Areas requiring improvement and/or reinforcement (i.e., additional training for Qwest personnel) are summarized as follows:

- CGE&Y interviewed Qwest's AMSC supervisory personnel and discussed AMSC procedures. Personnel were found to be knowledgeable and procedures soundly-designed. The preponderance of anecdotal evidence suggests, however, that procedures for trouble ticket status updates and closure are not being followed by AMSC personnel at least part of the time.
- Responses to CLEC questionnaires and the experiences of HPC point to inconsistent processes in Qwest's execution of contract amendments. Specific weaknesses appear to be centered in the tracking and document control of these amendments, and also in the development of amendment templates following the release of new products.
- Qwest has made great strides in improving the quality of information offered to CLECs through its wholesale website. Qwest must continue its efforts in this area.

Forecasting is an area where there seems to be a great deal of dispute between the CLECs and Qwest. Qwest feels that CLECs are unwilling, and in some cases unable, to provide accurate forecasts for network needs; and the CLECs feel that Qwest's forecasting requirements are unrealistic. CGE&Y believes that the nature of this dispute stems from the different business models used by CLECs versus Regional Bell Operating Companies (RBOCs).

The following paragraphs, summarized from Qwest’s wholesale website, describe the LIS forecasting process and serve to illustrate this issue.

Switch capacity growth requiring the addition of new switching modules may require six months to order and install. To align with the timeframe needed to provide for the requested facilities, including engineering, ordering, installation and make ready activities, the parties will utilize Qwest standard forecast timelines, as defined in the standard Qwest LIS/Type 2 Trunk forecast forms for growth planning. For capacity growth, Qwest will utilize CLEC forecasts to ensure availability of switch capacity.

Each party will utilize the forecast cycle outlined on the Qwest LIS/Type 2 Trunk forecast forms, which stipulates that forecasts be submitted on a quarterly basis. The forecast will identify trunking requirements for a two-year period. From the quarterly close as outlined in the forecast cycle, Qwest will have one month to determine network needs and place vendor orders which may require a six month minimum to complete the network build. Seven months after submission of the initial forecast, Qwest will have the necessary capacity in place to meet the CLEC forecast. After the initial forecast, Qwest will ensure that capacity is available to meet CLECs' needs as described in the CLEC forecasts.

Both parties will follow the forecasting and provisioning requirements of the interconnection agreement for the appropriate sizing of trunks, and use of direct end office versus tandem routing.

The LIS/Type 2 interconnection forecasting schedule is as follows:

Assumes Two Year Forecasting Cycle

Forecast Due to Service Manager (Month/Day)	Final View of Forecast For:
12/01	3rd qtr. second year
3/02	4th qtr. current year
6/01	1st qtr. second year
9/07	2nd qtr. second year
12/07	3rd qtr. second year

The use of a two-year forecasting cycle is a sound one for a company that has been in business for as long as Qwest. CLECs on the other hand, many of whom have not yet been in business for two years, may find it impossible to provide a trunking forecast two years in advance.

The collocation forecasting requirements, by way of comparison, follow a one-year forecasting schedule. The following paragraphs have been summarized from Qwest’s wholesale website.

The CLEC shall submit an annual forecast, updated at the end of each quarter, of its future collocation requirements. The quarterly forecast shall be reviewed by the CLEC and the Qwest service manager. The CLEC forecast shall be considered accurate for purposes of collocation intervals if the subsequent collocation application is within twenty percent of the forecast.

The forecast shall include, for each Qwest premises, the following:

- Identification of Qwest premises
- Floor space requirements, including the number of bays for a cageless collocation arrangement
- Power requirements
- Heat dissipation
- Type of collocation (e.g., caged physical, cageless physical, shared ICDF, virtual)
- Entrance facility type
- Type and quantity of terminations
- Date co-provider expects to submit its collocation application

Following is the collocation forecasting schedule:

Forecast due to Service Manager (Month/Day)	Final View of Forecast For:
12/01	1st quarter current year
3/02	2nd quarter current year
6/01	3rd quarter current year
8/01	4th quarter current year
11/30	1st quarter following year

5.3 CLEC Training

Per the MTP Section 7.2 and the TSD Section 6.1, the purpose of the CLEC training evaluation was to determine the availability of training schedules to the CLECs, how often this information is made available and in what formats this information is offered. This evaluation also examined the frequency of training on different topics and the effectiveness of the curricula. Documentation made available to CLECs in conjunction

with CLEC training was also reviewed, including user guides, workbooks, student guides, and online references.

During the course of this evaluation, Qwest rolled out a new and vastly improved CLEC training program. Prior to February 1, 2001, Qwest's catalog of training courses available to CLECs consisted of only two formal classes: an IMA class and a directory listings class. Furthermore, the IMA class, as observed by CGE&Y, was inadequate in serving the training needs of a typical CLEC IMA user. The lack of classes overall, and inadequacy of the IMA class resulted in AZIWO1066 and AZIWO1067.

On February 1, 2001, Qwest made available to CLECs an entire catalog of new courses addressing a majority of their training needs in systems, products and processes (<http://www.qwest.com/wholesale/training/coursecatalog.html>). CGE&Y randomly chose two of these new classes to attend and evaluate, and requested feedback on the other classes from any CLEC that attended them. As a result of these actions, AZIWO1066 and AZIWO1067 were closed.

The majority of this section on CLEC training is a review of Qwest's new training program. The only exception to this is Section 5.3.3 which describes CGE&Y's experience with the original IMA class, in addition to the new classes attended.

5.3.1 Questionnaires

Questionnaires regarding Qwest CLEC training⁷ were sent to all of the CLECs that participate in the Qwest CLEC Forum, and those that actively participate in the Arizona 271 TAG, including the Pseudo-CLEC. Formal responses were received from only seven CLECs, although numerous informal responses were received via telephone calls and e-mails throughout the evaluation process. Following the roll-out of Qwest's new training program, CGE&Y also requested and received feedback from CLECs regarding their experiences with these new classes.

The questionnaire responses received prior to Qwest's new training roll-out were generally negative. CLECs felt that the available classes did not meet their training needs, and that the classes were not very useful. Feedback received about Qwest's new classes, on the other hand, has been very positive.

CLEC feedback on Qwest's new classes is summarized below:

- Respondents were very happy with the quantity and variety of Qwest's new courses.
- Since the classes are new, the instructors are not always completely familiar with the subject matter.

⁷ CGE&Y Archive File: RME #4 – Qwest Training Questionnaires

- The IMA-GUI “Hands-On” class did not adequately cover the needs of both novice and experienced users.
- Most of the classes are conducted by the instructor reading from the class handbook, sometimes with the aid of visual aids and sometimes not. Respondents felt that the classes should be developed to be more interactive.

5.3.2 Interviews

CGE&Y did not conduct any formal interviews with Qwest’s training personnel. Information related to training development activities was obtained during formal interviews with Qwest account management personnel and informal discussions with Qwest classroom trainers during classes attended by CGE&Y.

The formal and informal interviews indicated that a new manager had been appointed to develop CLEC training and that plans for new training were being developed. Those interviewed said that the need for expanded training had been recognized for some time based on CLEC feedback.

The courses were developed with extensive input from product specialists and based upon the input received through the account management staff from the CLECs, according to those interviewed.

5.3.3 Documentation

CGE&Y found the training material made available during the IMA-GUI “Hands-On” class and the Unbundled Network Elements – Platform (UNE-P) Plain Old Telephone System (POTS) class⁸ to be well constructed, easy to follow, and up to date. Materials distributed during the IMA-GUI “Classic” course were found to be insufficient. Please see Section 5.3.4 for a more detailed description of the course materials for this class.

5.3.4 Observations

CGE&Y observed three classes offered by Qwest during the course of this evaluation; one before the roll-out of Qwest’s new classes and two after. CGE&Y’s experiences are described in the paragraphs that follow.

CGE&Y personnel attended a one-day IMA-GUI overview in the spring of 2000. The training provided a good overview of the IMA-GUI system, and afforded class participants an opportunity to view the interface and its various functions and observe some of the processes involved in pre-order, order, and M&R through IMA-GUI.

⁸ CGE&Y Archive File: RME #5 – IMA-GUI and UNE-P Training Class Material

CGE&Y found this class to be inadequate in meeting trainees' needs in several respects. While the IMA-GUI isn't difficult to use, the class observed by CGE&Y didn't prepare users adequately to actually perform pre-order, order, and M&R functions using the system.

The class wasn't hands-on. It was a lecture class with handouts, and a teacher's assistant with a laptop and a projector demonstrated the functionality of the IMA-GUI while the students merely observed. While this was somewhat effective, and might be a good class for supervisory personnel that will have little hands-on responsibility to attend, there was no way for any student to really get a feel for the system. And even though the instructors had a "demo" server that they could log into to show us most of the pre-order and order functionality, some of the functionality couldn't be demonstrated. Some of it just didn't work properly due to server and database configurations, and other functionality simply wasn't available in the demo environment.

An example of system functionality not available in the demo environment was M&R. While the instructors were able to demonstrate such things as checking a line's status and pulling up a circuit history, functionality such as opening a trouble report simply isn't available except in the "live" environment.

The class handouts were largely comprised of screen shots of the IMA-GUI system. They didn't contain much real information, although they did provide plenty of room for note taking by the student. Many of the screen shots, especially in the M&R area, were virtually unreadable. Since much of the M&R functionality couldn't be demonstrated, this was a critical oversight.

During the class, the instructors imparted various tips and business rules for using the IMA-GUI that are not documented anywhere in the user guide or any of the online resources. When class participants asked the instructors if these points were going to make it into the IMA documentation, the instructors took notes of these points and promised to pass them along. There was not any formalized process in place for doing this, nor was there any follow-up to indicate that the instructor's notes were being acted on by the IMA development and documentation staff.

CGE&Y attended two of Qwest's new classes in the spring of 2001: IMA-GUI "Hands-On" and UNE-P POTS. Both of these classes were held in Denver, Colorado.

The IMA-GUI "Hands-On" class was a vast improvement over what Qwest now calls the IMA "Classic" course. Aside from some minor logistical problems, the class was very well presented. This particular class was attended by IMA users ranging from very experienced to those with no experience at all. The class proceeded from a general overview of the IMA system and network, including

help desk and other support functions and telephone numbers, to a hands-on walk-through of the system administration, pre-order, order, and post-order functions of IMA-GUI. IMA-GUI M&R was not covered in this class because Qwest was in the process of transitioning to the Customer Electronic Maintenance and Repair (CEMR) system for CLEC maintenance and repair.

The instructors were very knowledgeable and answered all questions to the best of their ability. Instructors wrote down all questions they were not able to answer, and researched the answers on breaks and after the class. The instructors are not yet completely familiar with all of the courses they are required to teach, so they are often forced to consult with product subject matter experts in order to fully answer students' questions.

The majority of questions asked by participants, however, were related to business rules and Interconnection Service Center (ISC) processes and didn't necessarily have anything to do with the IMA-GUI system. Many other questions stemmed from some participants' lack of understanding of Local Service Ordering Guidelines (LSOG) fields and business rules, and likewise weren't related to IMA-GUI.

The training system created for this class was usable but contained some shortcomings. For example, since the system doesn't fully mirror the production environment, the student is not able to submit an order and receive a FOC. Likewise, most post-order functionality was not available to class participants. Finally, participants of the class experienced several system failures, most often when several students tried to submit the same transaction at the same time. This action resulted in their workstations locking up, and students were forced to completely shut down their browsers, log back into IMA, and get back to where they were. In some instances this wasted quite a bit of class time.

The UNE-P POTS class gave a basic overview of the UNE-P POTS product, some of the business rules associated with it, and a walk-through of the process used to order it. It was originally scheduled to be a half-day class, but was expanded to a full day in order to show those not familiar with IMA-GUI how to order it using that system. Those already familiar with IMA-GUI were free to leave the class when this section began. The class was informative, although it gave far more generic information about IMA-GUI ordering than specific information about the UNE-P POTS product. CGE&Y felt that the class material should either be enriched or else folded into a more comprehensive UNE-P class.

5.3.5 Results

Qwest's new CLEC training catalog, rolled out in February 2001, is a vast improvement from what preceded it and has been found to satisfy nearly all



objectives set forth in the Arizona 271 MTP and TSD. Qwest has begun offering a full catalog of products, systems and business process training that covers most needs of the CLEC community. A look at the following table, copied from the Qwest wholesale website, gives an indication of the scope of Qwest's new CLEC training program:

Instructor-Led Training					
Title	Tuition	Duration	Start Date	End Date	City
ASR LIS Trunking	No charge	1 day	4/24/01	4/24/01	Minneapolis
			5/24/01	5/24/01	Salt Lake City
			6/21/01	6/21/01	Seattle
			6/28/01	6/28/01	Denver
ASR Private Line	No charge	1 day	4/25/01	4/25/01	Minneapolis
			5/23/01	5/23/01	Salt Lake City
			6/20/01	6/20/01	Seattle
			6/27/01	6/27/01	Denver
ASR Switched Access	No charge	1 day	4/26/01	4/26/01	Minneapolis
			5/22/01	5/22/01	Salt Lake City
			6/19/01	6/19/01	Seattle
			6/26/01	6/26/01	Denver
ASR Wireless Customers	No charge	2 days	5/17/01	5/18/01	Seattle
			5/30/01	5/31/01	Denver
Centrex	No charge	2 days	5/23/01	5/24/01	Minneapolis
IMA "Hands On"	No charge	1 day	4/23/01	4/23/01	Denver
			4/24/01	4/24/01	Denver
			5/22/01	5/22/01	Denver
			5/23/01	5/23/01	Denver
			6/07/01	6/07/01	Denver
IMA "Classic"	No charge	1 day	6/05/01	6/05/01	Seattle
			6/12/01	6/12/01	Minneapolis
IMA Directory Listing	No charge	1 1/2 days	5/08/01	5/09/01	Minneapolis
			6/20/01	6/21/01	Denver
IMA Release 7.0	No charge	3 hours	4/06/01	4/06/01	Denver
			4/10/01	4/10/01	Audio Conference
			4/17/01	4/17/01	Audio Conference
LNP	No charge	1/2 day	4/27/01	4/27/01	Denver
			6/15/01	6/15/01	Denver
POTS Product Overview	No charge	1 day	6/27/01	6/27/01	Denver
POTS Resale	No charge	1 day	3/21/01	3/21/01	Denver
			6/28/01	6/28/01	Denver
Qwest 101	No charge	3 days	6/5/01	6/7/01	Denver
UBL	No charge	2 days	4/25/01	4/26/01	Denver
			6/13/01	6/14/01	Denver
UNE-P POTS	No charge	1 day	4/20/01	4/20/01	Denver
			6/29/01	6/29/01	Denver

These courses are still in their infancy and will probably need to be revised and possibly expanded. With student feedback it is expected that these courses will be streamlined and focused over time.

Results of the Training evaluation are further detailed in the table that follows:

TSD Objective and Section Reference	Objective Satisfied?	Source	Comments
1) Is there a process for obtaining CLEC input for the training? If so, is the process clearly written and has it been adequately communicated to the CLECs? (TSD Section 6.4.3.2)	Y	http://www.qwest.com/wholesale/training/feedback.html	CLECs can make requests at any time to their account management teams for different types of training, additional training, or enhancements to existing training.
2) Does the Qwest training available to CLECs adequately address the CLECs' need for product training? (TSD Section 6.4.3.2)	Y – with exception	N/A	<p>Qwest began offering a full compliment of product-specific courses beginning in February 2001. While CGE&Y only had the opportunity to review one of these courses, feedback from CLECs has been very positive.</p> <p>Exception:</p> <p>These courses are still in their infancy and will probably need to be revised and possibly expanded.</p> <p>CGE&Y attended Qwest's UNE-P POTS class in March 2001. The class was satisfactory overall. The instructor, by his own admission, was largely unfamiliar with the subject matter and merely read from the course book for most of the class. The second half of the class was supposed to have been an explanation of how to order the product through IMA-GUI. Since the IMA "Hands-On" class was not a prerequisite for the UNE-P class, however, the IMA-GUI portion of the course amounted to little more than a brief IMA-GUI overview. CLEC feedback on other such courses has reiterated this observation.</p> <p>With student feedback it is expected that these courses will be streamlined and focused over time.</p>
3) Does the Qwest training balance the needs of both new and experienced users of the IMA-GUI? (TSD Section 6.4.3.2)	Y	N/A	The training is aimed at the inexperienced user. Instructors are provided the flexibility, and are normally very willing, to address a variety of topics not in the curriculum.
4) Does Qwest provide an adequate means for CLECs to provide feedback on their experience of CLEC training? If so are the processes for evaluating CLEC feedback properly documented? (TSD Section	Y	http://www.qwest.com/wholesale/training/feedback.html	Course evaluation forms are distributed at the end of every class asking the student to rate the course, instructor, material, environment, and equipment, and provide any other feedback on the course that the student wishes. There is also a form on the website at the URL listed at left.

TSD Objective and Section Reference	Objective Satisfied?	Source	Comments
6.4.3.2)			
6) Were training schedules and documentation readily available? If yes, in what formats were the schedules and documentation available? If no, what steps were needed to obtain the necessary documentation? (TSD Section 6.4.3.2)	Y	http://www.qwest.com/wholesale/training/coursecatalog.html	Training schedules are provided on a web page that can be accessed from the wholesale training home page. Documentation is also available on a web page that can be accessed from the wholesale training home page.
7) Was the documentation readable and easy to understand? (TSD Section 6.4.3.2)	Y	http://www.qwest.com/wholesale/training/coursecatalog.html	The documentation examined by CGE&Y was clearly written and would be easily understood by most readers.
8) Was the documentation comprehensive? What type of documentation was provided (what areas are covered)? (TSD Section 6.4.3.2)	Y	http://www.qwest.com/wholesale/training/coursecatalog.html	Documentation examined by CGE&Y was found to be comprehensive. Documentation included IMA Training Guide/Class Companion, the IMA User Guide, and the IMA Administrator's Guide.
9) Was the frequency of training adequate? (TSD Section 6.4.3.2)	Y	http://www.qwest.com/wholesale/training/course_scheduled_reg.html	Classes on most subjects are given at least once per month. More popular classes, such as the IMA "Hands-On" class, are given several times per month.
10) Was the training information timely and up-to-date? (TSD Section 6.4.3.2)	Y	N/A	Classes on new products are developed at the same time the products are. Classes for new releases of IMA are held prior to the release, although such classes are not hands-on.
11) Training was provided at reasonable cost to CLECs (TSD Section 6.4.3.2)	Y	http://www.qwest.com/wholesale/training/course_scheduled_reg.html	Regularly scheduled training held at Qwest locations was free. If CLECs chose to send personnel from out of the area, the cost associated would include air fare, lodging and meals for all travelers. When CLECs require that Qwest provide classes at their sites, the CLEC must pay for one or two instructors to fly to the site, and pay for lodging if applicable.
12) Were contact names and numbers provided during the training class in the event there were follow-up questions about the training programs? If so, were the contacts able to provide the assistance needed? Additionally, were the answers direct and	Y	N/A	The IMA instructors provided business cards with their contact information in the event of further questions after the class. There were no reported incidents where a training issue required clarification and the instructor was unable to provide it.



TSD Objective and Section Reference	Objective Satisfied?	Source	Comments
complete or did significant effort have to be expended to answer questions? (TSD Section 6.4.3.2)			
13) Are the processes for monitoring Qwest instructor performance documented? (TSD Section 6.4.3.2)	N/A	N/A	Qwest's internal methods for evaluating instructor performance were not examined by CGE&Y. An examination of Qwest's internal procedures for instructor evaluation are outside the scope of this evaluation.
14) Do CLECs have proper input into the evaluation of the instructors? (TSD Section 6.4.3.2)	Y	http://www.qwest.com/wholesale/training/feedback.html	CLECs are provided with instructor evaluation forms at the conclusion of every class. Additionally, CLECs are free to submit evaluations to Qwest through their account management team.
15) Does Qwest have a structured method for evaluating instructor performance? (TSD Section 6.4.3.2)	Y	N/A	An instructor evaluation is part of the course evaluation form distributed by the instructors at the end of each class. Qwest's internal methods for evaluating instructor performance were not examined by CGE&Y.
16) Did the Pseudo-CLEC personnel that received the IMA-GUI training believe that it was effective in preparing them to use the IMA-GUI interface? (TSD Section 6.4.3.2)	Y- with exception	N/A	The IMA-GUI "Hands-On" class was effective in training users on the use of the system. Exceptions: > Pseudo-CLEC personnel attended the IMA "Classic" (i.e., non-hands-on) course. Since the class was not hands-on, the users from the Pseudo-CLEC were not able to practice different ordering scenarios. User feedback of the course ranged from "not useful" to "somewhat useful." This class is acceptable for those users not requiring an in-depth IMA-GUI class, such as supervisory personnel. > The IMA-GUI "Hands-On" class is only available in Denver. Not all CLECs will be able to send sufficient numbers of users to this class.

5.4 Interface Development - EDI/IMA-GUI

This evaluation examined the documentation, specifications and consultative assistance provided by Qwest to CLECs for use in building an EDI interface or installing the IMA-

GUI interface. An evaluation of the test environment that Qwest provides CLECs for testing their EDI and EB-TA interfaces was also included.

Per the MTP Section 7.2 and the TSD Section 6.1, the interface development evaluation included the following activities:

- Review and evaluation of all available documentation⁹
- Observation and evaluation of Qwest processes and procedures supporting CLEC EDI, EB-TA & Billing interface development and implementation efforts
- Review and evaluation of Qwest's EDI cooperative testing procedures and its testing environments

EDI Development Process

The EDI development process used by Qwest is well documented and followed in practice. The process, drawn from Qwest's EDI Implementation Guide (http://www.uswest.com/wholesale/ima/edi/downloads/EDI_ImplementationGuidelin_010301.doc), consists of the following:

❖ Project Initiation Discussions

According to the Qwest EDI Implementation Guide, the purpose of these discussions is to “to provide both the co-provider and Qwest with a clear understanding of the objectives during the implementation of EDI trading capabilities. These discussions also provide a forum for communicating a general description of the interface and an overview of the implementation process, for identifying and distributing applicable documentation, and for determining the specific EDI transactions to be implemented.”

Qwest and the CLEC hold an initial meeting, at which the following activities take place:

- Give general overview of the Qwest IMA-EDI interface
- Review Qwest data transport requirements
- Introduce team members and identify roles and responsibilities
- Identify the objectives and scope of the implementation
- Identify implementation timeframes and the EDI interface release against which implementation will be performed
- Review the EDI Implementation Guide and implementation processes
- Review documentation
- Establish administrative/housekeeping guidelines

⁹ <http://www.qwest.com/wholesale/ima/edi/index.html> and HPC EDI Report

❖ Project Plan Development and Agreement

The next phase in the process is the joint creation and negotiation of a project plan. The respective Qwest and CLEC project managers are responsible for adhering to this plan once it has been put into effect, and any changes to it must be jointly discussed, negotiated, and agreed to following the same process as the initial negotiation.

The execution of a project plan is a prerequisite to the beginning of the development effort.

The project plan includes the following phases, at a minimum:

- Initiation discussions
- Requirements review
- Circuit installation/configuration
- Test data development
- Interoperability testing
- Certification testing
- Production turn-up

According to Qwest, a typical project plan will be created for one to three products. If a CLEC wishes to implement several products, Qwest suggests that the CLEC start with the most important ones based on its business plan. The other products will be implemented in a phased approach, each receiving its own project plan.

Throughout the life of each project, there will be regular (typically weekly) conference calls between Qwest and the CLEC to monitor and discuss the progress of the project.

❖ Requirements Review

The first phase to occur after the project plan is implemented is the Requirements Review. According to Qwest, the purpose of the review is to assist the CLEC in:

- Developing and defining the business processes and procedures necessary to support the use of the IMA-EDI interface
- Developing the appropriate documentation (i.e., methods and procedures) necessary to support the use of the IMA-EDI interface by co-provider personnel
- Performing any necessary database gap analysis for the purpose of ensuring that all required, optional and conditional data fields within the EDI transactions can be successfully populated
- Identifying appropriate data values
- Defining co-provider internal business processes

Also included in the Requirements Review is a review of Qwest's EDI requirements, contained in the EDI Disclosure Document (<http://www.uswest.com/disclosures>). The "I-Charts," located within the EDI Disclosure Document, contain detailed developer-level EDI requirements on a product-by-product basis.

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

- **Business Description:** provides a general overview of the product, outlines dependencies and constraints, and describes the OBF forms to be used when ordering a particular product
- **Business Model:** describes the transactions that comprise the complete transaction cycle for a particular product and presents the sequence in which transactions will be exchanged
- **Trading Partner Access Information:** outlines data values for the ISA and GS segments, describes delimiter use, and indicates the standards version upon which a transaction is based
- **Mapping Examples:** defines the syntax and structure of the EDI transaction set
- **Data Dictionary:** offers a description of the individual EDI segments and elements that are contained within a particular transaction set
- **Appendices:** contain the developer worksheets defining the business rules and data values

CLECs are also provided with Developer Worksheets, which go hand-in-hand with the EDI Disclosure Document. According to Qwest, "the Qwest Developer Worksheets provide the co-provider with the Qwest business rules to allow the co-provider to correctly generate Qwest EDI requests. The Developer Worksheets summarize the business rules for each field in the interface by order form. In the Developer Worksheets, all OBF forms used for a product are described with the rules regarding how each field is used. These rules include the usage for the field, the business rules, the field length, the field characteristics, and the valid values."

During the Requirements Review, any questions the CLEC has regarding Qwest's EDI requirements will be captured by Qwest on an issues log and reviewed at the next regularly scheduled conference call.

❖ Circuit Installation

Before EDI connectivity can be established, the CLEC must order a dedicated circuit to connect to Qwest's data center either in Denver, Colorado, or Omaha, Nebraska. The bandwidth requirements for this circuit are dependent upon the projected number of concurrent users the CLEC expects to have interfacing with the system. CLECs have the option of ordering a T-1, fractional T-1, or 56k dial-up line.

One potential roadblock arises at the next point in the process. Again, to quote from Qwest's EDI Implementation Guide:

“The co-provider's circuit will need to be connected to the Qwest router located at one of the two data centers. This may 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 are provided by the co-provider to the appropriate Qwest connectivity contact. This information identifies the terminating point of the Co-Provider's incoming circuit.”

This means that it will take Qwest 30 to 45 days to complete internal work after the CLEC receives a FOC/Design Layout Request (DLR) for the dedicated circuit into the data center and submits the information to Qwest. If a CLEC does not begin this process near the beginning of the EDI development process, testing could very well be delayed until the connectivity work is completed.

❖ Test Data Development

To prepare for interoperability testing, the CLEC must prepare test scenarios and test cases and submit them to Qwest in the form of a Scenario Summary for review. Qwest's Scenario Summary and scenario order/pre-order templates are used by the CLEC to outline all the scenarios to be tested along with their expected responses and the actual test scenario data. The summary should contain the actual data the CLEC intends to use on the EDI transaction.

One important note must be made here. Although these orders do not pass through to Qwest's production environment and will not be provisioned, Qwest requires the use of real customer data in these test scenarios.

According to Qwest's documentation, the scenario review process for interoperability testing will occur as follows:

1. The CLEC generates the Scenario Summary, which is the set of scenarios it intends to test and each scenario's anticipated responses. The CLEC also generates each individual test scenario as it is outlined on the Scenario Summary.
2. Qwest reviews the Scenario Summary and the individual test scenarios according to the guidelines established in the Scenario Review Process section of the EDI Implementation Guide.
3. The CLEC fixes the Scenario Summary and/or scenarios based upon any comments and resubmits them for review.
4. Tasks 2 and 3 repeat until the scenarios are correct.
5. The CLEC sends copies of the final version of the scenarios to Qwest. This version of the scenarios should match the EDI transaction to be sent.

Qwest's review of the Scenario Summary includes the following:

- The address will be validated
- The AN will be validated
- The BAN will be validated
- The order will be reviewed to ensure that all necessary fields are populated correctly. This includes verifying that all business rules, as outlined in the appropriate release-specific Disclosure Document's Developer Worksheets, were followed
- USOCs will be reviewed to ensure that they are formatted correctly

❖ Interoperability Testing

Interoperability testing occurs once connectivity has been established and verification has been made that gateway software is operational. Interoperability testing is used to validate the results of EDI development; its purpose is to ensure that a CLEC can successfully and correctly generate EDI transactions, and receive and correctly process the EDI responses it receives from Qwest systems.

As previously stated, interoperability testing requires the use of valid data. All interoperability orders are subjected to the same edits as a production order. Therefore, in order to submit successful orders during interoperability testing, valid account data must be supplied and used by the CLEC.

Once certain entrance criteria are satisfied (e.g., test summary review completed, connectivity established, and gateway software tested), interoperability testing can begin. The interoperability test process is executed as follows:

- Qwest and the CLEC agree on a time period for testing
- During this time on testing days, the interoperability test environment will be available for interoperability testing
- The CLEC sends test 850 and 860 transactions
- At the end of the testing period each testing day, a testing call will be established. The testing call provides an opportunity for CLEC and Qwest testing representatives to interact and discuss the testing for the day
- Qwest generates test 855 and 865 transactions

Interoperability testing is considered complete when the following criteria have been met:

- Completed all agreed upon interoperability test scenarios
- Demonstrated ability of the CLEC to send valid 850 and 860 transactions
- Demonstrated ability of the CLEC to receive 997, 855 and 865 transactions as identified in the interoperability Scenario Summary

- Demonstrated ability of the CLEC to generate 997 transactions in response to Qwest 855 and 865 transactions, as identified in the interoperability scenario summary
 - Demonstrated ability of the CLEC to notify the end user of responses generated by Qwest, to indicate whether the sent transaction was successfully processed
 - Demonstrated ability of the CLEC to detect transaction processing failure within any component of the CLEC EDI environment
- ❖ Certification Testing

Certification testing is performed after the completion of interoperability testing. According to Qwest, “the certification testing process is designed to validate the ability of the co-provider to transmit EDI data that completely meets X12 standards definitions and complies with all Qwest business rules. Certification testing consists of the controlled submission of true account information to the Qwest production environment. Qwest treats these orders as production orders. Qwest and the co-provider use certification testing results to determine operational readiness.”

As with interoperability testing, a Scenario Summary review is conducted prior to beginning certification testing.

The orders involved in certification testing are considered live orders. They pass into Qwest’s production systems, and are provisioned and installed.

The testing proceeds as follows, per the EDI Implementation Guide:

- Qwest and the CLEC agree on a time period for testing.
- During this time on testing days, the certification test environment will be available for certification testing.
- The CLEC sends test 850 and 860 transactions, which have been reviewed by Qwest.
- Qwest monitors the test environment during the testing period, processes any received orders appropriately, and sends all appropriate responses.
- At the end of the testing period each testing day, a testing call will be established. The testing call provides an opportunity for CLEC and Qwest testing representatives to interact and discuss the testing for the day.

Certification testing is considered complete when the following criteria have been met:

- Completed all agreed upon interoperability test scenarios
- Demonstrated ability of the CLEC to send valid 850 and 860 transactions
- Demonstrated ability of the CLEC to receive 997, 855 and 865 transactions as identified in the interoperability Scenario Summary
- Demonstrated ability of the CLEC to generate 997 transactions in response to Qwest 855 and 865 transactions, as identified in the interoperability scenario summary

- Demonstrated ability of the CLEC to notify the end user of responses generated by Qwest, to indicate whether the sent transaction was successfully processed
- Demonstrated ability of the CLEC to detect transaction processing failure within any component of the CLEC EDI environment

Migration and Recertification

When a new EDI release is implemented, CLECs have six months during which to migrate to the new release before the old one is retired.

Currently, CLECs are required to re-accomplish certification testing each time a new version is released. This is accomplished on a product-by-product basis; if a particular product's business and transaction rules have not changed in a new release, recertification is not required.

The CLEC community has entered CR# 4661383 to request that it not be required to recertify for every new EDI release. Qwest has stated that if a CLEC is migrating from one version to the next without any new products or services, recertification testing is optional. If new products are involved, the CLEC must complete recertification on the new products only.

For further concerns regarding the test environment issue, please see Section 5.4.2, "Interviews" of this document.

5.4.1 Questionnaires

Questionnaires regarding Qwest interface development¹⁰ were sent to all of the CLECs whose names appear on the CICMP attendance sheets since the beginning of the process. Formal responses were received from only six CLECs, although informal responses were received via telephone calls and e-mails throughout the evaluation process.

Questionnaire responses generally agreed with the results of the overall evaluation. Specifically, participants felt that the process is well defined, more than adequately documented, well administered, and the technical specialists involved are very knowledgeable and helpful. The largest and most consistent complaint about the process is the lack of a testing environment that mirrors production systems.

Additional interview comments are summarized below:

- Many respondents stated that because Qwest deviates from the LSOG and, in their opinion, does not fully document the business rules associated with

¹⁰ CGE&H Archive File: RME #6 – CLEC Questionnaire RE: Qwest Interface Development

those deviations, creating a seamless EDI interface with Qwest is quite difficult.

- ❑ Some respondents complained that the information returned by Qwest’s OSS as a result of EDI pre-order transactions is not in a format that allows easy integration into the order transactions. One example cited is that end-user address information obtained from the Customer Service Record (CSR) must be parsed before being usable in an LSR transaction.
- ❑ Because the current Qwest testing process requires human monitoring and intervention, CLECs are limited in the time of day and days of the week during which they can submit test transactions.
- ❑ Some respondents felt that the project plan process was too rigid and bureaucratic, not responding smoothly enough to changes.
- ❑ All respondents felt that Qwest’s EDI design documentation was not released far enough in advance for them to adequately code their own systems to accommodate Qwest’s changes. This issue is discussed at length in Section 5.6, “Qwest Co-Provider Industry Change Management Process” of this document.
- ❑ Some of those that responded reiterated their desire to not have to recertify with Qwest after every new release. This is, again, related to the lack of an automated test environment and is discussed above in Section 5.4, “Interface Development – EDI/IMA-GUI” of this document.

5.4.2 Interviews

No formal interviews were conducted with EDI development personnel, except in the context of the CICMP process.

5.4.3 Documentation

The documentation review for EDI/interface development included the following documents:

Document Name/Purpose	Web Location
EDI Implementation Guidelines	http://www.uswest.com/wholesale/ima/edi/downloads/EDI_ImplementationGuidelin_010301.doc
IMA/EDI Recertification Document	http://www.uswest.com/wholesale/ima/edi/downloads/EDIRecertification.doc
EDI Disclosure Document	http://www.uswest.com/disclosures/netdisclosure409.html
IMA 6.0 Release Notes	http://www.uswest.com/wholesale/ima/downloads/RN_Description6_121400.pdf
Release 5.0 to 6.0 Change Summary	http://www.uswest.com/disclosures/netdisclosure409/changeSummar

Document Name/Purpose	Web Location
	y5-6.pdf
12 Release Schedule	http://www.uswest.com/wholesale/cicmp/downloads/TargRelSched070700.ppt
IMA Target Release Lifecycle	http://www.uswest.com/wholesale/cicmp/downloads/lifecycles070700.ppt

No major problems were noted with Qwest's EDI-related documentation since the re-design of the website during the summer of 2000. Prior to that there were navigation problems with the website, and certain documents, particularly the EDI Disclosure Document, were impossible to find if their locations were not known. These problems have all been addressed. The re-design of this portion of the Qwest website has made it much easier to navigate and find required documentation.

Pseudo-CLEC Experience

The summary below is based upon the following final reports of the IMA-GUI and the EDI connection, development, and certification processes developed by HPC:

- "EDI Connectivity Report for 271 Test Generator" – Version 6.0
- "IMA EDI 6.0 Migration Report for 271 Test Generator" – Version 2.0
- "IMA-GUI Interface Report for 271 Test Generator" – Version 3.0
- "EB-TA Specification Report for 271 Test Generator" – Version 2.0

❖ EDI

The focus of the EDI Connectivity Testing assessment was to evaluate the quality of processes, documented specifications and technical support provided for CLECs to understand and implement an IMA-EDI gateway to the Qwest OSS environment. The testing assessment was comprised of three primary phases: a review of the Qwest business rules and transaction standards, construction of an IMA-EDI gateway interface and validation testing of the established gateway. The process for implementing the gateway was outlined by the Qwest IMA-EDI Implementation Guidelines document. The IMA-EDI Implementation Guidelines document outlines the schedule, requirements, tests, Qwest support agreements and necessary steps for deploying a successful gateway interface to the Qwest OSS. The process described by this document was used as the basis for conducting the EDI Connectivity Testing assessment.

Overall, 86 test scenarios were executed in order to validate the established interface. For organizational purposes, these scenarios were grouped into three

transaction type arenas: pre-order, order and post-order. In order to successfully complete the validation/testing phase of the EDI Connectivity Testing assessment, all scenarios required a confirmed completion of all the interoperability and certification test's exit criteria. Untested scenarios classified as "Not Applicable" were reviewed and approved by the joint Qwest and HPC EDI implementation team.

HPC followed the Qwest recommended testing schedule for CLECs. The interoperability test was completed over the course of 35 weeks. Testing was conducted two hours a day, five days a week. Testing issues that prevented the successful completion of a test scenario were documented and submitted as IWOs using the CGE&Y IWO template. The IWO template provided a standard for detailing the specific testing issues and error results. Once Qwest determined that the issue did require a change in documentation, software or processes, the issue was translated into a Qwest internal CR. The CRs were then used internally by Qwest to determine the necessary updates to Qwest documentation, software or processes.

HPC was able to complete all of the tests for many of the scenarios requiring CRs by executing a work-around during the testing cycle. Work-arounds were temporary fixes associated with a specific scenario allowing for the full completion of the exercising tests. HPC and Qwest jointly developed work-arounds that required temporary changes to the processes, test data, test scripts and/or the implementation software for the IMA-EDI Gateway. Once the CRs associated with these work-arounds were completed and the necessary fixes were made, Qwest sent a notification to the HPC testing group requesting that specific scenarios relating to the submitted CRs be retested using the original testing procedures.

Scenarios with unresolved CRs will maintain an "open/incomplete" status. Once all associated Qwest CR are resolved, the scenario will be retested, and upon successful completion of all tests, the scenario will assume a "closed/complete" status. Presently, Qwest has not provided a defined process or schedule for ensuring the resolution of submitted CRs. Qwest has assured HPC that all open CRs will be resolved within the next release of EDI software, version 7.0, tentatively scheduled for release June 1, 2001. Once the version 7.0 EDI software has been released from Qwest, HPC will retest the "open" scenarios.

During the validation/testing phase, HPC submitted ten IWOs for unresolved IMA-EDI Qwest software errors. Qwest acknowledged all of the submitted IWOs as CRs and developed the necessary modifications to resolve the issues. Seventy-five of the eighty-six tested scenarios were completed successfully; the remaining eleven scenarios maintain an open status.

To highlight the CLEC experience with Qwest, key observations made during HPC's engagement with Qwest are outlined below:

- The EDI connectivity process described in the Qwest IMA-EDI Implementation Guidelines provided a very comprehensive framework for implementing the IMA-EDI gateway interface
- Qwest's staff was very knowledgeable in the Qwest IMA-EDI methodology and requirements
- There was no clearly identified process for communicating software changes that were outside of a scheduled IMA software release. These updates were implemented without a specification identifying the specific modifications
- There was no clearly defined process or schedule given for closing CRs associated with scenarios after the completion of the EDI connectivity process
- Qwest did not provide a test bed for exercising CLEC-side IMA-EDI transaction components. HPC was unable to properly exercise test harness developments prior to entering interoperability and certification test phases.
- Deviations of the Qwest business rules and transaction standards from the LSOG3 standard were not thoroughly documented
- The Qwest product certification process did not cover parallel product certifications. A process modification was necessary in order for HPC to certify nine products in parallel. The Qwest product certification process is constructed for handling product certifications serially.

Further observations are summarized in the following paragraphs.

Qwest Deviations from Industry Standards

Overall, the Qwest business rules and transaction standards remained relatively consistent with industry standards. However, there were some issues uncovered during the EDI Connectivity Testing that identified some variances between the Qwest standards and industry standards. The following points give an overview of the specific issues.

- If mandatory data was missing in the Qwest outbound mappings, Qwest would send syntactically incorrect EDI data. Qwest assumed all mandatory data would be present, and only mapped to the expected data. There appeared to be no "if-then-else" logic to verify that the mandatory data were present.
- A few minor mapping errors were identified in Qwest's outbound mapping.
- In some cases, Qwest did not re-send data transactions that required a repeated response. For example, in the CSR query transaction, a response transaction containing multiple matches only received one REFNUM transaction response. For this query transaction the REFNUM should have been sent multiple times. Because of this variance from the industry

- standards, HPC was not able to select from multiple return matches in order to execute another CSR query to retrieve an exact match.
- HPC found that in some cases expected data was not returned in the response.
 - HPC found in one instance, data submitted in an inquiry was not returned as expected in the response transaction.
 - HPC found that in some cases more than the expected data was returned.
 - HPC found that in one instance additional data that was not required by industry standards was needed in the Query in order to get a valid response.
 - Discrepancies between field usage in the Qwest business rules and the data mapping EDI were identified. For example, in one instance, data required by the EDI was specified as "Not Used" in the business rules.
 - HPC found in one instance that data returned in a field did not match the business rule description for that field.

EDI Connectivity Issues

The Qwest EDI Connectivity processes and gateway specifications were well documented. The level of detail and specificity included in the Qwest EDI Implementation Guidelines and Disclosure Document provided HPC with a step-by-step guide in undergoing the EDI Connectivity process and configuring the gateway interface. The Qwest EDI Implementation Guidelines outlined the project initiation and development phases, as well as the EDI Connectivity project schedule, testing requirements and change management process for software upgrades. Detailed information on the EDI data mapping requirements, transaction process descriptions, routing specifications, business rules and networking standards was provided in the Qwest Disclosure Document. The Disclosure Document also included information on the specific deviations of the Qwest business rules from industry standards; however, HPC determined that these deviations were not thoroughly represented. Overall, HPC found the Qwest provided documentation to be very thorough and beneficial in explaining and facilitating the entire EDI Connectivity process.

Qwest provided timely and accurate support throughout the course of the EDI Connectivity testing assessment project. Qwest's EDI staff was very knowledgeable in the IMA-EDI methodology and requirements, and they were very involved in facilitating the overall EDI Connectivity process. The staff assisted in creating the project schedule, conducted meetings and developed meeting minutes. The meetings with Qwest were conducted on a weekly basis to focus on the project schedule, EDI business requirements, technical requirements and testing issues. During the weekly meetings, Qwest was able to clearly articulate the Qwest business and technical requirements for the project and provide detailed explanations as needed. Qwest was also willing to research specific issues which could not be resolved during the meetings, and they were able to provide answers in a thorough and timely fashion. HPC found the level

of support provided by Qwest to be very helpful in ensuring the success and timely completion of the EDI Connectivity process.

HPC identified the following process issues while undergoing EDI Certification:

- The Qwest process did not appear to have the flexibility to handle the parallel certification of multiple products. The Qwest certification testing process requires that co-providers undergo scenario testing for products in a serial fashion. Serial testing involves testing products on both pre-order and order scenarios on a one by one basis; the product being tested must be completely certified before testing the next product. HPC acted as a Pseudo-CLEC taking an aggressive approach to setting up the EDI gateway interface and to quickly certifying many products and services to offer to their customers. HPC wanted to set up a total of nine products and services. Undergoing this multiple product certification using the Qwest product certification process would have taken an unacceptable amount of time. In order to accomplish the aggressive product certification plan that HPC wanted to execute, it was necessary that HPC deviate from the Qwest defined certification process to conduct certification testing for the multiple products in parallel. The pre-order scenarios were executed for every product, and then the order scenarios were executed for all the products. This approach gave HPC the flexibility to set up multiple products in a timely manner without experiencing the potential delays caused by a pending product certification completion. Qwest has since put procedures into place to rectify this deficiency.
- The Qwest Connectivity process did not include a clearly defined protocol or schedule for closing open CRs associated with scenarios after the completion of the EDI Connectivity process. Although Qwest has committed to resolving all open CRs associated with HPC's 271 testing effort in their next release of the EDI software, Release 7.0, there appears to be no defined schedule that identifies the specific timeframes in which co-providers could expect resolution of opened CRs. There was also no standard co-provider notification list that specified which co-providers would be notified of the specific CR fixes. It appears as if some of the CR fixes could be completed at any point after the EDI Connectivity process, and co-providers would not necessarily be made aware of the specific CRs that have been resolved. Release notes do not always indicate all CR fixes.
- There was no clearly defined process for communicating software changes that were implemented outside of the scheduled EDI software point releases (6.0, 6.1, etc.). Between-point release modifications were implemented without a specification identifying the specific changes. Often times

"between-release" CRs were resolved without a direct communication from Qwest to HPC. (AZIWO1127)

- Qwest did not provide a test bed for exercising CLEC-side EDI transaction components. HPC was unable to properly exercise test harness developments prior to entering interoperability and certification test phases. The absence of a test environment including a test database required that HPC submit valid account data that was present in the Qwest legacy environment. This might cause significant setbacks for co-providers who did not possess their own account data. In order to complete product certification, the CLEC would have to possess account order data for every product being certified. If there were certain products for which the CLEC did not possess valid customer order information, the CLEC would have to delay testing until they attained a valid customer order for that particular product. The absence of a test bed also required that a Qwest EDI support agent monitor the co-provider by phone during interoperability and certification testing periods. Co-provider interoperability and certification testing was conducted two hours a day, five days a week. This gave HPC a very limited window to test their EDI gateway developments. (AZIWO1044)

❖ IMA-GUI

Currently the IMA-GUI application must be accessed by one of two connection methods: dial-up or direct connect. The application itself is web-based and requires a Netscape browser to run. The two connections are very common, and the configuration of the software on the personal computers (PCs) is standard for both methods.

Prior to using the dial-up method, SecurID cards were ordered through the account manager. Prior to using the direct connection method, the network addresses for each of the PCs were forwarded to Qwest for entry into a firewall access table.

Dial-Up Connection

Dial-up connection requires a modem, a phone line, a SecurID card, a user login, Netscape Navigator 3.01 or newer software (Netscape Communicator 4.08 or newer software could be used instead) and the Sun Microsystems JAVA Plug-In 1.2.2. This method for connection is slow and cumbersome. It is slow because the connection speeds are consistently around 26.4 kbps, which could be due to the line quality or the modem speed on Qwest's end. It is cumbersome because there are two logins: one to authenticate at Qwest's firewall and one to login to the IMA-GUI application.

Direct Connect Connection

Direct connect access requires that a dedicated line be installed connecting the CLEC and Qwest networks, a user login, Netscape Navigator 3.01 or newer software (Netscape Communicator 4.08 or newer software could be used instead) and the Sun Microsystems JAVA Plug-In 1.2.2. During the configuration of this connection, information is forwarded that is used to allow access through Qwest's firewall directly to the IMA-GUI application leaving only one login required.

This connection method is much faster and more reliable. This circuit was installed and configured to pass data at T1 speeds, which are around one megabit per second verses the dial-up running around 26 kbps per second. The T1 circuit has been stable during almost nine months of testing, with no reported outages.

Connectivity Issues

- The dial-up method using the SecurID card was outdated and cumbersome. Qwest addressed this issue by changing to a digital certificate instead of a SecurID card. A small CLEC could still use the inexpensive dial-up access, but now with the benefit of not requiring the additional login to authenticate.
- The SecurID passcode was not accepted when trying the dial-up method for connection. It was due to the card not being used within 30 days after receipt. The cards were reactivated after contacting Qwest's help desk.
- The IMA-GUI pre-order screens appeared to freeze or lock-up. The help desk was eventually able to determine that HPC was not clearing temporary files. These files were created by the IMA-GUI application during each session and eventually they affected the performance of the application. The documentation made no reference to this condition. These temporary files are not useful after a session is completed. HPC created a script that executed daily to delete these temporary files.

IMA 6.0 to 7.0 Upgrade Overview – Installation Issues

HPC closely followed the Qwest IMA 7.0 Connection Guide when upgrading the IMA-GUI from version 6.0 to 7.0. The Qwest documentation seemed to assume that the IMA-GUI was being installed on computers with no previous IMA-GUI installation. When attempting to install the 7.0 IMA-GUI on computers with 6.0 already installed, it was discovered that there were installation steps that were not included in the Connection Guide. In order to get consistent access to the Qwest IMA server, it was necessary to completely uninstall previous versions of Netscape 4.71 and Sun Microsystem's Java Developer's Kit 1.2.2 and then do a fresh installation of the software.

❖ EB-TA

The Pseudo-CLEC evaluated the Qwest documentation and references to technical specifications that provide the information and conditions for building the Qwest EB-TA interface and a review of the process required for a CLEC to develop an EB-TA interface.

The evaluation included a review of all the steps leading up to the completion of the Joint Implementation Agreement (JIA). There are additional steps required to build an EB-TA interface that were not within the scope of the Pseudo-CLEC's evaluation.

Process

A Qwest account manager was previously assigned to the Pseudo-CLEC and that account manager was contacted to arrange for a meeting or conference call. A list of the calls and coverage will be listed in the "Items and Activities Reviewed" section of this document.

The Pseudo-CLEC established that it was investigating the viability of building its own EB-TA interface and that the Pseudo-CLEC would require the documentation, process, contacts and assistance to accomplish that task.

A log noting responsibility for action items was developed. Additionally, based on the results of the first conference call, documents from Qwest arrived via e-mail. A question log was also developed, covering three categories: general for questions pertaining to Qwest or Qwest procedures, questions pertaining to the JIA, and questions regarding the interface documents.

Substantial focus was placed upon the JIA. The JIA needs to be modified by the co-provider (CLEC) and as it is an agreement, the JIA needs to be in place before any actual interface work is undertaken. The JIA contains a wide range of information that has to be covered before the two companies can establish a working link. The JIA covers the process for the JIA, change control, business functions, communication protocol, security, performance, recovery procedures, testing, schedules, and twelve appendices.

Documentation

A review of the Qwest documentation found that it was satisfactory in detailing the process a CLEC must follow in the development of an EB-TA interface, though some specific documentation issues, such as unclear terminology and processes, were noted.

Items and Activities Reviewed:

- Co-Provider Maintenance and Repair (JIA)
- Qwest Trouble Report Format Descriptions
- Qwest / MEDIACC Electronic Bonding Trouble Administration – Loop Maintenance Operations System (LMOS) to ANSI T1.227/228 Standard Attribute Mapping
- Qwest / MEDIACC Electronic Bonding Trouble Administration - WFA/C to ANSI T1.227/228 Standard Attribute Mapping

The results presented here contain tables listing the attributes for each area of review in the left hand column. In the header of the charts are listed the measure types for the attribute. Each field will contain letters from a corresponding key, that indicates:

S-Satisfactory

Un-Unsatisfactory with note reference

If the field is blank then it should be assumed that this field was not applicable. Some tables will be truncated to reflect only the applicable attributes.

Model Joint Implementation Agreement:

At the beginning of the negotiation process, Qwest provided the Pseudo-CLEC with a Model JIA. This Model JIA provided a framework for change control, business functions, communication protocol, security, performance, recovery procedures, testing, schedules, and twelve appendices.

	Description	Examples	Detail	Clarity
Scope	S		S	S
Purpose	S		S	S
Process(es)	S	S	S	S
System(s)	S	S	S	S
Interface(s)	S	S	S	S
Interface Specifications	S	S	S	S
Maps (process)	S	S	S	S
Drawings	S			S
References	S	S	S	S
Expected Results	S	S	S	S
Organization (structure/format)	S			S
Responsibilities	S		S	S
Distribution	S		S	S
Exceptions	S		S	S
Schedule	S		S	S
Change process	S	S	S	S
Technical Mapping	S	S	S	S
Acronym/Abbreviation	S			

QWEST / MEDIACC Electronic Bonding Trouble Administration - LMOS to ANSI T1.227/228 Standard - Attribute Mapping:

This is not a stand-alone document. This document is the listing for the relationship between the ANSI documents T1.227 and T1.228 and the Qwest LMOS that is used for trouble reporting on residential and small business phone lines.

	Description	Examples	Detail	Clarity
Expected Results (character and field)	S	S	S	S
Organization (structure/format)	S			S
Technical Mapping	S		S	S
Acronym/Abbreviations	S			

QWEST / MEDIACC Electronic Bonding Trouble Administration - WFA/C to ANSI T1.227/228 Standard Attribute Mapping:

This is not a stand-alone document. This document is the listing for the relationship between the ANSI documents T1.227 and T1.228 and the Qwest Work Force Administration system used by Qwest for trouble reporting on private line services. A copy of this document can be found in Appendix E.

	Description	Examples	Detail	Clarity
Expected Results (character and field)	S	S	S	S
Organization (structure/format)	S			S
Technical Mapping	S		S	S
Acronym/Abbreviations	S			

5.4.4 Results

CGE&Y identifies the following deficiency in the EDI/interface development process followed by Qwest:

- ❑ Qwest does not provide a fully automated testing environment that mirrors its production environment (AZIWO1044).

The presence of a test environment that mirrors production, even in the absence of trading partners, is a fundamental tenet of software development. With trading partners involved, the issue of a testing environment becomes even more critical. Trading partners aside, however, in the absence of such an environment

how does Qwest test its own internal development effort to ensure validity before releasing it to the user community at large?

The current environment works to the extent that transactions can be generated and received, but only through human intervention to ensure that orders do not pass through to the production environment. As a result, some of the responses a CLEC should expect from the Qwest system are manually generated and a time delay often occurs.

It must be noted at this point that for pre-order transactions, real-time responses are received because the Qwest systems interfaced with are the production systems. Therefore, CLECs can “test” pre-order transactions without having to worry about a test environment.

The drawbacks to the current system are:

- ❑ Delayed production turn-up: CLECs are obligated to obtain “live” accounts as a means to certify EDI. This process is time-consuming and would be unnecessary if a test bed of accounts were available.
- ❑ CLECs may be forced to utilize newly established customers for the testing of EDI. Any problems with the customer’s service will be seen as the fault of the CLEC and not the ILEC.
- ❑ Qwest’s policy for certification testing places its entire production environment at risk.
- ❑ CLECs are reliant on Qwest’s documented requirements to build their side of the interface and it may be only during testing that flaws in documentation are recognized.

The benefits and issues associated with the creation of such a testing environment, as already mentioned elsewhere in this report, are:

- ❑ Qwest would be able to more fully and reliably test its internal EDI development efforts before putting them into production, thus largely eliminating many bugs that are currently discovered only after the production move.
- ❑ CLECs would not have to rely on the tightly controlled availability of Qwest testing personnel.
- ❑ Interoperability and recertification testing could be conducted much more quickly and efficiently.
- ❑ Qwest would not have to expend so many resources on CLEC interface during the testing process.
- ❑ Qwest would no longer be putting mission critical systems at potential risk.

Update – August 2001



On August 1, 2001, Qwest rolled out an EDI test bed called the Stand Alone Test Environment (SATE). This environment provides sufficient functionality for CLECs and third party vendors to conduct progression (i.e., interoperability) testing, regression testing, and ad hoc testing associated with development efforts. CLECs have the option of using the SATE for the interoperability testing phase of the EDI development cycle, or continuing to use the "interoperability environment" that was Qwest's former test environment. Following the implementation of the SATE, CGE&Y was able to close AZIWO1044.

CGE&Y made no formal evaluation of the SATE as part of its Arizona 271 evaluation of Qwest's OSS.

The SATE consists of the version of the EDI gateway being tested, including an EDI translator, and a "stubbing system."¹¹ The EDI gateway is a fully functioning version, with the exception that certain edits are turned off. These edits are primarily the ones used to determine whether an LSR requires manual handling. Turning off the edits, according to Qwest, in no way affects acceptance of a function performed by a CLEC. The EDI gateway sends Application Programming Interface (API) calls to the "stubbing system" instead of Qwest production systems. Using its own local database, the "stubbing system" provides responses consistent to those that the production back-end systems would ordinarily provide. The EDI gateway and EDI translator then send back the appropriately formatted EDI transactions to the CLEC system.

According to Qwest, the SATE does not mimic the flow-through process or the timing of responses in the production environment. Pre-order responses and Business Process Layer (BPL) errors are system-generated in real-time from SATE. For a CSR transaction requesting CSR return via e-mail or File Transfer Protocol (FTP), the appropriate 855 response will be generated. The actual CSR will not be sent via e-mail or FTP.

The following transactions, and all EDI transactions associated with them, are included in the initial release of the EDI SATE:

Pre-Order

- Address Validation (Numbered Addresses only)
- Appointment Scheduling
- Cancel TN/Appointment
- Connecting Facility Assignment

¹¹ Information concerning the design of Qwest's SATE is contained in Qwest's "White Paper on IMA EDI Stand Alone Test Environment, Version 1.01" dated 06/18/01

- Facility Availability (Unbundled ADSL, Convert POTS to Unbundled Loop, POTS)
- Meet Point Query
- Raw Loop Data Query
- Customer Service Record Query¹²
- Service Availability
- TN Reservation Query (with TNSR following)

Order

- Centrex Plus
- Directory Listing Only
- Local Number Portability
- Loop with Number Portability (LNP only)
- POTS Resale
- Shared Loop
- Unbundled Loop
- UNE-P Centrex
- UNE-P POTS

Post Order

- FOC
- Completion
- Reject
- Jeopardy
- Status Updates

When a CLEC enters the testing phase of its development process, it can choose to proceed using Qwest's traditional "interoperability environment" (i.e., the environment that existed prior to the development of the SATE), or it can choose to use the SATE. The administrative processes associated with both of these testing approaches (e.g., the development and approval of a set of test scenarios, the reporting of test results) is very similar for both. The primary difference in the two approaches is in the level of coordination required between the CLEC and Qwest; using the SATE requires considerably less coordination than the interoperability approach. Whichever approach is used during the testing phase, controlled production testing is still required before a CLEC can begin using the EDI system in production.

The following table contains specific findings cross-referenced with CGE&Y's Arizona TSD objectives:

¹² FTP or e-mail requests will not be returned; the appropriate 855 response will be returned.

TSD Objective and Section Reference	Objective Satisfied?	Source	Comments
<p>1) Are Qwest processes, intervals and communications activities that are conducted during the development of an EDI, EB-TA or Billing interface to Qwest's OSS or implementing a Qwest IMA-GUI interface to Qwest carried out in accordance with the Qwest processes and procedures published and available to the CLECs</p>	<p>Y – with exception</p>	<p>http://www.uswest.com/wholesale/ima/edi/downloads/EDI_ImplementationGuidelin_010301.doc and http://www.uswest.com/wholesale/cicmp/downloads/cicmpProcess.doc</p>	<p>The EDI Implementation Guide provides a comprehensive description of all the processes and, to some extent, the time intervals involved in the EDI development process. Included are processes for project plan development, requirements review, circuit installation and turn-up, cooperative testing, and recertification.</p> <p>Exception: Design documentation is not released by Qwest in sufficient time to allow CLECs to adequately code changes to their system. This exception is fully documented in Section 5.6, "Qwest Co-Provider Industry Change Management Process" of this document.</p>
<p>2) Are the terms and definitions utilized in the EDI, EB-TA, Billing development and IMA-GUI implementation documentation published and available to the CLECs</p>	<p>Y</p>	<p>http://www.uswest.com/wholesale/ima/edi/downloads/EDI_ImplementationGuidelin_010301.doc</p>	<p>The EDI Implementation Guide contains a terms and definitions section that explains most terms. Because EDI by and large is governed by standards and standards bodies such as X-12, UN/EDIFACT, and TCIF (for telecom), Qwest documents refer CLECs to these organizations and standards for clarifications and definitions.</p>
<p>3) Can the CLECs and the Pseudo-CLEC obtain documentation relating to building an interface and/or configuring service to the Qwest EDI, EB-TA, Billing and IMA-GUI interfaces? Is the documentation clear, accurate, and sufficient to build the interface</p>	<p>Y</p>	<p>http://www.uswest.com/wholesale/ima/edi/downloads/EDI_ImplementationGuidelin_010301.doc and http://www.uswest.com/disclosures/netdisclosure409.html</p>	<p>All of Qwest's technical specifications and developer-level instructions for CLECs to use to build EDI interfaces are contained in the EDI Disclosure Document (a separate one issued for each EDI release) and the EDI Developer Worksheets.</p>
<p>4) Are meetings to discuss interface development reasonably scheduled and attended by Qwest subject matter experts</p>	<p>Y</p>	<p>http://www.uswest.com/wholesale/ima/edi/downloads/EDI_ImplementationGuidelin_010301.doc</p>	<p>Qwest's interface development meetings were found to be a strong point of its joint EDI development process.</p>
<p>5) Do the data definitions (i.e., form, format, content, usage and meaning) between pre-ordering and ordering elements enable integration from pre-order transactions into order transactions without</p>	<p>Y – with exception</p>	<p>http://www.uswest.com/disclosures/netdisclosure409.html</p>	<p>CGE&Y was unable to compile a comprehensive list of specific pre-order information elements that require parsing before being used for order transactions.</p> <p>With respect to integration, CLECs need pre-order information in a format that can</p>

TSD Objective and Section Reference	Objective Satisfied?	Source	Comments
requiring translation, or reconfiguration of the data elements			be used to pre-populate ordering screens. Parsing pre-ordering information into identifiable fields is an important issue. For instance, CLECs prefer that CSR information be parsed into separate fields such as customer name, address, installed features, etc. At the time of this evaluation, directional, street name, and thoroughfare are together in one field, whereas they are separate fields in the OBF standards.

5.5 Interface Development – LSOG 3 Comparison

As a sub-section of the EDI/interface development area of this report, CGE&Y was tasked with conducting a comparison between Qwest’s business rules and the standards of the OBF of the Alliance for Telecommunications Industry Solutions (ATIS). The OBF rules reviewed are contained in the LSOG, Version 3. While not legally binding, these standards are the basis upon which all pre-ordering and ordering systems are designed.

CGE&Y found that Qwest has made numerous modifications to the OBF standards. CGE&Y found that the fields used by Qwest were consistent with LSOG 3, although some Qwest-specific fields were added. The majority of the differences found between Qwest and LSOG 3 were in the area of field usage; many fields that are “Required” by OBF are either “Optional,” “Not Required,” or “Forbidden” by Qwest, and vice versa. A summary is provided in Appendix C, “LSOG 3 Comparison.”

5.5.1 Documentation

Appendix C is comprised of tables containing a comparison of LSOG 3 and Qwest business rules for a typical order type – the Unbundled Loop. Other products were reviewed and found to contain most of the same differences. Please refer to the appendix for this data.

5.5.2 Results

CGE&Y’s analysis of this issue indicates that Qwest deviates significantly from the LSOG 3 in its business rules for local service ordering. CGE&Y’s finding in this regard is focused primarily on the usage of the various fields involved (i.e., prohibited, required, optional, conditional) and not the fields themselves. It is important to note in this regard, however, that since the LSOG is a guideline and not a regulation or even a standard, Qwest is not bound to comply with it.

5.6 Qwest Co-Provider Industry Change Management Process

The Co-Provider Industry Change Management Process (CICMP) is Qwest's process for receiving, tracking, prioritizing, and scheduling CLEC-requested changes to the various pre-ordering, ordering, and M&R interfaces available to them. These interfaces include:

- IMA-EDI
- IMA-GUI
- EB-TA
- CLEC billing interfaces
- Held, Escalated, and Expedited Tool (HEET)
- Customer Terminal Access System (CTAS)
- Telecommunications Information System (TELIS)

Beginning in December 2000, the CICMP charter was modified to also include requested changes to the Qwest business processes that are specific to CLECs.

Per the MTP Section 7.2 and the TSD Section 6.1, the purpose of the evaluation by CGE&Y was to validate that Qwest:

- Provides CLECs the ability to request changes to the CLEC-specific interfaces and processes **and** have them acted upon
- Adequately notifies CLECs of both planned and unplanned system outages
- Provides adequate documentation regarding CICMP processes and procedures
- Adequately prepares the CLEC community for upcoming changes to the CLEC-specific interfaces
- Carries out the CICMP process according to its own documentation
- Has created a sound overall process for cooperative software change control

Background

The Qwest CICMP kicked off in September of 1999. Prior to its existence, CLECs had to make requests for new or enhanced systems functionality through their account management teams. The process that CGE&Y analyzed for this report has been modified little since its inception. The process is currently being collaboratively re-designed by Qwest and the CLECs Qwest does business with using OBF issue 2233 as its basis.

CGE&Y encountered difficulty in locating CLEC personnel that have substantial history with the process and its development. Those with whom it did speak, however, indicated that while input from CLECs was invited into the creation of the process, the process was already substantially developed prior to the solicitation of that input.

Process

Qwest provides CLECs with a well defined and documented process for initiating CRs to request added or modified functionality for any of the interfaces listed above. The process is substantially similar for requested changes to Qwest business processes, and in fact uses the same CR form. The following pages contain a copy of the current Qwest CR form for reference:

Co-Provider Priority Level

High Medium Low

Desired Implementation **ASAP**

Date: _____

Product Change Request Section

Products Impacted: Please check mark all that apply (if "Other" please describe further)

- | | | | | |
|--|--------------------------------------|--|---|---------------------------------|
| <input type="checkbox"/> LIS/Interconnection | <input type="checkbox"/> Collocation | <input type="checkbox"/> UNE | <input type="checkbox"/> Ancillary | <input type="checkbox"/> Resale |
| <input type="checkbox"/> EICT | <input type="checkbox"/> Physical | <input type="checkbox"/> Switching | <input type="checkbox"/> AIN | |
| <input type="checkbox"/> Tandem Trans./TST | <input type="checkbox"/> Virtual | <input type="checkbox"/> Transport (incl. EUDIT) | <input type="checkbox"/> DA | |
| <input type="checkbox"/> DTT/Dedicated Transport | <input type="checkbox"/> Adjacent | <input type="checkbox"/> Loop | <input type="checkbox"/> Operation Services | |
| <input type="checkbox"/> Tandem Switching | <input type="checkbox"/> ICDF Collo. | <input type="checkbox"/> UNE - P | <input type="checkbox"/> INP/LNP | |
| <input type="checkbox"/> Local Switching | <input type="checkbox"/> Other _____ | <input type="checkbox"/> EEL (UNE-C) | <input type="checkbox"/> Other _____ | |
| <input type="checkbox"/> Other _____ | | <input type="checkbox"/> UDF | | |
| | | <input type="checkbox"/> Other _____ | | |

Description of Change:

Known Dependencies:

Additional Information: (e.g., attachments for business specifications and/or requirements documents)

Co-Provider Priority Level

High Medium Low

Desired Implementation **ASAP**

Date: _____

Process Change Request Section

Area Impacted: Please check mark as appropriate

- Pre-Ordering
- Ordering
- Billing
- Repair Other _____
- Please describe

Description of Change:

Products Impacted: Please check mark as appropriate and also list specific products within product group, if applicable

- | | | | |
|--------------------------------------|-------|---------------------------------|-------|
| <input type="checkbox"/> Centrex | _____ | <input type="checkbox"/> Resale | _____ |
| <input type="checkbox"/> Collocation | _____ | <input type="checkbox"/> SS7 | _____ |



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- | | | | |
|---|-----------------|--|-----------------|
| <input type="checkbox"/> EEL (UNE-C) | _____ | <input type="checkbox"/> Switched Services | _____ |
| <input type="checkbox"/> Enterprise Data Services | _____ | <input type="checkbox"/> UDIT | _____ |
| <input type="checkbox"/> LIDB | _____ | <input type="checkbox"/> Unbundled Loop | _____ |
| <input type="checkbox"/> LIS | _____ | <input type="checkbox"/> UNE-P | _____ |
| <input type="checkbox"/> LNP | _____ | <input type="checkbox"/> Wireless | _____ |
| <input type="checkbox"/> Private Line | _____ | <input type="checkbox"/> Other | _____ |
| | Please describe | | Please describe |

Known Dependencies:

Additional Information: (e.g., attachments for business specifications and/or requirements documents)

Co-Provider Priority Level

- High Medium Low Desired Implementation ASAP
Date: _____

This Section to be Completed by Qwest CICMP Manager

Qwest Account Manager Notification

Account Manager: _____ Notified: _____

Qwest CICMP Manager Clarification Request

- Yes No

If yes, clarification request sent: _____ Clarification received: _____

Co-Provider Industry Team Clarification Request

- Yes No

If yes, clarification request sent: _____ Clarification received: _____

Status, Evaluation and Implementation Comments:

Candidate for a Release Yes No

If yes, Release Number: _____

This Interim Report may be used only as authorized by the Commission. This Interim Report is subject to further revision by CGE&Y and shall not be deemed final until CGE&Y issues its Final Report in this proceeding and that Final Report is released by the Commission.

The process, as documented, works as follows (time intervals are given, where listed in the Qwest documentation):

Process Step	Time Interval
1. Co-provider (i.e. CLEC) submits CR.	
2. CICMP manager logs CR with status of "New-To Be Evaluated," assigns CR number and notifies originating CLEC of CR number.	Two business days.
3. CICMP manager validates CR and updates status of CR to "New-To Be Industry Evaluated."	
OR	
4. CICMP manager validates CR and finds it needs clarification, updates status to "New-To Be Clarified," sends clarification request to originating CLEC, receives response back, then updates status to "New-To Be Industry Evaluated." If no response is received, the CR will remain as "New-To Be Clarified" for 60 days. If after 60 days no response is received, the CR is cancelled.	<ul style="list-style-type: none"> • Co-provider CR status update to co-provider for "New – To be Industry Evaluated" two business days • Co-provider CR status update and clarification request to co-provider for "New – To be Clarified" two business days • Co-provider CR status update to co-provider for "Cancelled – Clarification Not Completed" two days after the sixty days a co-provider CR remained in "New – To Be Clarified" status • Co-provider CR status update to co-provider for "Cancelled – Co-Provider Requested" upon co-provider request to cancel CR.
5. New CR is then discussed at the next available monthly CICMP meeting. If more clarification is required following the meeting, the status of the CR changes to "New-To Be Clarified." If no further clarification is necessary, the status is changed to "Evaluated-To Be Reviewed." Finally, certain CRs, after having been discussed at the CICMP meeting, are cancelled at the originating CLEC's request. These are updated in the log as "Cancelled-Co-Provider."	
6. CICMP manager completes unspecified internal Qwest change management documentation for the reviewed CRs to be internally reviewed by Qwest teams.	
7. CR is reviewed by Qwest at its internal OSS Interface Release Review meeting. At this meeting, Qwest support groups including the Qwest CICMP manager present and discuss their list of prioritized CRs which have been	OSS Interface Release Review meeting varies based on the OSS interface and may occur weekly, biweekly, or

<p>collected during the initial phase of a release lifecycle. At the end of this phase, a short list of CRs (i.e., release baseline candidates) are selected to enter the next release life cycle phase: development. The reasons for selecting a CR as a release baseline candidate may include priority level, cost/benefit analysis, resource commitments, time constraints, industry direction and Qwest direction.</p>	<p>monthly. If a co-provider CR status changes to/from "Reviewed – Release Baseline Candidate"/"Reviewed – Under Consideration," the Qwest CICMP manager will notify the co-provider within two days.</p>
<p>8. At some point in the process, presumably during the meeting discussed in the above paragraph, the CR is assigned a "T-Shirt Size" (level of effort) and, if applicable, options.</p>	
<p>9. Approximately six months before an upcoming software release, all CRs with T-Shirt Sizes are prioritized by participating CLECs. This has mainly been accomplished at CICMP meetings, although candidates for the IMA 7.0 release were prioritized using an online form located on the CICMP website.</p>	
<p>10. All prioritized CRs are then reviewed by Qwest and a list of baseline release candidates is produced. This is a reiteration of step #6.</p>	

Observations

This section contains observations of actual practices. It is broken down into the following categories:

- CRs
- Release Notifications
- CICMP Meetings

Change Requests

Although the CR process listed above is strictly adhered to, it is difficult to comprehend the length of time involved in getting a CR through the process merely by looking at the written process.

The following table lists various CLEC-initiated CRs and their significant milestones. This list is not comprehensive; it is included to illustrate the lifecycle of some of the CRs currently in the pipeline.

CR #	Requirement	Date Submitted	Milestones	Current Status
418556	Business rule change to allow more than one loop per Purchase Order Number (PON)	10/12/99	10/12/99 – New-To Be Industry Evaluated 11/4/99 – New-To Be Clarified 11/9/99 – New-To Be	Even though this CR was prioritized nearly one year ago, due



CR #	Requirement	Date Submitted	Milestones	Current Status
			Industry Evaluated 11/18/99 – Evaluated- To Be Reviewed 12/3/99 – Reviewed- Under Consideration 1/12/00 – Industry Prioritized 1/24/00 – T-Shirt Size provided	to the T-Shirt Size provided (XXL), it still <u>has not been</u> <u>scheduled for</u> <u>a release.</u>
4186015	Adherence to OBF guidelines for LSR AGAUTH field	10/12/99	10/12/99 – New-To Be Industry Evaluated 11/11/99 – New-To Be Clarified 12/16/99 – Evaluated- To Be Reviewed 1/10/00 – Reviewed- Under Consideration 1/24/00 – T-Shirt Size provided 2/16/00 – On Hold-To Be Reviewed In Six Months 9/20/00 – Evaluated-To Be Reviewed 9/22/00 – Reviewed- Under Consideration 10/18/00 – T-Shirt Size (NA) provided; not eligible for industry prioritization	Cancelled on 11/15/00, jointly by originator and Qwest.
4186051	Adherence to OBF guidelines for Loop Service CFA	10/12/99	10/12/99 – New-To Be Evaluated 11/9/99 – New-To Be Industry Evaluated 11/18/99 – Evaluated- To Be Reviewed 12/3/99 – Reviewed- Under Consideration 1/12/00 – Industry Prioritized 4/19/00 – Reviewed- Release Baseline Candidate for release 7.0 11/30/00 – Committed Candidate, release 7.0	Committed candidate, IMA Release 7.0. Scheduled for release 4/1/01.
4455257	Allow POTS provisioning via EDI using TNs obtained through IMA-GUI pre-order	1/21/00	1/26/00 – New-To Be Industry Evaluated 2/16/00 – Evaluated-To Be Reviewed 2/28/00 – Reviewed-	Prioritized, not yet scheduled for release.



CR #	Requirement	Date Submitted	Milestones	Current Status
			Under Consideration 3/15/00 – T-Shirt Size provided 3/30/00 – Industry Prioritized	
5042531	Load BANs into IMA databases for all CLECs instead of CLECs having to load all their own BANs	8/31/00	8/31/00 – New-To Be Evaluated 8/31/00 – New-To Be Clarified 9/1/00 – New-To Be Evaluated 9/20/00 – Evaluated-To Be Reviewed 9/22/00 – Reviewed-Under Consideration 10/18/00 – T-Shirt Size provided 11/3/00 – Prioritized	Prioritized, not yet scheduled for release.
4185985	Removal of the 2000 circuit limit per BAN	10/12/99	10/12/99 – New-To Be Industry Evaluated 11/4/99 – New To Be Clarified 11/9/99 – New-To Be Industry Evaluated 11/18/99 – Evaluated-To Be Reviewed 12/3/99 – Reviewed-Under Consideration 1/12/00 – Prioritized 1/24/00 – T-Shirt Size provided 4/19/00 – On Hold-To Be Reviewed In Six Months 10/18/00 – Reviewed-Under Consideration 11/15/00 – T-Shirt Sizes and options once again provided	Prioritized, not yet scheduled for release.
5079096	Order review to be included in FOC	9/18/00	9/18/00 – New-To Be Industry Evaluated 10/18/00 – Evaluated-To Be Reviewed 10/27/00 – Reviewed-Under Consideration 11/15/00 – T-Shirt Size provided 12/4/00 – Status changed back to Reviewed-Under Consideration	Not yet prioritized.

CR #	Requirement	Date Submitted	Milestones	Current Status
5144378	Remove population requirement for approver's name and number when the EXP, SCZ, ALBR, AENG, and CHC fields on the LSR form are populated with a Y	10/13/00	10/13/00 – New-To Be Evaluated 11/15/00 – Evaluated-To Be Reviewed 12/4/00 – Reviewed-Under Consideration	Awaiting T-Shirt Size and prioritization.
5212925	Make the field length for IMPCON, ALT IMPCON, and DESIGNER fields at least 24 characters	11/8/00	11/8/00 – New, to be evaluated 12/4/00 – Reviewed, under consideration	Awaiting T-Shirt Size and prioritization.

Several comments are pertinent regarding the above list. The first and most obvious point is that several CRs on the list were submitted over a year ago and, even though given a high priority by the CLEC community, have not yet been scheduled for a release. It is well understood by all participants in the CICMP process that not all CRs will be implemented; however, this brings up a second point, related to the first.

Some CRs, coincidentally some of those that have been on the waiting list the longest (see CR #418556 and #4186015 above), are either requests for basic functionality or adherence to OBF guidelines. CR #418556, for instance, is requesting a change to IMA-GUI functionality to allow more than one UNE-loop to be ordered per PON. This is a basic function that has been available on the manual OBF Loop Service form since its inception (the Loop Service form has space to list up to four loops on the first page, and customers are free to attach as many additional Loop Service pages as necessary to fulfill their order).

CR #4186015 is a request that Qwest make a business rules change to IMA-GUI with regard to the Agency Authorization (AGAUTH) field to reflect OBF guidelines for new installs. After over a year of discussion and review it was found that Qwest had made the change. CR #4186051 and CR #4186015 are simply requests for adherence to OBF guidelines.

The final point to be made is merely to point out the sheer length of time it takes even the simplest and/or highest priority CRs to make their way through this system. In "ordinary" in-house software development efforts where changes are to be made to production systems, whatever the industry, it is not uncommon for the CR process (submission, level-of-effort, approval, prioritization, scheduling of release) to take two to three weeks; sometimes even less. Systems as complex as those under consideration, with the number of trading partners involved, obviously cannot be compared to ordinary production systems of other companies. That said, however, CGE&Y finds it unreasonable that the process is such that it can take three to four months, sometimes

even longer, to give a CR a level of effort, have it prioritized, and schedule it for a release which again could be another four to eight months away. This finding has resulted in the issuance of AZIWO1076.

IMA 6.0 Change Requests

The following table lists CICMP CRs that were implemented in IMA 6.0, and their significant milestones. Two of these CRs involved changes to processes, not systems, and one was requesting functionality that Qwest had already built and would be included in Release 6.0. *Not counting those three CRs, the average lifecycle of the remaining CRs, from the time they were submitted to the time they were implemented, is 12.5 months. (AZIWO1076)*

CR #	Requirement	Date Submitted	Milestones
4185852	Request for same PON use for migration of existing facilities and additional new facilities	10/12/99	10/12/99 – New-To Be Industry Evaluated 11/18/99 – Evaluated-To Be Reviewed 12/3/99 – Reviewed-Under Consideration 1/12/00 – Industry Prioritized 1/24/00 – T-Shirt Size provided
4261631	Enhancements to ADSL Loop Pre-Qualification	11/5/99	11/8/99 – New-To Be Industry Evaluated 11/18/99 – Evaluated-To Be Reviewed 12/3/99 – Reviewed-Under Consideration 1/12/00 – Industry Prioritized 1/24/00 – T-Shirt Size provided 1/24/00 – Reviewed-Release baseline Candidate for Release 6.0
4342063	CSR: Change to include fielded data based on OBF standards	12/8/99	12/9/99 – New-To Be Industry Evaluated 12/15/99 – New-To Be Clarified 1/1/00 – New-To Be Industry Evaluated 1/24/00 – Evaluated-To Be Reviewed 2/3/00 – Reviewed-Under Consideration 2/16/00 – T-Shirt Size provided 4/19/00 – Reviewed-Baseline Candidate for IMA Release 6.0
4267810	Extend IMA hours of operation	11/9/99	11/9/99 – New-To Be Industry Evaluated 11/18/99 – Evaluated-To Be Reviewed 12/3/99 – Reviewed-Under Consideration

			1/12/00 – Industry Prioritized 1/24/00 – T-Shirt Size Provided
5235881	CSRs for Centrex in electronic format	11/17/00	11/17/00 – New-To Be Industry Evaluated 11/21/00 – New-To Be Industry Evaluated 12/4/00 – Reviewed, under consideration
4441096	Retrieval of CSR by BTN or WTN	1/19/00	01/20/00 – New-To Be Industry Evaluated 01/24/00 – Evaluated-To Be Reviewed 02/03/00 – Reviewed-Under Consideration 02/16/00 - On Hold-To Be Reviewed In Six Months, and not Eligible for Industry Prioritization. 03/03/00 – CR Escalated 03/06/00 - Changed status to “Reviewed-Under Consideration.” Conducted co-provider industry team conference call to notify co-providers of status change with T-Shirt size and level of effort to be provided at the next industry team meeting on 03/15/00. 04/19/00 – Reviewed-Release Baseline Candidate for IMA Release 6.0 based on T-Shirt Size large and option description.
5043023	Create notification process for LSMS system outages	8/31/00	8/31/00 – New-To Be Evaluated 9/20/00 – Evaluated-To Be Reviewed 9/22/00 – Reviewed-Under Consideration 10/18/00 – T-Shirt Size NA provided in CICMP meeting. This CR will be resized for the November CICMP meeting and is not Eligible for Industry Prioritization. 11/15/00 – T-Shirt Size small and option provided in CICMP meeting. Eligible for Industry Prioritization.

Release Notifications

Qwest’s process for Release Notifications (RN) is very similar to that of the CR process. The RN form, in fact, is nearly identical to the CR form. The distinction, as the name implies, is that the RN is only a notification to the CLEC community, and as such is only initiated by Qwest. A CLEC can not issue an RN.

The RN is initiated by any one of a number of Qwest organizations, follows a process of review, approval, and logging, and then is released to the CLEC community by the CICMP manager via e-mail and by posting to the RN web page. The following pages contain a copy of the form for reference:



Final Report Relationship Management Evaluation

- Tandem Switching
- Local Switching
- Other _____
- ICDF Collo.
- Other _____
- UNE - P
- EEL (UNE-C)
- UDF
- Other _____
- INP/LNP
- Other _____

Process Release Notification Section

Area Impacted: Please check mark ✓ all that apply

- Pre-Ordering
- Ordering
- Billing
- Repair
- Other _____
Please Describe

Products Impacted: Please check mark ✓ as appropriate and list specific products within product group, if applicable

- | | | |
|---|--|-----------------|
| <input type="checkbox"/> Centrex _____ | <input type="checkbox"/> Resale _____ | |
| <input type="checkbox"/> Collocation _____ | <input type="checkbox"/> SS7 _____ | |
| <input type="checkbox"/> EEL (UNE-C) _____ | <input type="checkbox"/> Switched Services _____ | |
| <input type="checkbox"/> Enterprise Data Services _____ | <input type="checkbox"/> UDIT _____ | |
| <input type="checkbox"/> LIDB _____ | <input type="checkbox"/> Unbundled Loop _____ | |
| <input checked="" type="checkbox"/> LIS _____ | <input checked="" type="checkbox"/> UNE-P _____ | |
| <input type="checkbox"/> LNP _____ | <input checked="" type="checkbox"/> Wireless _____ | |
| <input type="checkbox"/> Private Line _____ | <input type="checkbox"/> Other _____ | |
| Please describe | Please describe | Please describe |

This Section to be Completed by Qwest CICMP Manager

Status, Evaluation and Implementation Comments:

CGE&Y finds no deficiency with the overall process. It is strictly followed by Qwest, and RNs issued by the CICMP manager were found to be complete and clearly written. The following table is provided as an example of a typical month's worth of Qwest RNs:

RN #	Title	Released To	Date Issued
4997738	Change in IMA System Availability	IMA Users and Account Managers	08/15/00
		Co-Provider Industry Team email	08/16/00
4999285	IMA NewsBurst	IMA Users and Account Managers	08/16/00
		Co-Provider Industry Team email	08/16/00
5017528	Draft IMA 6.0 Release Baseline Candidates with Descriptions - Clarification	Co-Provider Industry Team email	08/23/00
5019199	Updated IMA 5.02 Point Release Notes	Co-Provider Industry Team email	08/23/00
5021465	Interconnect Mediated Access Release 5.02	IMA Users and Account Managers	08/21/00
		Co-Provider Industry Team email	08/24/00
5024806	CALA/SAGA Field for IMA-EDI Release 5.0	IMA-EDI Users	08/24/00
		Co-Provider Industry Team email	08/25/00
5059933	IMA Production Update	IMA Users and Account Managers	09/11/00
		Co-Provider Industry Team email	09/11/00
5062166	IMA NewsBurst	IMA Users and Account Managers	09/11/00
		Co-Provider Industry Team email	09/11/00
5064800	IMA-EDI Notification – CSRR Multiple Match Response Map	IMA-EDI Users and IMA 5.0 CSR EDI Users	09/12/00

RN #	Title	Released To	Date Issued
	Change	Co-Provider Industry Team email	09/12/00
5066586	Co-Provider Change Request Options for IMA Release 8.0	Co-Provider Industry Team email	09/13/00
5066586	IMA User Questionnaire on Documentation	IMA Users	09/13/00
		Co-Provider Industry Team email	09/13/00

The only deficiency in the RN process lies in the timing of the release of EDI design documentation. During the course of the evaluation, CGE&Y had the opportunity to observe two full release cycles: one minor “point” release and one major “version” release. The following table contains pertinent milestone data for the most recent “version” release, as it is indicative of the process as defined by Qwest.

Event	Date	Method of Communication
IMA-EDI 6.0 Draft Developer Worksheets released	7/20/00	E-mail
IMA-EDI 6.0 baseline release candidates released	7/21/00	E-mail
IMA-EDI 6.0 release schedule	7/27/00	E-mail
IMA-EDI 6.0 training schedule released	9/15/00 (First class not scheduled until 11/02/00)	E-mail
IMA-EDI 6.0 Disclosure Document (with I-Charts) posted to the web	11/7/00	E-mail
IMA-EDI 6.0 Disclosure Document business description changes	12/29/00	E-mail

From the above schedule, the primary flaw in the release notification process becomes clear. In order for CLECs to successfully code their EDI interfaces (GUIs, business rules engines, parsers, mapping/translation engines, etc.) to match the changes on the Qwest side, they need a stable set of system specifications to work from. The above schedule, which has been in force for at least the last two major and one minor releases of IMA, shows the following:

- “Draft Developer Worksheets” are released approximately five months before a release.

- “Final” development specifications are not released until roughly one month (sometimes less) before the release.
- Often times the “Final” specifications aren’t final, as evidenced by the updated spec issued two weeks after the 6.0 release was already in production.

“Draft developer worksheets,” as the name implies, are drafts. They can certainly be used by CLEC development staff to get a start on development efforts. Qwest makes it clear, however, that changes to these worksheets can and will be made throughout the development process up until the issuance of the “final” disclosure document.

CLECs have repeatedly taken issue with this schedule, bringing it up as an issue in CICMP meetings. Qwest’s reply to this issue has always been that it always supports the previous IMA-EDI release for six months following the production release of the new version. The CLECs find this answer unacceptable, and CGE&Y largely concurs. As a result of this finding, CGE&Y has issued AZIWO1078.

CICMP Meetings

During the course of the evaluation, CGE&Y had the opportunity to attend four CICMP meetings via conference bridge, and one meeting in-person.

Prior to each meeting, the CICMP manager sends out a meeting package that is also made available on the CICMP website. This package contains:

- Meeting agenda
- List of active CRs, separated by system/interface
- Master issues log, containing all open action items
- Copy of each of the active CRs
- Tables containing release candidates, if applicable
- Any other supporting documentation for discussion at the upcoming meeting

Meetings are always attended by the CICMP manager and at least one representative from each Qwest business and/or IT unit affected by the topics discussed at the meeting. This usually consists of one or more representatives from:

- EDI
- Billing
- IMA-GUI
- Training
- Other departments responsible for such things as OBF standards, business processes, and sometimes account management

CLECs may choose to attend in person or via a conference call bridge. Other organizations attend as well, such as third party test consultants (CGE&Y, KPMG, etc.) and EDI/Gateway vendors (e.g., NightFire, Mantiss, Quintessent).

The meetings are conducted professionally, and the agenda is quite rigidly adhered to. The meetings usually run the entire allotted time, four hours, and it is often necessary to “table” discussion items in order to get through the entire agenda in the time allotted.

The only deficiency to be found in the CICMP meetings themselves is the frequency. The frequency of the meetings has consequences on other aspects of the CICMP, and these are discussed elsewhere in this report. Regarding the meetings themselves, however, the fact that they are only once monthly means, by definition, that they are very long and their agendas very often filled to the brim. This often makes it difficult to even get through all the agenda items, let alone initiate discussion on a topic that is not on the agenda. If a topic is brought up and then tabled due to time constraints, unless it is identified as a very important topic, it will be another month before it can be brought up again.

This and all related issues are discussed at length in Section 5.6.4, “Results” of this document.

5.6.1 Questionnaires

Questionnaires regarding the Qwest CICMP¹³ were sent to all of the CLECs whose names appear on the CICMP attendance sheets since the beginning of the process. Formal responses were received from only six CLECs, although informal responses were received via telephone calls and e-mails throughout the evaluation process.

Questionnaire responses generally matched with the results of the overall evaluation. Specifically, participants feel that while the process is well defined, more than adequately documented, and adequately administered, the process itself is poorly conceived, too narrowly focused, and only marginally achieves its objectives for CLECs.

The relevant points highlighted by the questionnaires are summarized below:

- ❑ CLECs that responded to the questionnaires were uniformly dissatisfied with the length of time it takes to create a CR, have Qwest give it a level of effort, have it prioritized, and finally have it scheduled for a release.
- ❑ Most respondents expressed extreme displeasure with the fact that CLEC CRs seem to be constantly “bumped” in favor of “higher priority” changes, all of which are generated internally by Qwest.

¹³ CGE&Y Archive File: RME #7 – CLEC Questionnaire RE: Qwest CICMP

- ❑ Most respondents expressed their dissatisfaction with the actual number of CLEC-initiated CRs that actually make it into a software release. For example, of the approximately 24 new functions added to IMA for its 6.0 release in December 2000, only 4 of them originated with a CLEC CR.
- ❑ Some of those that responded indicated that they felt the process was too narrowly defined. For example, in the past CLECs were prevented and/or discouraged from discussing business process-related issues during CICMP meetings, even though system functionality is largely driven by business processes. This has since been rectified by the addition of CICMP meetings dealing only with processes. Likewise, other topics which are systems related but not specifically related to functionality and CRs, such as test environments and processes, are often excluded from discussion because they are “outside the scope of CICMP.”
- ❑ As a corollary to the above, one of the formal respondents and several of the informal respondents felt that there was an unintentional “Catch-22” in the process. Specifically, that for issues “outside the scope of CICMP,” CLECs are told to consult with the account management teams. Very often, however, when the CLECs do take their issues to their account managers, they are told that the issue in question should be addressed by CICMP.

5.6.2 Interviews

CGE&Y interviewed the CICMP manager in the fall of 2000. This manager was in the process of transitioning her duties to a new manager. Following this interview, a new CICMP for products and processes was implemented and another manager named to lead it.

The manager described the CICMP process in high-level terms, including processes for CR prioritization and escalation. Since the process is so well documented, however, nothing new or hidden about the process was brought to light.

The only area of concern from the CICMP manager’s perspective was the level of CLEC representation at typical CICMP meetings. According to her, at most meetings the ratio of CLECs present to CLECs that have actually signed up to attend is “very small.” This adversely affects Qwest’s ability to discuss open CRs and have them voted upon.

CGE&Y comment: CGE&Y has attended each CICMP meeting, either by telephone or in person, since July 2000 and has found them to be adequately attended by the CLECs on most occasions.

5.6.3 Documentation

Documentation available to CLECs regarding the CICMP process is comprehensive. Documentation is updated on a continuous basis. A summary of available documentation is contained in the table below:

Document Name/Purpose	Web Location
CICMP Process Overview	http://www.uswest.com/wholesale/cicmp/downloads/cicmpProcess.doc
CICMP Prioritization Process	http://www.uswest.com/wholesale/cicmp/downloads/industry_team_prioritization_process.doc
CICMP Escalation Process	http://www.uswest.com/wholesale/cicmp/downloads/Escalation_120100.doc
Change Request Form	http://www.uswest.com/wholesale/cicmp/downloads/Co-Pro_Change_Req_Form_120100.doc
Change Request Form Instructions	http://www.uswest.com/wholesale/cicmp/downloads/Co-Pro_Change_Req_Form_Inst_121100.doc
CICMP Meeting Schedule	http://www.uswest.com/wholesale/cicmp/downloads/copro_tm_mtg_sched_v17.doc
CICMP Meeting Packages	http://www.uswest.com/wholesale/cicmp/teammeetings.html
Release Notifications	http://www.uswest.com/wholesale/cicmp/releasenote.html
12 Release Schedule	http://www.uswest.com/wholesale/cicmp/downloads/TargRelSched070700.ppt
IMA Target Release Lifecycle	http://www.uswest.com/wholesale/cicmp/downloads/lifecycles070700.ppt
FAQs	http://www.uswest.com/wholesale/cicmp/questions.html

5.6.4 Results

Qwest began a comprehensive review and re-design of the entire CICMP charter in June 2001. The process is being collaboratively re-designed by Qwest and the CLECs that Qwest does business with, and OBF issue 2233 is being used as



the basis for its re-design. The proposed re-design is aimed at improving many of the deficiencies defined in this report. Since this effort is still in its initial stages, CGE&Y was unable to make an assessment of the effectiveness of this effort. The following results applies to the CICMP process as it existed as of the date of this report.

CGE&Y finds the Qwest CICMP process does not satisfy the objectives set forth in the CGE&Y MTP Section 3.3.4 and TSD Section 6.6 for the following reasons:

1. The CICMP process is not a truly collaborative vehicle for CLECs to request changes to the applicable interfaces. (AZIWO1075)
2. CLEC CRs are not acted upon in a reasonable amount of time. (AZIWO1076)
3. EDI development documentation is not distributed in a timely manner. (AZIWO1078)

Deficiency #1, Explanation

The Qwest CICMP process is well documented and defined, and is carried out in accordance with its stated process. There is ample and clearly understandable documentation on the Qwest wholesale website describing the purpose of the CICMP and its processes, and containing instructions for completing a CR form. Also contained on the website are blank CR forms for printing or download, copies of CRs that have been submitted, and a comprehensive repository of materials from past CICMP meetings as well as for upcoming meetings.

The Qwest CICMP managers do an excellent job of keeping the CLECs in the loop with all issues relating to CICMP between the monthly meetings. They also have made several modifications to the CICMP home page to incorporate additional avenues of communication and collaboration between Qwest and the CLECs.

The fundamental flaws in the process lie with its very purpose and structure.

The primary functions of the CICMP, as stated in its charter, are:

- To track and communicate *CLEC*-requested changes to the various Qwest interfaces
- To *notify* CLECs of *CLEC-impacting* changes

Historically, however, CLEC requests have only accounted for a small percentage of the functionality added to any given release. For instance, IMA-GUI Release 6.0 contains 24 changes or enhancements over Release 5.2; and only 4 of them originated with a CLEC request.

Further, the Qwest-originated requests, which account for the majority of enhancements to these systems, are totally outside the scope of the CICMP process. They are not open for debate, prioritization, voting, etc., by the CLEC community. Not only are they not open for debate, the CICMP manager is not even involved in the process by which these internal requests are approved.¹⁴

In any software requirements management system it is understood that the end-users are not the sole originators of CRs. It is a given, in fact, that Qwest will have the need to make architectural, code, or database modifications to its systems from time to time due to various internal requirements. It is also understandable that regulatory requirements will mandate changes to various CLEC systems. The fact remains that many of the enhancements that are generated internally by Qwest are related neither to architecture or regulatory concerns. Regardless of the source of the enhancement, however, the process by which these requests are made, voted on, prioritized, and implemented is not made available to the CLEC community in any way, nor do the CLECs have any input into it whatsoever. As a result, there is justifiable concern that the internal CRs are not subject to the same scrutiny and delay inherent in the CICMP process.

Best practices in software engineering dictate that software change management processes treat all CRs in a cohesive, uniform manner. Further, all stakeholders in the systems in question, including the end-users, must have representation at the change control meetings during which all changes are voted on. The fact that Qwest has two separate change management processes, one internal and one external, for the same systems is a deficiency. This finding has resulted in the issuance of AZIWO1075.

Software CRs can originate from many sources: users, developers, managers, or as a result of regulatory or company policy changes. A large number of changes to any software, however, comes from users of that software. Further, the functional requirements used to design the system in the first place almost exclusively come from the end-users. As previously mentioned, the interfaces covered by the CICMP process were designed and exist primarily for the use and benefit of Qwest wholesale customers (e.g., CLECs, wireless carriers). Therefore, to have a totally separate process for CRs that wholesale customers have no participation in, yet which produces the vast majority of approved CRs, is an unacceptable and counterproductive practice.

A review of current software change management practices followed by two other RBOCs chosen at random, Bell Atlantic and Bell South, show these RBOCs follow a fully collaborative process. In reviewing the change

¹⁴ This was the case as of October 23, 2000, when CGE&Y interviewed the previous CICMP manager.

management practices of these two RBOCs, CGE&Y found that while change requests are given a classification that indicates, among other things, whether the CR is CLEC or RBOC-initiated, all CRs are discussed and prioritized by all participants of the change control process, including CLECs. The charter for Qwest's CICMP, on the other hand, makes it clear that the CICMP is only for CLEC-initiated changes.

Deficiency #2, Explanation

Regarding the flaws in the "structure" of the CICMP process mentioned above, the following comments also apply. Despite the application of fairly conservative time intervals to individual steps of the CR process, the length of time it takes an average CR to make it through the process, not even taking into account making it into a release, is simply too long. If we take into account the length of time it takes a CR to actually make it into a release, the length of time can double or even triple.

The primary culprits here are the once-monthly CICMP meetings and their relation to internal development meetings, and the frequency of software releases (releases are scheduled approximately every four months).

The frequency of the CICMP meetings has the potential to slow down the CR process at several points. For instance, depending upon when a CLEC submits a CR, it can take from several days to an entire month for the CR to be initially "industry evaluated." If the CR requires clarification, it can take from several days to two months before it is discussed at its first CICMP meeting.

Having been initially discussed at the CICMP meeting, the CR still has a minimum of two more CICMP meetings at which it must be discussed: once, when it receives a "T-Shirt Size," and again after it has been prioritized and is baselined for release. If further clarification is required once the CR has been discussed at any of the aforementioned stages, the CR will need to come back to the CICMP once again. Each time the CR must come back to a CICMP meeting for discussion, there is the possibility that it will have to wait nearly a month for one to come along.

Obviously, some CRs are timed perfectly and make it through the system in the minimum time possible. This minimum possible time, however, can still be considerable. In this regard, it is again necessary to point out the sheer length of time it takes even the simplest and/or highest priority CRs to make their way through this system. In "ordinary" in-house software development efforts where changes are to be made to production systems, whatever the industry, it is not uncommon for the CR process (submission, level-of-effort, approval, prioritization, scheduling of release) to take two to three weeks; sometimes even less.

Systems as complex as those under consideration, with the number of trading partners involved, obviously cannot be compared to “ordinary” production systems of other companies. That said, however, CGE&Y finds it unreasonable that the process is such that it can take three to four months, sometimes even longer, to give a CR a level-of-effort, have it prioritized, and schedule it for a release which again could be another four to eight months away.

Deficiency #3, Explanation

“Final” EDI design documents are only released to the CLECs three weeks prior to a new EDI release. Qwest has two answers to this deficiency:

1. “Draft Developer Worksheets,” which are developed by the EDI developers during their design process, are issued to the CLEC community approximately 180 days before a release. They are updated as needed until the release is final.
2. EDI releases are supported by Qwest for six months after the release of a newer version.

The problem with answer #1 above is that the “Draft Developer Worksheets” are exactly that: drafts. Due to their sheer size, however, the fact that they may change over time is a significant hindrance to using them as a design document.

When the above point has been made to Qwest in the past, however, the response has always been answer #2: that a CLEC can always use the previous release for six months after a new release, thus giving them time to use the “final” design documents to modify its system. While true, the obvious problem with this is that it delays CLECs taking advantage of any expanded functionality offered by a new release.

The existence of stable, unchanging requirements is an absolute pre-requisite to CLECs being able to code their own systems to match Qwest’s. CLECs have brought up this issue both to the CICMP manager and their account management teams on numerous occasions, with the same responses, listed above, given every time.

The following table contains specific findings cross-referenced with CGE&Y’s Arizona TSD objectives:

TSD Objective and Section Reference	Objective Satisfied?	Source	Comments
(1) Does the Change Management Process information available to the CLECs clearly document the methodology, timing and communication of Qwest OSS software changes and releases? (6.6.2.3)	Y	http://www.qwest.com/wholesale/cicmp/whatisicmp.html	The four phases of the Qwest OSS development lifecycle are explained in the document titled "Qwest Change Control Process." The phases are: <ul style="list-style-type: none"> • Initiate • Develop • Deploy • Retire Also included in the above document are intervals for each task involved in the CICMP process, including communications to the CLECs regarding upcoming releases.
(2) Are terms and definitions utilized in the Change Management Process information clearly documented? (6.6.2.3)	Y	http://www.qwest.com/wholesale/downloads/010514/CICMP_Document_051401.doc	Section V of the document titled "Qwest Change Control Process" is titled "Terms and Definitions." Most terms and their usage were found to be consistent with standard software quality management usage. Instances where a term is unique to the Qwest process, for example "T-Shirt Size," are adequately explained.
(3) Software releases are periodic and predictable (i.e., appropriately noticed)? (6.6.2.3)	Y	http://www.qwest.com/wholesale/cicmp/calendar.html	The CICMP homepage of the Qwest wholesale website contains a link to a calendar of upcoming releases and their associated milestones.
(4) Does the Change Management Process information available to the CLECs clearly explain how CLECs can request changes to the OSS? (6.6.2.3)	Y	http://www.qwest.com/wholesale/downloads/2000/industry_team_prioritization_process.doc http://www.qwest.com/wholesale/downloads/2001/010313/Co-Pro_Change_Req_Form_Inst_031301.doc	The CR page of the CICMP website contains a brief description of the CR process, as well as links to the CR form and instruction document.



TSD Objective and Section Reference	Objective Satisfied?	Source	Comments
(5) Does CICMP documentation include forms for requesting changes and clear instructions for completing, submitting and tracking progress on CLEC CRs? (6.6.2.3)	Y	http://www.qwest.com/wholesale/downloads/2001/010313/Co-Pro_Change_Req_Form_Inst_031301.doc http://www.qwest.com/wholesale/downloads/010605/CR_Form.doc	The CR page of the CICMP website contains a brief description of the CR process, as well as links to the CR form and complete instruction document.
(6) Does the Change Management Process provide for frequent scheduled communications regarding changes to the CLECs? (6.6.2.3)	Y	http://www.qwest.com/wholesale/cicmp/releasenote.html	<p>CGE&Y observed copious communications from the Qwest CICMP manager to the CLECs during the release lifecycles. Examples of such communications were:</p> <ul style="list-style-type: none"> • Preparations for upcoming CICMP meetings • Lists of candidate CRs • Draft Developer Worksheets for EDI • Release notes
(7) Releases issued as part of the Change Management Process are complete, clearly written, and distributed in a timely fashion? (6.6.2.3)	N	http://www.qwest.com/disclosures/netdisclosure409.html	<p>“Final” EDI design documents are only released to the CLECs three weeks prior to a new EDI release. Qwest has two answers to this deficiency:</p> <ol style="list-style-type: none"> 1. “Draft Developer Worksheets,” which are developed by the EDI developers during their design process, are issued to the CLEC community approximately 60 days before a release. They are updated as needed until the release is final. 2. EDI releases are supported by Qwest for six months after the release of a newer version. <p>This deficiency has been documented in AZIWO1078</p>



TSD Objective and Section Reference	Objective Satisfied?	Source	Comments
			<p>The problem with item #1 above is that the "Draft Developer Worksheets" are exactly that: drafts. Due to their sheer size, however, the fact that they may change over time is a significant hindrance to being able to use them as a design document.</p> <p>When the above point has been made to Qwest in the past, however, the response has always been item #2: that a CLEC can always use the previous release for six months after a new release, thus giving them time to use the "final" design documents to modify their system. The obvious problem with this is that, while true, it prevents CLECs from taking advantage of any expanded functionality offered by a new release.</p> <p>The existence of stable, unchanging requirements is an absolute prerequisite to CLECs being able to code their own systems to match Qwest's.</p>
(8) Does the Change Management Process information available to the CLECs provide a clearly defined escalation process? (6.6.2.3)	Y	http://www.qwest.com/wholesale/downloads/2000/001201/Escalation_120100.doc	The source document adequately explains the process and provides time intervals in which the steps will be carried out.
(9) If Change Management Processes are located on the internet, are URLs for this information communicated to CLECs via multiple avenues? (6.6.2.3)	Y	N/A	<p>URLs are provided initially by a CLEC's account team.</p> <p>Also, links to relevant websites are provided in all communications from the CICMP manager.</p>
(10) Are the roles and responsibilities of each party clearly communicated in the Qwest Change Management and escalation processes? (6.6.2.3)	Y	http://www.qwest.com/wholesale/downloads/2000/001201/Escalation_120100.doc http://www.qwest.com/wholesale/do	Every process description contained in the source documents contains tables with columns for Qwest and co-provider (i.e. CLEC) responsibilities.

TSD Objective and Section Reference	Objective Satisfied?	Source	Comments
		wnloads/010514/C ICMP_Document 051401.doc	
(11) Does the documentation available to CLECs for Qwest's Change Management Processes clearly identify how CRs will be evaluated and prioritized for inclusion in future releases? (6.6.2.3)	Y	http://www.qwest.com/wholesale/downloads/2000/industry_team_prioritization_process.doc	Source documentation provides detailed descriptions of the processes involved. All CRs will be evaluated by Qwest, who will request more information from the CLEC if necessary. They will then be given a "T-Shirt Size," i.e., level of effort, by the Qwest IT staff. Following this, they will be evaluated and prioritized by the CLECs in the CICMP meetings.
(12) Does the Change Management Process information available to CLECs clearly explain how changes to the process and forms utilized by the process will be accomplished? If so, is it clear how the new process will be distributed and how new forms will be distributed/implemented and the old process and forms retired? (6.6.2.3)	Y	http://www.qwest.com/wholesale/downloads/010514/C ICMP_Document _051401.doc	Qwest chartered and convened a "Product and Process" CICMP in December 2000. All processes related to this CICMP are located on the CICMP website.
(13) If utilized, are release life cycles clearly described including all activities required by each segment of the lifecycle? (6.6.2.3)	Y	http://www.qwest.com/wholesale/downloads/010514/C ICMP_Document _051401.doc	The four phases of the Qwest OSS development lifecycle are explained in the document titled "Qwest Change Control Process." The phases are: <ul style="list-style-type: none"> • Initiate • Develop • Deploy • Retire Also included in the above document are intervals for each task involved in the CICMP process, including communications to the CLECs regarding upcoming releases. Thus far, Qwest has planned for two major releases to IMA-GUI and EDI per year.
(14) Is there a process in	Y	N/A	Notification of all planned system



TSD Objective and Section Reference	Objective Satisfied?	Source	Comments
place to notify CLECs in advance of planned system outages? (6.6.2.3)			outages are sent directly to the CLECs from the IMA system managers, and are likewise relayed through the CICMP manager.
(15) Is there a process in place to notify CLECs of unplanned system outages? (6.6.2.3)	Y		In the fall of 2000, Qwest implemented a notification system called NewsBurst to send mass e-mails to users about urgent IMA happenings Also, Qwest instituted an auto e-mail system to notify those that wish to subscribe of system events.

Appendix A - Glossary

ACC	Arizona Corporation Commission
ACNA	Access Customer Name Abbreviation
AIN	Advanced Intelligent Network
AMSC	Account Maintenance Service Center
API	Application Programming Interface
ASR	Account Service Record
ATIS	Alliance for Telecommunications Industry Solutions
ATM	Asynchronous Transfer Mode
AZ	Arizona
BFR	Bona Fide Request
BPL	Business Process Layer
BVMS	Business Voice Messaging Service
CEMR	Customer Electronic Maintenance and Repair
CGE&Y	Cap Gemini Ernst & Young
CICMP	Co-Provider Industry Change Management Process
CLEC	Competitive Local Exchange Carrier
CLLI	Common Language Location Identifier
CMDS	Centralized Message Distribution System
CO	Central Office
CR	Change Request
CSC	Customer Service Center
CSR	Customer Service Record
CTAS	Customer Terminal Access System
EB-TA	Electronic Bonding – Trouble Administration
EDI	Electronic Data Interchange
FCC	Federal Communications Commission
FID	Field Identifier
FOC	Firm Order Confirmation
FTP	File Transfer Protocol
GUI	Graphical User Interface
HEET	Held, Escalated, and Expedited Tool
HPC	High Performance Communications
ICDF	Interconnect Distribution Frame
ILEC	Incumbent Local Exchange Carrier
IMA	Interconnect Mediated Access
IRRG	Interconnect/Resale Resource Guide
ISC	Interconnection Service Center
ISP	Internet Service Provider
IWO	Incident Work Order

IXC	Interexchange Carrier
JIA	Joint Implementation Agreement
LIDB	Line Information Data Bases
LIS	Local Interconnection Service
LMOS	Loop Maintenance Operations System
LNP	Local Number Portability
LPIC	Local Primary Interexchange Carrier
LSOG	Local Service Ordering Guidelines
LSR	Local Service Request
M&R	Maintenance and Repair
MSA	Metropolitan Service Area
MTP	Master Test Plan
OBF	Ordering and Billing Forum
ONA	Open Network Architecture
OSS	Operations Support Systems
PC	Personal Computer
PIC	Primary Interexchange Carrier
PON	Purchase Order Number
POR	Plan of Record
POTS	Plain Old Telephone Service
RBOC	Regional Bell Operating Company
RN	Release Notification
ROC	Regional Oversight Committee
SATE	Stand Alone Test Environment
SBC	Southwestern Bell Company
SGAT	Statement of Generally Accepted Terms
SICM	State Interconnection Manager
SIG	Service Interval Guide
SNET	Southern New England Telephone
SOC	Service Order Completion
SR	Special Request
TA	Test Administrator
TAG	Test Advisory Group
TELIS	Telecommunications Information System
TSD	Test Standards Document
UNE	Unbundled Network Elements
UNE-P	Unbundled Network Elements – Platform
USOC	Universal Service Order Code
VMS	Voice Messaging Service

Appendix B – Incident Work Order Summary

IWO #	Incident Work Order	Qwest's Response	Results
AZIWO1064 C L O S E D	Discrepancies and inconsistencies in the CLEC account establishment process published on Qwest's website.	Qwest agrees with the findings outlined in IWO 2060. Qwest Wholesale Marketing Communications will update the "Getting Started" URL http://www.qwest.com/wholesale/clecs/index.html section of the Wholesale Markets Web Page to arrange the section into a more easy to understand format.	Documentation and process improvement
AZIWO1065 C L O S E D	Inconsistencies in published process for CLECs to request new services (Bona Fide Request process)	Cap Gemini has identified confusing language in the IRRG regarding the processes and applications co-providers should use to request new unbundled network elements, combinations of unbundled network elements, or switch features. Outlined in this response are revisions to the Qwest IRRG, now referred to as the Product Catalogue or PCAT. Qwest believes these changes should minimize confusion regarding various Service Request options available to Wholesale customers and should answer the questions raised by this IWO.	Documentation and process improvement
AZIWO1066 C L O S E D	Qwest's introduction to IMA class needs to be improved to include a hands-on training environment where users can actually use the system. All ordering scenarios need to be included in this functionality.	Qwest agrees that the IMA class should include a hands-on training environment for users. Qwest is releasing a hands-on IMA training class on February 21, 2001. This class will provide the students with the opportunity to actually use IMA in a classroom setting. Each ordering scenario will be included in the appropriate course by product.	Training improvement
AZIWO1067 C L O S E D	Qwest's CLEC training program needs to be expanded to include more classes. Specifically, classes dealing with individual or families of products, and classes regarding Qwest business processes are most needed.	In the year 2000, Qwest expanded its CLEC training schedule for 1 st Quarter 2001; instructor-led training classes and WEB-Based training classes, both for products and IMA, were added. Thirty-four instructor-led training classes were added.	Training improvement
AZIWO1068 W I T	Qwest's current EDI testing process is inadequate. Qwest does not operate a fully functional, fully	IWO withdrawn. Duplicated an earlier IWO.	N/A

IWO #	Incident Work Order	Qwest's Response	Results
H D R A W N	automated testing environment that mimics its production environment.		
AZIWO1070 C L O S E D	The monthly service performance reporting that Qwest provides to the CLECs is inadequate and inaccurate.	Qwest states that it has voluntarily changed the reporting format to match the format Qwest uses in its workshops. These newly formatted CLEC specific reports contain December 2000 data and were distributed to the CLEC Account Teams on 2/8/01 and 2/9/01.	Performance reporting improvement
AZIWO1075 O P E N	The current CICMP process is not a true collaborative effort for making changes to the CLEC-specific pre-order, order, and repair interfaces.	Qwest disagrees with CGE&Y's belief as to the degree to which the CICMP process is not collaborative. It is Qwest's position that it is appropriate for CLECs to vote on CLEC initiated changes but is not appropriate for CLECs to vote on all changes.	N/A
AZIWO1076 O P E N	The Change Request (CR) process used in the CICMP needs to be reviewed and re-designed in order for CRs to progress through the lifecycle in a much more timely fashion.	The Qwest once a month CICMP meetings are in line with other ILECs such as SBC and Bell Atlantic (Verizon) which have both been approved by the FCC.	N/A
AZIWO1078 O P E N	"Final" EDI design documents are only released to the CLECs three weeks prior to a new EDI release. This issue has been repeatedly brought up at CICMP meetings by both the CLECs and third party EDI software vendors.	Qwest's EDI release documentation notification procedures give the CLECs adequate time to prepare for an EDI release. Qwest's EDI release documentation notification timelines meet or exceed industry expectations, demonstrated by comparing SBC timelines to Qwest timelines.	N/A
AZIWO1086 C L O S E D	Various minor discrepancies were noted in reviewing the Resale and Interconnection Product Descriptions (PDs) available to CLECs on the Qwest Wholesale website.	In order to address the concerns raised, Qwest is implementing several changes to the means by which it shall review, and communicate information necessary for CLEC's to conduct business with Qwest.	Documentation improvement

Appendix C – LSOG 3 Comparison

LSR Form for Unbundled Loop

Field Name	LSOG 3	Qwest	Instructions
ADMIN SECTION			
CCNA	R	C for all activity types except for Disconnect	
PON	R	R	
VER	C	O	
LSR NO.	C	N	
LOCQTY	R	N	
HTQTY	O	N	
AN	C	R for Conv As Specified O for all other activity types	Per LSOG 3: Required when the ATN field is not populated. Required when the EAN field on the EU form is blank or when a new AN is required.
NAN		C for Conv As Specified N for all other activity types	This field is not contained in LSOG 3. This entry is required when the AN (the line that Qwest uses as the BTN) is moved from Qwest to another co-provider account on a partial conversion. This means that the primary AN is no longer serviced by Qwest, therefore a new primary AN must be designated for the lines remaining with Qwest.
ATN	C	N	Per LSOG 3: Required when the AN field is not populated. Required when the EATN field on the EU form is blank or when a new ATN is required.
SC	R	N	Per Qwest: Qwest generated. Qwest does not expect to see this field populated.
PG OF	R	O	
D/TSENT	R	R	
CLEC D/TSENT		N	This field is not contained in LSOG 3.
DDD	R	R	
APPTIME	O	N for Disconnects	

Field Name	LSOG 3	Qwest	Instructions
		O for all other activity types	
APT CON		N	This field is not contained in LSOG 3.
DDDO	C	N	Per LSOG 3: Required when the service is to be suspended and the DDD field is populated with a restoral date. Required for short term service (e.g. trade shows) and the DDD field is populated with an install date. Required for dual service, or when the DDDO is different from the DDD for an outside move.
APPTIME	O	N	
DFDT	C	N	Per LSOG 3: Prohibited when the first position of the REQTYP field is "G", "H" or "J", otherwise optional.
PROJECT	O	O	Per Qwest: Qwest will automatically project manage requests of more than 25 loops or requests requiring out-of-hours cuts. A co-provider can indicate an entry of "Requested;" however, Qwest will not provide project handling unless the previously defined criteria are met.
CHC	O	N for Disconnects O for all other activity types	
TEST		N for Disconnects O for all other activity types	This field is not contained in LSOG 3. Per Qwest: TEST indicates the type of test (if any) that is requested. If CHC = Y, allowed values for TEST are B, N, and blank. If CHC = N or blank, allowed values are A, N, or blank.
REQTYP	R	R	
ACT	R	R	
CONVIND		C for Conv As Specified	This field is not contained in LSOG 3.

Field Name	LSOG 3	Qwest	Instructions
		N for all other activity types	Per Qwest: This field is required if converting from a TN based service to a loop.
SUP	C	C	
EXP	C	N for Disconnects C for all other activity types	Per LSOG 3: Required when desired due date is less than the standard interval for the provisioning of the service, otherwise optional. No Qwest conditions listed.
AFO	C	N	Per LSOG 3: Required when the associated request form(s) is applicable and sent, otherwise prohibited.
RTR	R	R	
CC	C	N	Per LSOG 3: Required when the CCNA field is "CUS", otherwise optional.
AENG	O	N for Disconnects O for all other activity types	
ALBR	O	N for Disconnects O for all other activity types	
SCA	O	N for Disconnects O for all other activity types	
AGAUTH	C	R for New Installs and Conv As Specified N for all other activity types	Per LSOG 3: Required when the customer is acting as an end user agent, otherwise optional.
DATED	C	R for New Installs and Conv As Specified N for all other activity types	Per LSOG 3: Required when the AGAUTH field is "Y", otherwise optional.
AUTHNM	O	O for New Installs and Conv As Specified N for all other activity types	
PORTTYP	C	N	Per LSOG 3: Required when the first position of the REQTYP field is "F" or "M", otherwise prohibited.
ACTL	C	N	Per LSOG 3:

Field Name	LSOG 3	Qwest	Instructions
			Prohibited when the first position of the REQ TYP field is "D", "E", "G", "H" or "J", otherwise optional.
AI	C	N	Per LSOG 3: Required when the APOT field is populated, otherwise prohibited.
APOT	C	N for Disconnects C for all other activity types	Per Qwest: Either the APOT or CFA on the LS form is required on all activity types except D. If an entry appears in this field, then the CFA field on the LS form must be blank. If no entry appears in this field, then an entry is required in the CFA field. Per LSOG 3: Required when the ACTL field does not identify the specific physical termination point of the service, otherwise optional.
LST	C	N	Per LSOG 3: Required when the first position of the REQ TYP field is "F" or "M". Required when the first position of the REQ TYP field is "E" and the entry is different than the end user's local serving office. Otherwise Optional.
LSO	C	N	Per LSOG 3: Required when the RTR field is "C" or "D", the ACT field is "N" or "T" and the first position of the REQ TYP field is "D" or "E". Prohibited when the first position of the REQ TYP field is "K".
TOS	C	R	Per LSOG 3: Required when the ACT field is "N", "C", "T", "V" or "W" and the first position of the REQ TYP field is "E", "F" or "M" and the LTOS on the service specific form is not populated, otherwise optional.



Field Name	LSOG 3	Qwest	Instructions
SPEC	O	N	
NC	O	N for Disconnects R for all other activity types	
NCI	C	N for Disconnects R for all other activity types	
CHANNEL	C	N	Per LSOG 3: Prohibited when the NC and NCI fields are populated, otherwise optional.
SEC NCI	O	N for Disconnects R for all other activity types	
RPON	O	C	Per Qwest: This field is required if PG_OF_ is used and does not begin with 01. Otherwise this field is optional. The first LSR in the series would have a blank RPON if the PG_OF_ field is populated. The subsequent LSRs would all have the PON of the first LSR in this RPON field. Optional fields can also represent related PON without a PG OF .
RORD	C	O	Per LSOG 3: Required when the provider has pre-assigned a related order number, otherwise prohibited.
LSP AUTH	O	N	
LSP AUTH DATE	C	N	Per LSOG 3: Required when the LSP AUTH field is populated, otherwise optional.
LSP AUTH NAME	C	N	Per LSOG 3: Required when the LSP AUTH field is populated, otherwise optional.
LSPAN	O	N	
CIC	O	N	
CUST	O	N	
BILLING SECTION			
BI1	C	N	Per LSOG 3: Required when more than one BAN field (i.e., BAN1 and BAN2) is populated, otherwise optional.
BAN1	R	R	

Field Name	LSOG 3	Qwest	Instructions
BI2	C	N	Per LSOG 3: Required when more than one BAN field (i.e., BAN1 and BAN2) is populated, otherwise optional.
BAN2	C	N	Per LSOG 3: Required when the BI2 field is populated, otherwise prohibited.
BAPC		N	This field is not contained in LSOG 3. No explanation of this field exists in the Qwest I-Chart.
ACNA	R	R	
EBD	O	N	
CNO	O	N	
NRI	O	N	
BILLNM	C	N	Per LSOG 3: Required when the BAN (i.e. BAN1 or BAN2) field is "N", otherwise optional.
SBILLNM	O	N	
TE	C	N	Per LSOG 3: Required when the BAN (i.e. BAN1 or BAN2) field is "N", otherwise optional.
EBP	O	N	
STREET	C	N	Per LSOG 3: Required when the BAN (i.e. BAN1 or BAN2) field is "N", otherwise optional.
FLOOR	O	N	
ROOM	O	N	
CITY	C	N	Per LSOG 3: Required when the BAN (i.e. BAN1 or BAN2) field is "N", otherwise optional.
STATE	C	N	Per LSOG 3: Required when the BAN (i.e. BAN1 or BAN2) field is "N", otherwise optional.
ZIP CODE	C	N	Per LSOG 3: Required when the BAN (i.e. BAN1 or BAN2) field is "N", otherwise optional.
BILLCON	C	N	Per LSOG 3: Required when the BAN (i.e. BAN1 or BAN2) field is "N", otherwise optional.
TEL NO	C	N	Per LSOG 3: Required when the BAN (i.e. BAN1 or BAN2) field is "N",



Field Name	LSOG 3	Qwest	Instructions
VTA	O	N	otherwise optional.
CONTACT SECTION			
INIT	R	R	
TEL NO	R	R	
EMAIL	O	O	
FAX NO	O	O	
STREET	R	N	
FLOOR	O	N	
ROOM/MAIL	O	N	
CITY	R	N	
STATE	R	N	
ZIP CODE	R	N	
IMPCON	O	N for disconnects R for all other activity types	
TEL NO	C	N for Disconnects C for all other activity types	Per LSOG 3: Required when the IMPCON field is populated, otherwise prohibited. Per Qwest: This field must be populated if IMPCON is populated and PAGER is not populated. If PAGER is populated, this field is prohibited.
PAGER	O	N for Disconnects C for all other activity types	Per Qwest: This field must be populated if IMPCON is populated and TEL NO is not populated. If TEL NO is populated, this field is prohibited.
ALT IMPCON	O	N	
TEL NO	C	N	Per LSOG 3: Required when the ALT IMPCON field is populated, otherwise prohibited.
PAGER	O	N	
DSGCON	O	N for Disconnects C for all other activity types	Per Qwest: Required if RTR = D.
DRC	O	N for Disconnects C for all other activity types	Per Qwest: Required if RTR = D and FAX NO is not populated. If FAX NO is populated then DRC is prohibited.
TEL NO	O	C	Per Qwest: If the RTR = D, then the TEL NO is required.
FAX NO	O	N for Disconnects C for all other	Per Qwest: Required if RTR = D and

Field Name	LSOG 3	Qwest	Instructions
		activity types	DRC is not populated. If DRC is populated, FAX NO is prohibited.
EMAIL	O	N	
STREET	C	N	Per LSOG 3: Required when the DSGCON field is populated, otherwise optional.
FLOOR	O	N	
ROOM/MAIL STOP	O	N	
CITY	C	N	Per LSOG 3: Required when the DSGCON field is populated, otherwise optional.
STATE	C	N	Per LSOG 3: Required when the DSGCON field is populated, otherwise optional.
ZIP CODE	C	N	Per LSOG 3: Required when the DSGCON field is populated, otherwise optional.
REMARKS	O	O for Disconnects C for all other activity types	Per Qwest: Required if basic installation with testing is requested. If SCA = Y, then contract # or job # is required in the REMARKS field. Name and TN are required in REMARKS field if an out-of-hours installation is requested, or if CHC = Y, ALBR = Y, AENG = Y, or EXP = Y. Remarks are recommended on all supplements and are preferred if the SUPP = 3 to explain the changes made on the LSR. In the case of a held order, use this field to indicate that this LSR is for a held order. Enter CDLR as a remark if appropriate.
MANUAL IND		C	This field is not contained in LSOG 3. Per Qwest: MANUAL IND must be set



Field Name	LSOG 3	Qwest	Instructions
			to Y if the REMARKS field contains information that must be processed manually.
PENDING ORDER		O	This field is not contained in LSOG 3. No explanation of this field is given in the I-Chart.
HUNTING SECTION			
LOCNUM	R	N	
HNUM	R	N	
CB	C	N	Per LSOG 3: Required when the REQTY field is "P" and the HA field is populated, otherwise optional.
HA	C	N	Per LSOG 3: Required when the HTQTY field is populated, otherwise optional.
HID	O	N	
TIP	O	N	
TLI	C	N	Per LSOG 3: Required when the TIP field is populated, otherwise optional.
HNTYP	C	N	Per LSOG 3: Required when the HA field is populated, otherwise optional.
HLA	C	N	Per LSOG 3: Required when the HTQTY field is populated, otherwise optional.
HTSEQ	C	N	Per LSOG 3: Required when the HLA field is populated, otherwise optional.
NOTYP	C	N	Per LSOG 3: Required when the HLA field is populated, otherwise optional.
HTN	C	N	Per LSOG 3: Required when the HLA field is populated, otherwise optional.

End User Form for Unbundled Loop

Field Name	LSOG 3	Qwest	Comments
PON	R	N	



Field Name	LSOG 3	Qwest	Comments
VER	O	O	
AN	C	N	Per LSOG 3: Required when the ATN field is not populated. Required when the EAN field on the EU form is blank or when a new AN is required, otherwise optional.
ATN	C	N	Per LSOG 3: Required when the AN field is not populated. Required when the EATN field on the EU form is blank or when a new ATN is required, otherwise optional.
DQTY	C	N	Per LSOG 3: Required when the DISC # field is populated, otherwise optional.
PG OF	R	N	
LOCATION AND ACCESS SECTION			
LOCNM	R	R	Per Qwest: If ACT = T, the first occurrence of the Location and Access Section is required. LOCNM must = 1 for this occurrence. This section is the first section entered and this section contains the old end-user address (previous CKL). The second occurrence of the Location and Access Section is required and LOCNM must = 2. This section is the second section entered and this section contains the new end-user address (new CKL). If ACT = T and the above validations are not followed: The order is not valid and is rejected back to the co-provider. For all other valid



Field Name	LSOG 3	Qwest	Comments
			activities: the first occurrence of the Location and Access Section is required and LOCNM must = 1 and this section is the only section entered and this section contains the new end-user address. If ACT is valid and the above validations are not followed: the order is not valid and is rejected back to the co-provider.
NAME	R	R	
ANV		O for New Installs and Outside Moves N for all other activity types	This field is not contained in LSOG 3. Per Qwest: This field is required for LOCNM2 only. No other explanation of the field is provided.
SAPR	C	N	Per LSOG 3: Optional when the SANO field is populated, otherwise prohibited.
SANO	C	C	Per LSOG 3: Optional when the SASN field is populated, otherwise prohibited. Per Qwest: Required for numbered addresses, otherwise prohibited.
SASF	C	C	Per LSOG 3: Optional when the SASN and SANO fields are populated, otherwise prohibited. Per Qwest: Optional for numbered addresses, otherwise prohibited. Valid only if SANO is populated.
SASD	C	N	Per LSOG 3:



Field Name	LSOG 3	Qwest	Comments
			Optional when the SASN field is populated, otherwise prohibited.
SASN	R	R	Per Qwest: If TNs were reserved for this CCNA/PON in pre-order, either manually or using IMA, the service address on the LSR must match the service address provided in pre-order. If an invalid address is provided, Qwest will reject the LSR.
SATH	C	N	Per LSOG 3: Optional when the SASN field is populated, otherwise prohibited.
SASS	C	N	Per LSOG 3: Optional when the SASN field is populated, otherwise prohibited.
SADLO	O	N	
FLOOR	O	O	
ROOM	O	O	
BLDG	O	O	
AHN	N/A	C	This field is not contained in LSOG 3. Per Qwest: Required for unnumbered addresses (SANO is not populated for unnumbered addresses), otherwise not applicable. If the Address Not Validated flag, ANV, is set to Y and the address is unnumbered, then this field is optional.
ROUTE	N/A	O	This field is not contained in LSOG 3. No explanation of this field is provided by Qwest in the I-Chart.
BOX	N/A	O	This field is not contained in LSOG 3. No explanation of this field is

Field Name	LSOG 3	Qwest	Comments
			provided by Qwest in the I-Chart.
CITY	R	R	
STATE	R	R	
ZIP CODE	R	R	
CALA	N/A	C	This field is not contained in LSOG 3. Per Qwest: This field is required if ZIP CODE is not provided. CGE&Y Comment: If ZIP CODE field is required, which it is per Qwest, then Qwest's condition for this field is not valid.
LCON	O	R for New Installs, Conv As Specified, and Outside and Inside Moves C for Changes N for Disconnects	Per Qwest: This field is required when the request requires a dispatch and is necessary for all physical changes. For ACT = T, this field is applicable to LOCNUM (2) only.
TEL NO.	O	N for Disconnects C for all other activity types	Per Qwest: This field is required if LCON is populated.
EUMI	O	N	
ACC	O	N for Disconnects C for all other activity types	Per Qwest: This field is required if LSR has Meet Me USOC (VT6NC), or move of a drop of NID (NW1 & NW2-for drop wire, RWW-outside wire work), or if ordering a jack (IWJK-Resale form, LSNP form, LS form, or CRS form) or requesting a new NID (field on Resale, LS form, LSNP form, or CRS form). Instructs installer for above work.
WSOP	O	N	
WSOP TEL NO.	N/A	N	This field is not contained in LSOG 3.

Field Name	LSOG 3	Qwest	Comments
			No further explanation is provided by Qwest for this field in the I-Chart.
CPE MFR	O	N	
CPE MOD	O	N	
IBT - ISDN BRI Type	O	N	
INSIDE WIRE SECTION			
IWO	O	N	
IW BAN	O	N	
IWCON	C	N	Per LSOG 3: Required when the IWO field is populated, otherwise optional.
TEL NO.	C	N	Per LSOG 3: Required when the IWCON field is populated, otherwise prohibited
BILL INFORMATION SECTION			
EAN	C	N	Per LSOG 3: Required for conversion of end user accounts when the EATN field is not populated, otherwise optional
EATN	C	N	Per LSOG 3: Required for conversion of an end user account when the EAN field is not populated, otherwise optional
FBI	O	C for Conv as Specified N for all other activity types	Per Qwest: If converting entire account from Qwest to co-provider, and customer requests a different address for the final Qwest bill, use these fields. When FBI = D, BILLNM, STREET#, STREET NAME, CITY, STATE, ZIP CODE are required fields.
BILLNM	C	C for Conv as Specified N for all other activity types	Per LSOG 3: Required when the FBI field is "D", otherwise optional. Per Qwest: If converting entire account



Field Name	LSOG 3	Qwest	Comments
			from Qwest to co-provider, and customer requests a different address for the final Qwest bill, use these fields. An entry is required if FBI is present.
SBILLNM	O	O for Conv as Specified N for all other activity types	Per Qwest: If converting entire account from Qwest to co-provider, and customer requests a different address for the final Qwest bill, use these fields. May be populated if BILLNM is present.
STREET	C	N	Per LSOG 3: Required when the FBI field is "D", otherwise optional
SANO	N/A	C for Conv as Specified N for all other activity types	This field is not contained in LSOG 3 for the EU form. Per Qwest: Required for numbered addresses, otherwise not applicable. May be populated if BILLNM is present.
SASF	N/A	O for Conv as Specified N for all other activity types	This field is not contained in LSOG 3 for the EU form. Per Qwest: Optional for numbered addresses, otherwise not applicable. May be populated if BILLNM and SANO are present.
SASN	N/A	C for Conv as Specified N for all other activity types	This field is not contained in LSOG 3 for the EU form. Per Qwest: If converting entire account from Qwest to co-provider, and customer requests a different address for the final Qwest bill, use these fields. Required if BILLNM is present.
FLOOR	O	O for Conv as	Per Qwest:

Field Name	LSOG 3	Qwest	Comments
		Specified N for all other activity types	If converting entire account from Qwest to co-provider, and customer requests a different address for the final Qwest bill, use these fields. May be populated if BILLNM is present.
ROOM	O	O for Conv as Specified and Disconnects N for all other activity types	Per Qwest: If converting entire account from Qwest to co-provider, and customer requests a different address for the final Qwest bill, use these fields. May be populated if BILLNM is present.
CITY	C	C for Conv as Specified N for all other activity types	Per LSOG 3: Required when the FBI field is "D", otherwise optional. Per Qwest: If converting entire account from Qwest to co-provider, and customer requests a different address for the final Qwest bill, use these fields. Required if BILLNM is present.
STATE	C	C for Conv as Specified and Disconnects N for all other activity types	Per LSOG 3: Required when the FBI field is "D", otherwise optional. Per Qwest: If converting entire account from Qwest to co-provider, and customer requests a different address for the final Qwest bill, use these fields. Required if BILLNM is present.
ZIP CODE	C	C for Conv as Specified N for all other activity types	Per LSOG 3: Required when the FBI field is "D", otherwise optional. Per Qwest:

Field Name	LSOG 3	Qwest	Comments
			If converting entire account from Qwest to co-provider, and customer requests a different address for the final Qwest bill, use these fields. Required if BILLNM is present.
BILLCON	C	O for Conv as Specified N for all other activity types	Per LSOG 3 Required when the FBI field is populated and/or this entry is different from the BILLNM field, otherwise optional. Per Qwest: May be populated if BILLNM is present.
TEL NO	C	C for Conv as Specified N for all other activity types	Per LSOG 3: Required when the BILLCON field is populated, otherwise optional. Per Qwest: If BILLCON is provided, this entry must have a telephone number.
SSN	O	N	
DISCONNECT SECTION			
DNUM	R	N	
DISC #	O	N	
TER	O	N	
TC OPT	O	N	
TC TO PRI	C	N	Per LSOG 3: Required when the TC OPT field is not "N", otherwise optional.
TCID	N/A	N	This field is not contained in LSOG 3. No further explanation of this field is given in the Qwest I-Chart.
TC NAME	N/A	N	This field is not contained in LSOG 3. No further explanation of this field is given in the Qwest I-



Field Name	LSOG 3	Qwest	Comments
			Chart.
SECONDARY TRANSFER OF CALLS SECTION			
TC TO SEC	O	N	
TCID	C	N	Per LSOG 3: Required when split transfer of calls is requested, otherwise prohibited.
TC NAME	C	N	Per LSOG 3: Required when split transfer of calls is requested in the TC OPT field, otherwise prohibited.
TC PER	C	N	Per LSOG 3: Optional when the TC TO field is populated, otherwise prohibited.
REMARKS SECTION			
REMARKS	O	O	
MANUAL IND	N/A	C	This field is not contained in LSOG 3. Per Qwest: MANUAL IND must be set to Y by the co-provider if the REMARKS field contains information that must be processed manually. MANUAL IND in N or blank if the REMARKS field does not require manual processing. MANUAL IND is an optional field with a default. BLANK is the EDI default.

Loop Service Form for Unbundled Loop

Field Name	LSOG 3	Qwest Says	Comments
PON	R	N	
VER	O	N	
AN	C	N	Per LSOG 3: Required when the ATN field is not populated. Required when the EAN field on the EU Form is blank or



Field Name	LSOG 3	Qwest Says	Comments
ATN	C	N	when a new AN is required. Per LSOG 3: Required when the AN field is not populated Required when the EATN field on the EU Form is blank or when a new ATN is required.
LQTY	R	R	Per Qwest: Must match the number of LNUMs.
PG OF	R	N	
SERVICE DETAILS SECTION			
LOCNM	R	N	
LNUM	R	R	Per Qwest: This entry should be sequentially numbered. LNUM must be unique within a single request/PON and sequential starting with 0001.
LNA	R	R	Per Qwest: This entry identifies the activity involved at the line entry level. The ACT entry mirrors the LNA entry except when a conversion is requested. When converting at the account level, the LNA can be equal to D or V. When ACT = T, LNA = T
CKR	O	O	
TSP	O	N for Disconnects O for all other activity types	
SAN	O	C	Per Qwest: Required if the first character of TOS = 3. Co-provider is responsible for tracking.
ECCKT	C	N for New Installs C for Conv. As Specified N for all other activity types	Per Qwest: This entry is required on all orders after Qwest makes the initial assignment. If ACT = V this entry is not applicable when converting



Field Name	LSOG 3	Qwest Says	Comments
			<p>from Qwest or resale to Unbundled Loop.</p> <p>This entry is required if converting Unbundled Loop from one co-provider to another.</p> <p>Per LSOG 3:</p> <p>Required when the LNA field on the LS Form is "C", "D", "M", "T" or "R", otherwise optional.</p>
CFA	C	N for Disconnects C for all other activity types	<p>Per Qwest:</p> <p>Either APOT on the LSR form or CFA is required on all activity types except ACT = D. If an entry appears in this field, then the APOT field on the LSR form must be blank. If no entry appears in this field, then an entry is required in the APOT field on the LSR form.</p> <p>Per LSOG 3:</p> <p>Required when utilizing Hi-Cap facilities and the customer has assignment control, otherwise optional.</p>
SYSTEM ID	C	N	<p>Per LSOG 3:</p> <p>Required when the customer has assignment control in a collocation arrangement, otherwise optional.</p>
CABLE ID	C	N	<p>Per LSOG 3:</p> <p>Required when the customer has assignment control in a collocation arrangement, otherwise optional.</p>
SHELF	C	N	<p>Per LSOG 3:</p> <p>Required when the customer has assignment control in a collocation arrangement, otherwise optional.</p>
SLOT	C	N	<p>Per LSOG 3:</p>



Field Name	LSOG 3	Qwest Says	Comments
			Required when the customer has assignment control in a collocation arrangement, otherwise optional.
RELAY RACK	C	N	Per LSOG 3: Required when the customer has assignment control in a collocation arrangement, otherwise optional.
CHAN/PAIR	C	N	Per LSOG 3: Required when the customer has assignment control in a collocation arrangement, otherwise optional.
JK CODE	C	N	Per LSOG 3: Required when the JR field is populated, otherwise prohibited.
JKNUM	C	N	Per LSOG 3: Required when the JK CODE field is populated, otherwise optional.
JK POS	C	N	Per LSOG 3: Required when the JK CODE field is populated, otherwise optional.
JR	O	N	
NIDR	O	N for Disconnects O for all other activity types	Per Qwest: The NIDR is a Y if a NID is requested. When the LNA = D, NIDR is not applicable.
IWJK	C	N for Disconnects O for all other activity types	Per LSOG 3: Required when the IWJQ field is populated, otherwise prohibited. Per Qwest: Valid only in states where co-provider has negotiated inside wiring. This entry is not applicable when LNA = D.
IWJQ	C	N for Disconnects	Per LSOG 3:

Field Name	LSOG 3	Qwest Says	Comments
		C for all other activity types	Required when the IWJK field is populated, otherwise prohibited. Per Qwest: Same instructions as in LSOG 3.
DISCONNECT SECTION			
AENG	O	N for Disconnects O for all other activity types	
ALBR	O	N for Disconnects O for all other activity types	
SCA	O	N for Disconnects O for all other activity types	
AGAATH	C	R for New Installs and Conv As Specified N for all other activity types	Per LSOG 3: Required when the customer is acting as an end user agent, otherwise optional.
DATED	C	R for New Installs and Conv As Specified N for all other activity types	Per LSOG 3: Required when the AGAATH field is "Y", otherwise optional
AUTHNM	O	O for New Installs and Conv As Specified N for all other activity types	
PORTTYP	C	N	Per LSOG 3: Required when the first position of the REQTYT field is "F" or "M", otherwise prohibited.
ACTL	C	N	Per LSOG 3: Prohibited when the first position of the REQTYT field is "D", "E", "G", "H" or "J", otherwise optional
AI	C	N	Per LSOG 3: Required when the APOT field is populated, otherwise prohibited
APOT	C	N for Disconnects C for all other activity types	Per Qwest: Either the APOT or CFA on the LSR form is required on all activity types except D. If



Field Name	LSOG 3	Qwest Says	Comments
			<p>an entry appears in this field, then the CFA field on the LSR form must be blank. If no entry appears in this field, then an entry is required in the CFA field.</p> <p>Per LSOG 3: Required when the ACTL field does not identify the specific physical termination point of the service, otherwise optional.</p>
LST	C	N	<p>Per LSOG 3: Required when the first position of the REQ TYP field is "F" or "M". Required when the first position of the REQ TYP field is "E" and the entry is different than the end user's local serving office, otherwise optional.</p>
LSO	C	N	<p>Per LSOG 3: Required when the RTR field is "C" or "D", the ACT field is "N" or "T" and the first position of the REQ TYP field is "D" or "E". Prohibited when the first position of the REQ TYP field is "K".</p>
TOS	C	R	<p>Per LSOG 3: Required when the ACT field is "N", "C", "T", "V" or "W" and the first position of the REQ TYP field is "E", "F" or "M" and the LTOS on the service specific form is not populated, otherwise optional.</p>
SPEC	O	N	
NC	O	N for Disconnects R for all other activity types	
NCI	C	N for Disconnects R for all other activity types	
CHANNEL	C	N	<p>Per LSOG 3: Prohibited when the NC and NCI fields are populated, otherwise optional.</p>



Field Name	LSOG 3	Qwest Says	Comments
SEC NCI	O	N for Disconnects R for all other activity types	
RPON	O	C	Per Qwest: This field is required if PG_OF_ is used and does not begin with 01. Otherwise this field is optional. The first LSR in the series would have a blank RPON if the PG_OF_ field is populated. The subsequent LSRs would all have the PON of the first LSR in this RPON field. Optional fields can also represent related PON without a PG OF .
RORD	C	O	Per LSOG 3: Required when the provider has pre-assigned a related order number, otherwise prohibited.
LSP AUTH	O	N	
LSP AUTH DATE	C	N	Per LSOG 3: Required when the LSP AUTH field is populated, otherwise optional.
LSP AUTH NAME	C	N	Per LSOG 3: Required when the LSP AUTH field is populated, otherwise optional.
LSPAN	O	N	
CIC	O	N	
CUST	O	N	
BILLING SECTION			
BI1	C	N	Per LSOG 3: Required when more than one BAN field (i.e., BAN1 and BAN2) is populated, otherwise optional.
BAN1	R	R	
BI2	C	N	Per LSOG 3: Required when more than one BAN field (i.e., BAN1 and BAN2) is populated, otherwise optional.
BAN2	C	N	Per LSOG 3: Required when the BI2 field is populated, otherwise prohibited.
BAPC		N	This field is not contained in LSOG 3. No explanation of



Field Name	LSOG 3	Qwest Says	Comments
			this field exists in the Qwest I-Chart.
ACNA	R	R	
EBD	O	N	
CNO	O	N	
NRI	O	N	
BILLNM	C	N	Per LSOG 3: Required when the BAN (i.e. BAN1 or BAN2) field is "N", otherwise optional.
SBILLNM	O	N	
TE	C	N	Per LSOG 3: Required when the BAN (i.e. BAN1 or BAN2) field is "N", otherwise optional.
EBP	O	N	
STREET	C	N	Per LSOG 3: Required when the BAN (i.e. BAN1 or BAN2) field is "N", otherwise optional.
FLOOR	O	N	
ROOM	O	N	
CITY	C	N	Per LSOG 3: Required when the BAN (i.e. BAN1 or BAN2) field is "N", otherwise optional.
STATE	C	N	Per LSOG 3: Required when the BAN (i.e. BAN1 or BAN2) field is "N", otherwise optional.
ZIP CODE	C	N	Per LSOG 3: Required when the BAN (i.e. BAN1 or BAN2) field is "N", otherwise optional.
BILLCON	C	N	Per LSOG 3: Required when the BAN (i.e. BAN1 or BAN2) field is "N", otherwise optional.
TEL NO	C	N	Per LSOG 3: Required when the BAN (i.e. BAN1 or BAN2) field is "N", otherwise optional.
VTA	O	N	
CONTACT SECTION			
INIT	R	R	
TEL NO	R	R	
EMAIL	O	O	
FAX NO	O	O	
STREET	R	N	
FLOOR	O	N	
ROOM/MAIL	O	N	



Field Name	LSOG 3	Qwest Says	Comments
CITY	R	N	
STATE	R	N	
ZIP CODE	R	N	
IMPCON	O	N for disconnects R for all other activity types	
TEL NO	C	N for Disconnects C for all other activity types	Per LSOG 3: Required when the IMPCON field is populated, otherwise prohibited. Per Qwest: This field must be populated if IMPCON is populated and PAGER is not populated. If PAGER is populated, this field is prohibited.
PAGER	O	N for Disconnects C for all other activity types	Per Qwest: This field must be populated if IMPCON is populated and TEL NO is not populated. If TEL NO is populated, this field is prohibited.
ALT IMPCON	O	N	
TEL NO	C	N	Per LSOG 3: Required when the ALT IMPCON field is populated, otherwise prohibited.
PAGER	O	N	
DSGCON	O	N for Disconnects C for all other activity types	Per Qwest: Required if RTR = D.
DRC	O	N for Disconnects C for all other activity types	Per Qwest: Required if RTR = D and FAX NO is not populated. If FAX NO is populated then DRC is prohibited.
TEL NO	O	C	Per Qwest: If the RTR = D, then the TEL NO is required.
FAX NO	O	N for Disconnects C for all other activity types	Per Qwest: Required if RTR = D and DRC is not populated. If DRC is populated, FAX NO is prohibited.
EMAIL	O	N	
STREET	C	N	Per LSOG 3: Required when the DSGCON field is populated, otherwise optional.
FLOOR	O	N	
ROOM/MAIL STOP	O	N	



Field Name	LSOG 3	Qwest Says	Comments
CITY	C	N	Per LSOG 3: Required when the DSGCON field is populated, otherwise optional.
STATE	C	N	Per LSOG 3: Required when the DSGCON field is populated, otherwise optional.
ZIP CODE	C	N	Per LSOG 3: Required when the DSGCON field is populated, otherwise optional.
REMARKS	O	O for Disconnects C for all other activity types	Per Qwest: Required if basic installation with testing is requested. If SCA = Y, then contract # or job # is required in the REMARKS field. Name and TN are required in REMARKS field if an out-of-hours installation is requested, or if CHC = Y, ALBR = Y, AENG = Y, or EXP = Y. Remarks are recommended on all supplements and are preferred if the SUPP = 3 to explain the changes made on the LSR. In the case of a held order, use this field to indicate that this LSR is for a held order. Enter CDLR as a remark if appropriate.
MANUAL IND	N/A	C	This field is not contained in LSOG 3. Per Qwest: MANUAL IND must be set to Y if the REMARKS field contains information that must be processed manually.
PENDING ORDER	N/A	O	This field is not contained in LSOG 3. No explanation of this field is given in the I-Chart.
HUNTING SECTION			
LOCNUM	R	N	



Field Name	LSOG 3	Qwest Says	Comments
HNUM	R	N	
CB	C	N	Per LSOG 3: Required when the REQTYP field is "P" and the HA field is populated, otherwise optional.
HA	C	N	Per LSOG 3: Required when the HTQTY field is populated, otherwise optional.
HID	O	N	
TIP	O	N	
TLI	C	N	Per LSOG 3: Required when the TIP field is populated, otherwise optional.
HNTYP	C	N	Per LSOG 3: Required when the HA field is populated, otherwise optional.
HLA	C	N	Per LSOG 3: Required when the HTQTY field is populated, otherwise optional.
HTSEQ	C	N	Per LSOG 3: Required when the HLA field is populated, otherwise optional.
NOTYP	C	N	Per LSOG 3: Required when the HLA field is populated, otherwise optional.
HTN	C	N	Per LSOG 3: Required when the HLA field is populated, otherwise optional.