

# Open Product/Process CR Detail

Report Line Number 1

| CR #       | Title                                                                                                                                                             | Date<br>Current Status | Organization       | Area Impacted                              | Products Impacted |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|--------------------|--------------------------------------------|-------------------|
| PC120301-4 | Implement a process to insure Qwest adheres to ANSI Standard T1.102 and ANSI T1.104 for setting signal and loss level standards for DS3 cable length limitations. | Completed<br>4/17/2002 | Wholesale ProdProc | Ordering, Maintenance/Repair, Provisioning | Collocation       |

**Director:** Perko, Gale

**Originator:** Stichter, Kathy

**Owner:** Wycoff, William

**CR PM:** Martin, Ric

**Originator Company Name:** Eschelon

## Description Of Change

Qwest currently states that it will meet ANSI standards without defining how it will meet the standards. Qwest should commit to engineering a complete DS3 Circuit when the request for a CLEC to CLEC cross-connect is made through the Qwest ICDF. Eschelon asks that Qwest adhere to ANSI Standard T1.102 and ANSI T1.104 with the additional lineal footage, ICDF connections, connectors and DSX interfaces taken into consideration. Without such a standard, CLECs are not assured a clear DS3 signal. If it is discovered that a signal level of no less than -4.7 dBm is present on a single unbalanced coaxial line (20 Ga/26 Ga), Qwest will notify the CLEC that amplification is required and will appropriately amplify the signal to meet ANSI Standards (as identified in ANSI Standard T1.102 and ANSI T1.104). Additionally, Eschelon requires that the two-unbalanced coaxial cable paths are within  $\pm .5$  dBm of one another. Otherwise, corrective action is necessary to meet this requirement.

Example #1 (Qwest needs to engineer the entire path (CLEC to CLEC) when the cross-connect is made through the Qwest ICDF). A CLEC to CLEC cross-connect was made with a third party in a Central Office. When the entire lineal footage of the DS3 Circuit was taken into consideration, the DS3 signal was not within ANSI loss level standards. Qwest contends that it will engineer the DS3 cable/signal from the Qwest ICDF to each separate Co-Provider but that it is not responsible for the complete circuit, although all elements involved. (i.e. BNC connectors, ICDF Cross-connect points, and DSX interfaces) contribute significantly to overall signal loss. Since Qwest provisions all three segments of the circuit, Qwest must provision the complete circuit in such a way that meets the ANSI standard.

## Status History

11/30/01 - CR received from Eschelon.  
 12/03/01 - E-Mail Acknowledgement issued to Eschelon Telecommunications  
 12/04/01 - CR posted to Qwest Wholesale Markets CMP Web page  
 12/07/01 - Eschelon contacted to schedule clarification call.  
 12/12/01 - CMP Meeting - Eschelon presented CR to CLEC Community.  
 12/14/01 - Clarification call conducted with Eschelon. Meeting minutes transmitted to Eschelon.  
 01/16/02 - CMP Meeting - Qwest conducted CLEC community clarification discussion. Eschelon requested that Qwest contact Paul Hauser, Eschelon to discuss additional technical issues regarding the CR. Eschelon asked that Michael Zulevic, COVAD be invited to the conference call. CLEC community agreed to change CR Status to "Evaluation."  
 01/18/02 - Follow-up clarification call conducted with Eschelon and Covad in attendance; minutes transmitted to Eschelon and Covad.  
 02/08/02 - Qwest draft response (dated 02/06/02) posted in CMP database & transmitted to Eschelon.  
 02/20/02 - CMP Meeting - Qwest presented the "Draft" response. CR status changed to "CLCE Test." Meeting discussions will be set forth in the Product/Process Draft Meeting Minutes contained in the Product/Process CMP Meeting Distribution Package (03/20/02).  
 02/22/02 - Qwest "Formal" response (dated 02/06/02) posted in CMP data base.  
 03/20/02 - CMP Meeting - Eschelon requested that the CR remain in CLEC Test for another month until they have a chance to perform a test.  
 04/17/02 - CMP Meeting - Meeting discussions will be set forth in the Product/Process Meeting Minutes to be posted on the CMP Web site. It was agreed that the CR could be closed.

## Project Meetings

8:00 p.m. (MDT) / Friday 18th January 2002  
 Conference Call  
 TEL: 877.564.8688  
 CODE: 6265401  
 PC120301-4 "Implement a process to insure Qwest adheres to ANSI Standard T1.102 and ANSI T1.104 for setting signal and loss level standards for DS3 cable length limitations." [Follow-up]  
 Kathleen Stichter, Eschelon  
 Paul Hanser, Eschelon

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Michael Zulevic, Covad  
Bill Wycoff, Qwest  
Jeff Ferra, Qwest  
Laurel Burke, Qwest  
Peter Wirth, Qwest

1.0 Introduction of Attendees  
Attendees introduced.

2.0 Review Requested (Description of) Change {review long description from change request, confirm with all parties there is agreement on the change requested}

Clarification was obtained from Eschelon & Covad for the subject CR. The following items were discussed:

1) Paul Hanser, Eschelon identified two (2) types of CLEC to CLEC connections in Qwest CO facilities: 1) direct connection (i.e., no routing through Qwest ICDF; and 2) connection through Qwest ICDF(s). Direct connections, in general, exhibit fewer problems and mainly concern cable lengths and re-generation concerns. Connections routed through a Qwest ICDF(s) usually involve larger Qwest CO facilities that may involve multiple floors and require more detailed assessments of circuit cable lengths, regeneration, ICDF connection losses, and other connector losses (i.e., BNC). Eschelon expressed concern that proper engineering and testing of the end to end portion of the Qwest furnished circuit (i.e., cabling, regeneration (if required), all related connections) need to be conducted properly prior to "throwing the cables over the fence into the co-location areas."

2) Michael Zulevic, Covad concurred with Eschelon and also requested cable continuity testing and documentation for the Qwest provided portion of the circuit at the conclusion of the construction phase; along with possible collaborative testing during the test & turn-up phase.

3) William Wycoff, Qwest asked Eschelon what signal levels are being transmitted and received from their co-location areas. Paul Hanser, Eschelon indicated that maximum transmit and minimum receive are indicative of signal levels.

3.0 Confirm Areas & Products Impacted {read from change request, modify if needed}  
N/A. Discussed in previous clarification meeting.

4.0 Confirm Right Personnel Involved {ensure the Qwest SME can fully answer the CLEC request. Confirm whether anyone else within Qwest has been involved with this issue, or whether we need to bring anyone else in}  
N/A. Discussed in previous clarification meeting.

5.0 Identify/Confirm CLEC's Expectation {Identify specific deliverables from CLEC – what does Qwest have to do in order to close this CR? (in measureable terms ie provide a documented process, change a process to include training etc)}  
Qwest to generate draft response for CMP Monthly Product & Process Meeting.

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1:30 p.m. (MDT) / Friday 14th December 2001

Conference Call  
TEL: 877.564.8688  
CODE: 6265401

PC120301-4 "Implement a process to insure Qwest adheres to ANSI Standard T1.102 and ANSI T1.104 for setting signal and loss level standards for DS3 cable length limitations" Clarification Meeting

Kathleen Stichter, Eschelon  
Renee Lernes, Eschelon  
Bill Kent, Eschelon  
Bill Wycoff, Qwest  
Jeff Ferra, Qwest  
Laurel Burke, Qwest  
Peter Wirth, Qwest

1.0  Introduction of Attendees  
 Attendees introduced.

2.0  Review Requested (Description of) Change {review long description from change request, confirm with all parties there is agreement on the change requested}  
 Eschelon presented the CR. Eschelon requested that the completed circuit provided by Qwest for CLEC to CLEC cross connect through a Qwest Interconnect Distribution Frame (ICDF) provide a signal level of no less than -4.7 dBm (additional detail in CR). Qwest is responsible for completing the cross connect circuit.

3.0  Confirm Areas & Products Impacted {read from change request, modify if needed}  
 "Collocation" confirmed as appropriate. "Physical" & "ICDF Collocation" boxes under "Collocation" identified during conference call.

4.0  Confirm Right Personnel Involved {ensure the Qwest SME can fully answer the CLEC request. Confirm whether anyone else within Qwest has been involved with this issue, or whether we need to bring anyone else in}  
 Qwest & Eschelon confirmed appropriate personnel were in attendance.

5.0  Identify/Confirm CLEC's Expectation {Identify specific deliverables from CLEC – what does Qwest have to do in order to close this CR? (in measureable terms ie provide a documented process, change a process to include training etc)}

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Qwest to evaluate CR. During the January 2002 Monthly P&P CMP Meeting , a CLEC community clarification session will be conducted with Qwest providing potential options for addressing the CR.

6.0  Identify any Dependent Systems Change Requests {Note any connected CRs and the potential impacts}

None.

### ***Qwest Response***

February 6, 2002

Kathy Stichter  
ILEC Relations Manager  
Eschelon Telecom Inc

SUBJECT: Qwest Change Request Response - Number PC120301-4 (December 3, 2001) – Implement a process to insure Qwest adheres to ANSI Standard T1.102 and ANSI T1.104 for setting signal and loss level standards for DS3 cable length limitations.

Qwest has responsibility to engineer network elements within its Central Offices (CO) in an efficient manner. Qwest has engineering criteria establishing DSX-N cross-connect fields that are in compliance with ANSI Standard T1.102 for setting signal and loss levels using cable length limitations, signal source level control, and signal regeneration. It is unclear how ANSI Standard T1.104 relates to the signal level question.

To minimize equipment, the ICDF is not engineered as a DSX-N level point. According to Technical Publication 77386 on Interconnection and Collocation, Chapters 5 and 15, the engineering requirement is to design through the ICDF to a DSX-N point when accessing unbundled offerings such as Unbundled Loops, Unbundled Dedicated Interoffice Transport, etc. This principle was established circa 1996 in FCC Docket 93-192.

The CLEC-to-CLEC Cross-Connection (COCC-X) offering is defined as the CLEC's capability to order a cross-connection from its Collocation in a Qwest Premises to its non-adjacent Collocation space or to another CLEC's Collocation within the same Qwest Premises at the Interconnection Distribution Frame (ICDF). This is accomplished by the use of the CLEC's Connecting Facility Assignment (CFA) terminations residing at the same ICDF and at the same service rate level.

Qwest is providing clarification for the following activities to address this request:

- CLEC ordering procedure for cross-connection;
- Qwest engineering data exchange with the requesting CLEC(s) for the cross-connection;
- CLEC to CLEC cross connection within the Qwest Central Office (CO);
- ICDF connections, and regeneration installation; and
- Verification testing.

#### CLEC Ordering Procedure

CLEC to CLEC cross-connections are ordered through the Qwest EXACT-PC system using the Access Service Request (ASR) form. This form is used for ordering Access and Local Network Interconnection Services. Qwest processes the ASR and determines a ready for service (RFS) date for the connection.

The requesting CLEC(s) is required to assess the need for signal regeneration prior to submittal of the completed ASR form. An engineering data exchange can be arranged through the Qwest Wholesale Collocation Project Manager (<http://www.uswest.com/wholesale/clecs/escalations.html>)

#### Qwest Engineering Data exchange with requesting CLEC(s)

The requesting CLEC(s) are required to know the cable types and lengths from their equipment to the ICDF(s) in order to assess the need for signal regeneration. The need for regeneration may arise when the distances between the CLEC's collocation equipment exceeds twice the cable length limitation criteria (table) when connected through the ICDF. The total cable length limitation from signal source to sink, without a DSX-N point is nominally, two times the shown length.

Qwest will provide the requesting CLEC(s) the type and length of cable between their physical space and the ICDF. Each CLEC uses this information to design the span between their equipment. The design is done to determine any need for regeneration. Regeneration is typically at the ICDF.

[Table in Supplemental Information]

Given the probability of having cable lengths that total less than the maximums, it has been and is the CLEC's responsibility to set any transmit attenuators in their equipment. Given the possibility that total cable lengths from the Collocation spaces through the ICDF are longer

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than the table allows, there is the opportunity for a CLEC to request regeneration by using a specific Network Channel Interface (NCI) code on their order. The NCI is chosen from Table 6-5 of Tech Pub 77386 using one that calls for regeneration. CLEC to CLEC cross connects occur between two CLECs within a Qwest CO and use jumper cables at the ICDF to complete the link. There is no assured DSX-N level point in the circuit.

Figure A below illustrates the situation where there is a single, ICDF cross-connect to complete a CLEC-to CLEC circuit that needs a regenerator. There is no DSX-N level point assured in this circuit.

[Figure A in Supplemental Information]

Figure A: Single ICDF Connection with Regeneration

ICDF connections and regeneration installation

Qwest, following receipt of the ASR will perform ICDF connections and regeneration functions. Equipment additions for regeneration (if no spares are available) will be initiated. Qwest completes these activities and conducts verification testing.

Verification testing

Verification testing of the cross-connection will be conducted to assure compliance with the ASR. Cooperative testing on circuits will be conducted with Qwest and requesting CLEC(s) technicians.

Qwest will coordinate with the requesting CLEC and schedule the testing of the completed cabling, ICDF connections and regeneration. CLEC(s) will be responsible to terminate cabling into their respective collocation equipment prior to the testing effort.

Although circuit testing is the responsibility of the CLECs, Qwest will provide technician support of CLEC to CLEC circuit testing efforts and provide trouble-shooting support, as necessary to successfully complete an ASR. Such testing shall confirm that ASR ordered circuits perform to service objectives in ANSI Standard T1.510, Network Performance Parameters for Dedicated Digital Services for Rates Up to and Including DS3. Clauses 8.2 and 8.3 describe DS1 and DS3 testing, respectively.

Sincerely,

William R. Wycoff  
Services Planning  
Qwest

CC: Bill Campbell, Qwest  
Barry Orrel, Qwest  
Gale Perko, Qwest  
Mary Retka, Qwest

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