

**BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

**In the Matter of the Petition of Qwest
Corporation to Initiate a Mass-Market
Switching and Dedicated Transport Case
Pursuant to the Triennial Review Order**

Docket No. UT-033044

**DIRECT TESTIMONY OF
DENNIS L. PAPPAS
ON BEHALF OF
QWEST CORPORATION**

DECEMBER 22, 2003

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I. IDENTIFICATION OF WITNESS

Q. PLEASE STATE YOUR NAME, EMPLOYER AND BUSINESS ADDRESS.

A. My name is Dennis Pappas. I am employed by Qwest Corporation as a Director in the Technical-Regulatory Group of the Local Network Organization. My business address is 700 W. Mineral Avenue, Room MNH19.15, Littleton, Colorado 80120.

Q. PLEASE DESCRIBE YOUR WORK EXPERIENCE, TECHNICAL TRAINING, AND PRESENT RESPONSIBILITIES.

A. I have worked in the telecommunications industry for twenty-five years. Between 1996 and 2001, I was directly associated with Interconnection and Wholesale Product Marketing. My first responsibilities in this area were as State Interconnection Manager for Colorado and Wyoming, a position that involved project management of all collocation activity. I later became a team leader for the Unbundled Loop and Collocation product teams. Subsequently, I became the Director of the Wholesale Product Marketing team and, during that time, led multiple groups in developing new products and processes for provisioning interconnection products and services for competitive local exchange carriers ("CLECs"). Subsequent to that assignment, I was the General Manager for Qwest Wholesale Emerging Diversified Markets and had responsibility for approximately 75 CLEC accounts. In late 2000, I left Qwest to accept a position as Vice President of Services at TESS Communications, which was a facilities-based CLEC in Colorado and Arizona that provided a suite of services, including

1 telecommunications, data, long distance and CATV to approximately 1,200 end
2 users. In early 2001, I assumed the role of President of TESS with responsibility
3 for the day-to-day operations of the company. I left TESS that same year and
4 returned to Qwest, where I again worked on the unbundled loop product team and
5 began participating as a witness in a number of section 271 workshops. In
6 December 2001, I accepted my current position as Director in the Technical
7 Regulatory Group, Local Network Organization.

8 Prior to the years working in the area of interconnection, I held multiple titles and
9 positions requiring expertise in network operations, including, for example, Staff
10 Manager and Regional Service Manager in the Local Networks Organization. In
11 the 14 years prior to those assignments, I worked in Network as an Installation and
12 Maintenance Technician (I&M Technician) and an Outside Plant Technician. I
13 have my Bachelor's degree in Business Administration and a Masters in
14 Telecommunications from the University of Denver.

15 II. INTRODUCTION

16 Q. DO YOU HAVE AN OPENING STATEMENT?

17 A. Yes I do. In its Triennial Review Order ("TRO"), the FCC states, at paragraph 459,
18 "We find on a national basis, that competing carriers are impaired without access to
19 unbundled local circuit switching for mass market customers. This finding is based
20 on evidence in our record regarding the economic and operational barriers caused
21 by the cut over process." Throughout the TRO, the FCC identifies three distinct

1 areas as constituting potential operational impairments: (1) loop provisioning; (2)
2 collocation availability; and (3) the ability to obtain CLEC to CLEC cross
3 connects.¹ On the first point, loop provisioning, Qwest and the CLEC community
4 are engaged in a multi-state forum to consider a Batch Hot Cut Process (“BHCP”).
5 Given that this forum will address this topic, and a separate filing schedule exists
6 for testimony associated with the BHCP, the remainder of my Direct Testimony
7 will consider the remaining two potential operational impairments – collocation and
8 CLEC to CLEC cross connects.

9 As to collocation availability, as of September 30, 2003 CLECs already had 503
10 collocations in the state of Washington. In fact, as of December 12, 2003 there is
11 only one office that does not currently have space available for collocation in
12 Washington, out of 112 offices.² In offices where physical collocation in is not an
13 option at this time, the CLEC would have the ability to order shared,
14 interconnection distribution frame (“ICDF”), or virtual collocation.

15 Moreover, Qwest’s audited performance data shows that Qwest has been providing
16 CLECs with collocation throughout the state of Washington in a timely manner.
17 Qwest also provides CLECs with the ability to obtain prompt CLEC to CLEC cross
18 connects. Qwest’s Washington SGAT provides any carrier that chooses to opt in
19 with the ability to obtain such cross connects, and to either ask Qwest to install the

¹ TRO at ¶456.

1 cross connects on the CLEC's behalf, or for the CLEC to install them themselves.
2 Qwest has not had any complaints in Washington or anywhere else in its region on
3 its process for making CLEC to CLEC cross connects available.
4 My testimony therefore shows that neither collocation nor CLEC to CLEC cross
5 connects create an operational impairment for CLECs within the state of
6 Washington.

7 **III. COLLOCATION AVAILABILITY**

8 **Q. WHAT DID THE FCC STATE WITH RESPECT TO COLLOCATION**
9 **AVAILABILITY AS BEING A POTENTIAL OPERATIONAL**
10 **IMPAIRMENT?**

11 A. The FCC found that inadequate collocation availability, and the ILEC's poor
12 performance in making collocation available, could be potential operational
13 impairments to a carrier providing mass market switching.³ The FCC
14 promulgated a rule on the subject stating: "The state commission also shall
15 examine the role of potential operational barriers in determining whether to find
16 'no impairment' in a given market. Specifically, the state commission shall
17 examine whether the incumbent LEC's performance in provisioning loops,

² The central office with space constraint is the Steamboat Island CO, which is actually a remote CO homed off of the Olympia Whitehall CO. The space constraint is expected to be resolved in early 2004. See, <http://www.uswest.com/wholesale/notices/collo/spaceAvail.html>.

³ TRO at ¶¶454, 462, 462, 476 to 477, 507, 511 and 513.

1 difficulties in obtaining collocation space due to lack of space or delays in
2 provisioning by the incumbent LEC, or difficulties in obtaining cross-connects in
3 an incumbent LEC's wire center render entry uneconomic for requesting
4 telecommunications carriers in the absence of unbundled access to local circuit
5 switching. . . . The state commission . . . shall examine the role of potential
6 operational barriers in determining whether to find 'no impairment' in a given
7 market. Specifically the state commission shall examine whether . . . difficulties
8 in obtaining collocation space due to lack of space or delays in provisioning by
9 the incumbent LEC. . . . render entry uneconomic."⁴

10 **Q. DOES QWEST OFFER MANY COLLOCATION OPTIONS TO CLECs**
11 **THROUGHOUT THE STATE OF WASHINGTON?**

12 A. Yes. Many of the filed interconnection agreements in Washington contain
13 provisions concerning collocation. Qwest's approved Statement of General
14 Terms and Conditions ("SGAT") also contains detailed provisions around
15 collocation. See Exhibit DLP-2 which is a copy of Section 8 to Qwest's currently
16 approved Washington SGAT.⁵

17 The SGAT provides a CLEC with many different types of collocation including

⁴ 47 U.S.C. §51.319(D)(2)(B)(2).

⁵ For ease of reference to one contract, Qwest will refer to its SGAT; however, similar provisions are in many of the approved interconnection agreements as well.

1 but not limited to, caged physical collocation, cageless collocation, virtual
2 collocation, shared collocation, and ICDF collocation. Based on these terms,
3 which were negotiated and approved in the Qwest 271 process (Docket Nos. UT-
4 003022 and UT-003040), CLECs in Washington can order and obtain the type of
5 collocation it desires. CLECs can also obtain augments to existing collocation
6 arrangements. As stated above, as of September 30, 2003, CLECs had 503
7 collocations in the state of Washington alone

8 **Q. THE TRO EMPHASIZES COLLOCATION AVAILABILITY. DOES**
9 **QWEST HAVE TOOLS THAT CLECS CAN USE TO EVALUATE**
10 **COLLOCATION AVAILABILITY.**

11 A. Yes. Qwest offers multiple tools to the CLECs to evaluate whether each Qwest
12 wire center has collocation space availability. First, Qwest offers CLECs a Space
13 Availability Report that requires Qwest, within 10 calendar days of the request, to
14 provide the requesting CLEC with a report that includes the “available Collocation
15 space in a particular Qwest Premises.”⁶ Second, if Qwest denies a CLEC
16 collocation due to lack of space, a CLEC can tour the facility to verify that no space
17 exists to fulfil the collocation application exists.⁷ Finally, and most important,
18 Qwest maintains a publically available website that identifies all wire centers in
19 Washington (and other states) that have space constraints:

⁶ See Exhibit DLP-2 at §8.2.1.9.

⁷ *Id.* at §8.2.1.11.

1 Qwest will maintain a publicly available document, posted for viewing on
2 the Internet,
3 (www.qwest.com/wholesale/notification/collo/spaceavail.html) indicating
4 all Premises that are full, and will update this document within ten (10)
5 calendar days of the date at which a Premises runs out of physical space
6 and will update the document within ten (10) calendar days of the date
7 that space becomes available. In addition, the publicly available
8 document shall include, based on information Qwest develops through the
9 Space Availability Report process, the Reservation Process, or the
10 Feasibility Study Process:

- 11 a) Number of CLECs in queue at the Premises, if any;
12 b) Premises that have not been equipped with DS3 capability;
13 c) Estimated date for completion of power equipment additions
14 that will lift the restriction of Collocation at the Premises; and,
15 d) Address of the Remote Premises that have been inventoried for
16 Remote Collocation, and if the Remote Premises cannot
17 accommodate Collocation.

18 Notwithstanding the foregoing, the Qwest web site will list and update
19 within the ten (10) day period, all Wire Centers that are full, whether or
20 not there has been a CLEC requested Space Availability Report.⁸

21 **Q. GIVEN THESE SUBSTANTIAL TOOLS, IF CLECS WERE TO REQUEST**
22 **COLLOCATION IN ANY OF QWEST'S CENTRAL OFFICES IN**
23 **WASHINGTON TODAY, WOULD QWEST BE ABLE TO FULFILL**
24 **SUCH A REQUEST?**

25 A. Yes, Qwest would. Based on the publicly available website, there is only one
26 Qwest central office in Washington where collocation space is an issue. While in
27 Qwest's experience this rarely occurs, if physical space were to become an issue at
28 a later date, this does not mean that a CLEC requesting collocation in that office

⁸ SGAT at § 8.2.1.13

1 would be denied for another type of collocation. In most cases, Qwest can
2 provision ICDF, shared, or virtual collocation for the CLEC, even if there is no
3 space available for traditional caged or cageless physical collocation. These types
4 of collocation would allow the CLEC to obtain access to unbundled loops.

5 **Q. PLEASE EXPLAIN HOW MUCH COLLOCATION SPACE IS**
6 **REQUIRED WHEN A CLEC REQUESTS AN ICDF OR SHARED SPACE**
7 **COLLOCATION.**

8 A. When a CLEC requests ICDF collocation space from Qwest, the CLEC has its
9 choice of DS0, DS1, or DS3 terminations at the ICDF in order to access unbundled
10 network elements. ICDF collocation at a DS0 level requires the placement of
11 blocks at the ICDF in increments of 100 DS0 increments/circuits. As part of the
12 ordering process ICDF collocation requires the number of circuits on the
13 application form submitted to Qwest to determine the amount of space required. In
14 the case of shared space collocation, the requesting CLEC could either place the
15 same types of terminations (ICDF) or place transmission equipment (DS1, DS3, or
16 OCn) in the space of an existing CLEC's collocation space in order to interconnect
17 with the Qwest network and gain access to the end user's unbundled loops. Shared
18 space collocation is negotiated between CLECs and the use of the original CLEC's
19 terminations would have to be agreed to by the CLECs themselves.

20 At a 2-wire analog loop level, ICDF collocation can be ordered a single block at a
21 time with each block containing 100 terminations. However, before I define each

1 of the network components, let me explain the relationship each of these
2 components have with each other. The ICDF has both vertical and horizontal
3 terminations. The CLECs tie cables to their collocation terminate on the vertical
4 side of the frame while the tie cable connecting to the COSMIC or MDF connect to
5 the horizontal side of the ICDF. The blocks on either side of the ICDF will reside
6 in either a new or existing frame within a frame line up.

7 The block itself has 100 pair of pins on the front of the block and from these pins, a
8 Qwest COT or a CLEC representative can wire either to the horizontal side of the
9 ICDF, in order to gain access to an unbundled element, or to another CLEC
10 termination on the same ICDF for a CLEC to CLEC cross connect. Each block is
11 approximately 4 inches wide and 9 inches long; so, in a single frame, in a 8 foot
12 environment, 8 vertical blocks could be placed providing a total of 800 terminations
13 in a single vertical frame. To accommodate a request for ICDF collocation, Qwest
14 would establish terminations for the CLEC at the ICDF and then place a tie cable
15 between the requesting CLEC's block on the ICDF and the Qwest COSMIC™ or
16 main distribution frame ("MDF") in order to gain access to the unbundled loop at
17 either of these frames. The MDF or COSMIC frames contain the Outside Plant
18 ("OSP") terminations which are the feeder ("F1") facilities that extend from the
19 central office to the multitude of end user locations. Due to the size of the blocks
20 used to facilitate a request for ICDF collocation, Qwest does not expect that it
21 would ever have difficulty providing a CLEC with such a request especially in

1 Washington due to the fact that only one office of the 112 central offices in
2 Washington has some space constraints today.

3 In the case of shared space collocation, the requesting CLEC could either place the
4 same types (DS0, DS1, DS3, etc.) of terminations or place transmission equipment
5 in the space of an existing CLEC's collocation space in order to interconnect with
6 the Qwest network and gain access to the end user's unbundled loops.

7 **Q. THE TRO EMPHASIZES COLLOCATION PROVISIONING**
8 **PERFORMANCE. WHAT IS QWEST'S CURRENT INSTALLATION**
9 **PERFORMANCE FOR COLLOCATION WITHIN WASHINGTON AND**
10 **ACROSS THE REGION?**

11 A. Qwest has developed several Performance Indicator Definitions ("PIDs") that track
12 Qwest's performance in provisioning collocation performance. As part of the
13 Section 271 process, Liberty Consulting, an independent third party, audited these
14 PIDs and found they generate accurate and reliable performance data. Qwest's
15 current PID measurements for Washington show that Qwest meets 100 percent of
16 its collocations installation commitments irrespective of volume.⁹ The same is true
17 on a regional level and has been true for more than two years.¹⁰ Not only has
18 Qwest met these commitments, it usually provisions the collocations weeks ahead
19 of schedule. This is established because the average installation intervals in

⁹ See Exhibit DLP-3.

¹⁰ See Exhibit DLP-4.

1 Washington and regionally show average installation intervals between 62 and 75
2 days when the expected interval is 90 days.¹¹ In summary, Qwest's collocation
3 performance in Washington and regionally has been outstanding.

4 **Q. DOES QWEST PROVIDE TIMELY COLLOCATION FEASIBILITY**
5 **STUDIES TO THE CLECS?**

6 A. Yes. A feasibility study is a document that informs the CLEC whether Qwest has
7 the space and power requirements to fulfill the requirements set forth in an
8 individual CLEC collocation application. The SGAT requires completion of
9 feasibility studies within 10 days of the collocation application. Again, Qwest has
10 audited PIDs that track Qwest's performance in providing CLECs with feasibility
11 studies. In Washington, Qwest has provided the CLECs with timely feasibility
12 studies 100% of the time, in an average of between seven and 10 days.¹²
13 Regionally, Qwest again provides 100% of its feasibility studies on time in an
14 average of six to nine days.¹³ Again, this performance is excellent.

15 **Q. THE TRO EXPRESSED CONCERN ABOUT THE COST OF**
16 **COLLOCATION. ARE QWEST'S CURRENT COLLOCATION COSTS**
17 **TELRIC COMPLIANT?**

¹¹ See Exhibits DLP-3 and DLP-4.

¹² See Exhibit DLP-3.

¹³ See Exhibit DLP-4.

1 A. Yes. In Washington, the Commission has set the rates for collocation in cost
2 docket and determined that Qwest's current rates for collocation are TELRIC
3 compliant.

4 **Q. CAN YOU PLEASE SUMMARIZE YOUR TESTIMONY ON THE**
5 **AVAILABILITY OF COLLOCATION IN WASHINGTON?**

6 A. Yes. Qwest has demonstrated that it offers many different types of collocation to
7 CLECs in Washington. Irrespective of the type of collocation desired, Qwest's
8 publicly available website shows that every wire center in Washington but one has
9 space available. Moreover, it is not anticipated that there will be space concerns at
10 any time in the foreseeable future. Finally, irrespective of the type of collocation
11 ordered, Qwest routinely provisions the collocation on time, and often well ahead
12 of schedule. Collocation concerns do not create any arguable operational
13 impairment for CLECs in the state of Washington.

14 **IV. CLEC TO CLEC CROSS CONNECTIONS**

15 **Q. WHAT DID THE FCC STATE WITH RESPECT TO CLEC TO CLEC**
16 **CROSS CONNECTS AS BEING A POTENTIAL OPERATIONAL**
17 **IMPAIRMENT?**

18 A. The FCC stated that state commissions "must consider whether incumbent LEC
19 performance in provisioning loops, difficulties in obtaining collocation space due to
20 lack of space or delays in provisioning by the incumbent LEC, or difficulties in

1 obtaining cross connects in an incumbent's wire center, are making entry
2 uneconomic for competitive LECs."¹⁴

3 The FCC found that "an incumbent LEC's failure to provide cross connections
4 between facilities of two competitive LECs on a timely basis can also result in
5 impairment."¹⁵

6 **Q. DOES QWEST OFFER "CLEC TO CLEC CROSS CONNECTS" TO CLECS**
7 **IN WASHINGTON.**

8 A. Yes. Qwest's approved SGAT in Washington does contain provisions that provide
9 CLECs with the ability to obtain such connections.¹⁶

10 **Q. THE TERM CLEC TO CLEC CROSS CONNECTION WAS USED**
11 **EARLIER IN YOUR TESTIMONY. BRIEFLY DESCRIBE THIS**
12 **PRODUCT OFFERING.**

13 A. CLEC to CLEC connections enable two or more CLECs to connect their networks
14 with each other in a Qwest central office. Qwest's approved SGAT in the state of
15 Washington contains two different types of CLEC to CLEC connections. The first
16 type of request is a direct CLEC to CLEC connection where Qwest identifies the
17 path between two collocation spaces, typically CLEC 'A' relay rack to CLEC 'B'
18 relay rack. The second type of request is when the CLECs place a CLEC to CLEC
19 cross connect order for Qwest personnel to cross connect two collocation spaces.

¹⁴ TRO at ¶456

¹⁵ TRO at ¶478.

1 Both accomplish the same function, which is to give two different CLECs within
2 the same Qwest central office, the ability to exchange services by cross connecting
3 to each other. A common use for either of these CLEC to CLEC connections would
4 be in the scenario where one CLEC provides the voice service over an unbundled
5 loop to their end user while another provider, a Data LEC (“DLEC”) in the same
6 central office provides the same end user with some form of data service. The
7 connection between these two different CLECs could be facilitated via a CLEC to
8 CLEC connection – either Direct or Cross Connect. Additionally the CLECs can
9 run their own cross connect on the vertical side of the ICDF (where they have
10 access) without any notification to or assistance from Qwest to complete
11 connection between two collocation spaces.

12 **Q. HAVE CLECS ORDERED ANY CLEC TO CLEC DIRECT**
13 **CONNECTIONS OR CLEC TO CLEC CROSS CONNECTIONS IN**
14 **WASHINGTON?**

15 A. They have. To date in Washington, there are 17 direct connections and 42 CLEC to
16 CLEC cross connections. Obviously, this does not mean that these are the only
17 CLEC to CLEC cross connections that have been installed. This is because one of
18 the provisioning options mentioned above is to allow the CLEC to perform the
19 work for itself. Region wide, CLECs have asked that Qwest provision 195 CLEC
20 to CLEC cross connects.

¹⁶ See Exhibit DLP-2 at §§8.2.1.23 and 8.4.7

1 **Q. WOULD A CLEC HAVE TO NOTIFY QWEST OF THEIR INTENTION**
2 **TO RUN CLEC TO CLEC CROSS CONNECTIONS AT THE ICDF?**

3 A. No they would not. As stated earlier in my testimony, CLECs could exchange CFA
4 information at the ICDF and have one of their own technicians place the cross
5 connection, thereby facilitating a CLEC to CLEC cross connection without
6 assistance from or knowledge of Qwest.

7 **Q. HAS ANY CLEC ISSUED A COMPLAINT ABOUT QWEST'S PROCESS**
8 **FOR MAKING CLEC TO CLEC CROSS CONNECTS AVAILABLE.**

9 A. No. Qwest has no record of complaints about CLEC to CLEC cross connects
10 anywhere in the 14-state region. This is not surprising given that the procedure for
11 making CLEC to CLEC cross connects available was negotiated with the CLECs in
12 the Section 271 process. As stated above, the process gives CLECs the opportunity
13 to perform this work for themselves. As such, the success of the product usually is
14 placed squarely on the CLECs.

15 **Q. CAN YOU PLEASE SUMMARIZE YOUR TESTIMONY ON THE**
16 **AVAILABILITY OF CLEC TO CLEC CROSS CONNECTS IN**
17 **WASHINGTON?**

18 A. Yes. Qwest has demonstrated that it offers two different types of CLEC to CLEC
19 cross connects to CLECs in Washington. In both instances, CLECs have the ability
20 to and usually perform the work for themselves. The process for making these
21 connections available was created with CLEC input during the section 271 process.

1 To date, no CLEC has issued any type of complaint about the process. CLEC to
2 CLEC cross connect concerns do not create any arguable operational impairment
3 for CLECs in the state of Washington.

4 **V. CONCLUSION**

5 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

6 A. Yes it does.