# BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

IN THE MATTER OF THE CONTINUED	)	
COSTING AND PRICING OF UNBUNDLED NETWORK ELEMENTS	)	DOCKET NO. UT-003013
	)	Part D
	)	
	)	

DIRECT TESTIMONY OF

KATHRYN MALONE

**QWEST CORPORATION** 

**NOVEMBER 7, 2001** 

# TABLE OF CONTENTS

I.	IDENTIFICATION OF WITNESS	1
II.	PURPOSE	2
III.	CUSTOMER TRANSFER CHARGE (CTC)	2
IV.	UNBUNDLED NETWORK ELEMENTS	3
A	. Local Tandem Switching	3
В	. Local Switching	4
	1) Vertical Switch Features	7
	2) Trunk Ports	8
C	. Customized Routing	9
D	. Access to Common Channel Signaling (SS7)	10
E.	Advanced Intelligent Network (AIN)	12
F	. 800 Database, Line Information Database (LIDB) and Calling Name Database	
	(CNAM)	14
G	. UNE Combinations	14
Н	. Unbundled Packet Switching	16

# I. IDENTIFICATION OF WITNESS

1

19

2	Q.	PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND CURRENT POSITION.
3	A.	My name is Kathryn Malone. I am employed by Qwest as a Manager -Wholesale
4		Markets. My business address is 1801 California Street, Suite 2360, Denver, Colorado,
5		80202.
6	Q.	PLEASE STATE YOUR WORK EXPERIENCE AND PRESENT RESPONSIBILITIES.
7	A.	I began my career with Qwest (formerly U S WEST) in 1964 in the Denver Operator
8		Services Department. In 1968, I joined the Network Facilities Department as a
9		technical assistant. From 1968 to 1978, I held various positions responsible for
10		coordination and design of Outside Plant Facilities. In 1978, I was promoted to Budget
11		Manager and was responsible for preparation and forecasting of both the construction
12		and maintenance budgets in Arizona, Colorado, Montana and Wyoming.
13		
14		In May 1984, after the divestiture of the Bell System, I accepted a position in the
15		Revenue Requirements Department. In that capacity, I was responsible for cost
16		settlements with local exchange carriers. My responsibilities included analysis of cost
17		separation studies. In January 1990, I was promoted to Senior Access Manager with
18		responsibility for developing and negotiating contractual arrangements for toll access

compensation with local exchange carriers. I accepted my current position as Manager

- 1 -Wholesale Markets in 1998, and am responsible for Wholesale advocacy surrounding
- 2 interconnection and resale of products and services.

#### 3 II. PURPOSE

#### 4 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

5

6

7

8

9

10

11

12

13

14

15

16

17

A. My testimony describes various services that Qwest provides to Competitive Local Exchange Carriers (CLECs). I will describe and define the applicable elements for Customer Transfer Charge (CTC), Local Tandem Switching, Local Switching, Customized Routing, Common Channel Signaling (SS7), Advanced Intelligent Network (AIN), UNE Combinations, and Unbundled Packet Switching, along with their pricing structure, which include recurring and nonrecurring charges, as appropriate. Charges associated with each service addressed in my testimony are listed in Exhibit TKM-28, which is attached to the testimony of Ms. Teresa Million. I also address the fact that the existing rates previously approved for 800 Database, Line Information Database and Calling Name Database are not being readdressed in this proceeding. It is not the purpose of my testimony to analyze or determine the amount of the rates listed in TKM-28.

## III. CUSTOMER TRANSFER CHARGE (CTC)

#### 18 Q. WHAT IS QWEST'S PROPOSAL FOR APPLICATION OF THE CUSTOMER

19 TRANSFER CHARGE?

- A. Customer Transfer Charge ("CTC") should apply when an end-user customer's Plain

  Old Telephone Service (POTS), Private Line Transport Service, or Advanced

  Communication Service is transferred from Qwest to a Competitive Local Exchange

  Carrier (CLEC) on a resold basis. A separate nonrecurring CTC is applicable for each

  service transferred to a CLEC. The nonrecurring charge applicable to these services is

  listed in Exhibit TKM-28 of Ms. Million's testimony.
- 7~ Q. Please distinguish the terms "pots" and "advanced
- 8 COMMUNICATIONS SERVICES."

11

9 A. POTS is basic residential or business service. Advanced Communications Services
 10 include Frame Relay, ATM Cell Relay and Transparent LAN Service.

# IV. UNBUNDLED NETWORK ELEMENTS

#### 12 A. LOCAL TANDEM SWITCHING

- 13 Q. PLEASE DESCRIBE LOCAL TANDEM SWITCHING.
- A. The unbundled local tandem switching element includes the facilities connecting the trunk distribution frames to the tandem switch and all functions of the switch itself, including those facilities that establish a temporary transmission path between two other switches. The local tandem switching elements also include the functions that are centralized in local tandem switches rather than end office switches, such as call recording, the routing of calls to operator services, and signaling conversion features.

#### Q. WHAT RECURRING CHARGES APPLY TO UNBUNDLED LOCAL TANDEM

2 **SWITCHING?** 

1

- 3 A. Local tandem switching is billed on a per-minute-of-use basis in accordance with the
- 4 rates previously ordered by the Commission in Docket Nos. UT-960369, et al.

#### 5 Q. WHAT NONRECURRING CHARGES APPLY TO UNBUNDLED LOCAL TANDEM

- 6 **SWITCHING?**
- 7 A. If the CLEC chooses to purchase use of a DS1 trunk port, terminating at a DS1
- 8 demarcation point on a local tandem switch, the CLEC incurs a nonrecurring charge.
- 9 Each DS1 tandem trunk port includes a subset of 24 DS0 channels capable of
- supporting local message type traffic and incurs a nonrecurring charge to establish both
- the first and each additional trunk group member. Please see Exhibit TKM-28 for those
- rates.

#### B. LOCAL SWITCHING

- 14 Q. PLEASE DESCRIBE UNBUNDLED LOCAL SWITCHING.
- 15 A. Access to unbundled local switching encompasses line-side and trunk-side facilities,
- plus the features, functions and capabilities of the switch. The features, functions, and
- capabilities of the switch include the basic switching function, as well as the same basic
- capabilities that are available to Qwest's end-user customers. Unbundled local
- switching also includes access to vertical features that the switch is capable of
- providing, as well as any technically feasible customized routing functions.
- 21 **Q.** PLEASE DESCRIBE AN ANALOG LINE PORT.

- A. There are two types of analog line ports, a basic analog line port and a premium analog line port. The basic analog line port includes basic vertical switch features at no extra charge, pursuant to a previous order of the Commission. In addition to the basic vertical switch features, the premium analog line port provides Centrex Management System (CMS), Conference Call Meet Me, Conference Calling Preset, and Conference Calling Station Dial.
- 7 Q. PLEASE DESCRIBE A DIGITAL LINE PORT (SUPPORTING BRI ISDN).
- 8 Basic Rate Interface Integrated Services Digital Network (BRI-ISDN) is a digital A. 9 architecture that provides integrated voice and data capability on a 2-wire loop. A BRI-10 ISDN Port is a Digital 2B+D (2 Bearer Channels for voice or data and 1 Delta Channel 11 for signaling and D Channel Packet) line-side switch connection with BRI-ISDN voice 12 and data basic elements. Similar to the analog line port, the digital line port includes 13 vertical switch features listed in Exhibit TKM-28. In addition to the basic vertical 14 switched features, the premium digital line port provides Centrex Management System, 15 Conference Calling - Meet Me, Conference Calling - Preset, and Conference Calling -16 Station Dial.

## 17 Q. PLEASE DESCRIBE CENTREX MANAGEMENT SYSTEM.

A. Centrex Management System (CSM) is a computer software program that provides the customer access to their Centrex database for the purpose of general database inquiry, move, add, delete, and change of station lines and generate Basic Management Reports without having service orders issued.

#### 1 Q. PLEASE DESCRIBE CONFERENCE CALLING - MEET ME.

- 2 A. Conference Calling Meet Me provides the ability to establish, at a predetermined
- 3 time, a conference of up to 30 members. The conferees can be internal or external to
- 4 the Customer/Business Group, but one conference member must always be calling from
- 5 a Centrex Plus Station or from a trunk group in the same group. When a Centrex Plus
- 6 Station customer is at an external location they must call in to a specified conference
- 7 bridge number required to access the Conference Calling- Meet Me which places
- 8 them in a trunk group in the same group.

## 9 Q. PLEASE DESCRIBE CONFERENCE CALLING - PRESET.

- 10 A. Conference Calling Preset establishes a Preset Conference when a Centrex Plus
- station user dials the directory number associated with the conference circuit. It can
- also be established by a POTS line or an incoming trunk if the customer desires. Up to
- 13 25 pre-selected stations are rung simultaneously. The member may be internal,
- external or a combination of both.

#### 15 Q. PLEASE DESCRIBE CONFERENCE CALLING - STATION DIAL.

- 16 A. Conference Calling Station Dial allows a customer to establish a conference call with
- 17 up to six conferees, including the originator. Conferees may be inside or outside the
- system.

#### 19 Q. DOES OWEST PROPOSE A RECURRING RATE FOR A DIGITAL LINE PORT?

20 A. Yes. The recurring rate is listed in Exhibit TKM-28.

		Page /
1	Q.	DOES QWEST PROPOSE NONRECURRING CHARGES FOR A DIGITAL LINE-SIDE
2		PORT?
3	A.	Yes. Qwest proposes nonrecurring charges for the first port and each additional port.
4		The nonrecurring charges are included in Exhibit TKM-28.
5		1) Vertical Switch Features
6	Q.	PLEASE DESCRIBE VERTICAL SWITCH FEATURES.
7	A.	Vertical switch features are software attributes of end office switches.
8	Q.	IS QWEST INCLUDING VERTICAL SWITCH FEATURES IN THIS DOCKET?
9	A.	Yes. Qwest is proposing a list of vertical features that are available to CLECs that
10		purchase a line side port.
11	Q.	DO THE INDIVIDUAL VERTICAL SWITCH FEATURES PROPOSED BY QWEST
12		HAVE A RECURRING CHARGE?
13	A.	Yes. As Ms. Million describes in her testimony, the unbundled line port has a recurring
14		charge to recover the cost of the port previously established by this Commission. Ms.
15		Million is proposing an additional element of recurring cost to recover the previously-
16		unaccounted for capitalized lease cost.
17	Q.	DO THE INDIVIDUAL VERTICAL SWITCH FEATURES PROPOSED BY QWEST
18		HAVE NONRECURRING CHARGES?
19	A.	Certain vertical switch features have a specific additional nonrecurring charge. Please
20		see Exhibit TKM-28 for the features list and the associated nonrecurring charges.

1		These nonrecurring charges recover the cost of additional programming to the switch
2		either by a complex translator or a Recent Change Memory Administration Center
3		(RCMAC) employee.
4	Q.	PLEASE DESCRIBE THE NONRECURRING VERTICAL SWITCH FEATURE
5		SUBSEQUENT ORDER CHARGE.
6	A.	A nonrecurring subsequent order charge applies to recover the cost of processing an
7		order when a CLEC requests additional vertical switch features to an existing port. The
8		charge is listed in Exhibit TKM-28.
9		2) Trunk Ports
10	Q.	WHAT TYPES OF TRUNK PORTS DOES QWEST OFFER?
11	A.	Qwest offers the following types of trunk ports:
12		<u>DS1 Local Message Trunk Port.</u> A DS1 trunk port is a DS1 trunk side switch port
13		that is extended to the trunk main distributing frame and is connected to the
14		demarcation point through an ITP. Each DS1 trunk port includes a subset of 24 DS0
15		channels capable of supporting local message type traffic.
16		Unbundled DS1 PRI ISDN Trunk Port (Supporting Direct Inward Dial/Direct
17		Outward Dial/Private Branch Exchange (DID/DOD/PBX)). A DS1 Trunk Port is a
18		DS1 trunk-side switch port terminated at a Digital Cross Connect Panel (DSX1) or
19		equivalent. Each DS1 trunk Port includes a subset of 24 DS0 channels capable of
20		supporting DID/DOD/PBX type traffic.

- 1 <u>DS0 Analog Trunk Port.</u> This port can be configured as Direct Inward Dial (DID),
- 2 Direct Outward Dial (DOD), and two-way. Because the configuration of the DS0
- Analog Trunk Port is unique to each CLEC it is available on an Individual Case Basis
- 4 (ICB) in order to meet the CLEC's specific requirements.
- 5 <u>DS3 and OCN Trunk Ports.</u> These may be ordered via the Special Request Process
- 6 (SRP).
- 7 Q. DOES QWEST PROPOSE RECURRING CHARGES FOR TRUNK PORTS?
- 8 A. Yes. Qwest proposes recurring charges for trunk ports as listed in Exhibit TKM-28.
- 9 Q. DOES QWEST PROPOSE NONRECURRING CHARGES FOR TRUNK PORTS?
- 10 A. Yes. Owest proposes the nonrecurring charges for trunk ports as listed in Exhibit
- 11 TKM-28. There is a nonrecurring charge for the digital trunk port, as well as
- 12 nonrecurring charges for the establishment of the first and each additional message
- trunk group member associated with the digital trunk port.
- 14 C. CUSTOMIZED ROUTING
- 15 Q. PLEASE DESCRIBE CUSTOMIZED ROUTING.
- 16 A. Customized routing enables the CLEC to direct particular classes of calls to specific
- outgoing trunks that will permit the CLEC to provide its own interoffice facilities or
- select among other providers of interoffice facilities, operator services and directory
- 19 assistance. Customized routing is a software function of a switch. Customized routing

1		may be ordered as an application with Resale, or Unbundled Local Switching and
2		UNE-P combination services.
3	Q.	WHAT CHARGES DOES QWEST PROPOSE FOR CUSTOMIZED ROUTING?
4	A.	Customized Routing applications are unique to each CLEC, however, Qwest proposes
5		that it assess nonrecurring charges based on the elements listed below.
6 7		<ul> <li>Development of Custom Line Class Code – Directory Assistance or Operator Services Routing Only, per Line Class Code;</li> </ul>
8 9		<ul> <li>Line Class Code(LCC) Installation per Switch – Directory Assistance or Operator Services Routing Only; and</li> </ul>
10 11		<ul> <li>All Other Custom Routing is designed to specifically meet the requirements of each CLEC and is charged on an individual case basis.</li> </ul>
12		
13		References to the three Customized Routing nonrecurring charges are included in
14		Exhibit TKM-28.
15		D. ACCESS TO COMMON CHANNEL SIGNALING (SS7)
16	Q.	PLEASE DESCRIBE COMMON CHANNEL SIGNALING/SIGNALING SYSTEM 7
17		(CCS/SS7).
18	A.	Common Channel Signaling/Signaling System 7 (SS7) provides multiple pieces of
19		signaling information via the SS7 network. This signaling information includes, but is
20		not limited to, specific information regarding calls made on associated Feature Group D
21		trunks and/or LIS trunks, Line Information Database (LIDB) data, Local Number
22		Portability (LNP), Custom Local Area Signaling Services (CLASS), 8XX set up
23		information, call set up information and transient messages.

1	Q.	WHAT RECURRING CHARGES APPLY TO THE SIGNALING RATE ELEMENTS IN
2		THIS PROCEEDING?
3	A.	Recurring rates include:
4		Integrated Services Digital Network User Port (ISUP) Signal Formulation Charge
5		- a set-up charge to formulate the ISUP message at a SS7 Service Point or Signaling
6		Service Point (SP/SSP). The charge is assessed on a per-terminating-call basis.
7		ISUP Signal Transport Charge – a set-up charge to transmit signaling data between
8		the local Signaling Test Point (STP) and an end office SP/SSP. The charge is assessed
9		on a per-terminating-call basis.
10		ISUP Signal Switching Charge – a per terminating call set-up request charge to
11		switch an SS7 message at the local STP. The charge is assessed on a per-terminating-
12		call basis.
13		TCAP (Transaction Capabilities Application Part) Signal Transport Charge – a
14		set-up charge to transmit signaling data between the local STP and the regional STP.
15		The charge is assessed on a per-terminating-call basis.
16		TCAP Signal Switching Charge - a set-up charge to switch an SS7 message at the
17		local STP. The charge is assessed on a per-terminating-call basis.
18		The recurring charges are listed in Exhibit TKM-28.
19	Q.	WHAT NONRECURRING CHARGES APPLY TO THE SIGNALING RATE
20		FI EMENTS IN THIS PROCEEDIG?

- 1 A. Nonrecurring charges for CCS/SS7 include:
- Common Channel Signaling Access Service (CCSAC) Options Activation
- 3 **charge for Basic translations**: (first activation and each additional activation, per
- 4 order (nonrecurring); and

8

- CCSAC Options Activation charge for Database translations: (first activation
- 6 and each additional activation, per order (nonrecurring)
- 7 The nonrecurring charges are listed in Exhibit TKM-28.

#### E. ADVANCED INTELLIGENT NETWORK (AIN)

- 9 Q. PLEASE DESCRIBE ADVANCED INTELLIGENT NETWORK (AIN).
- 10 A. Advanced Intelligent Network (AIN) is a call-related database platform that enables
- 11 telecommunication companies to provide customized incoming and out-going call
- management services. AIN is deployed, using SS7 architecture, to provide the
- framework to create and deploy new network services. AIN service is offered and
- available as an enhancement to a CLEC's SS7-capable network structure and operation
- of AIN Version 0.1-capable switches to offer new network-wide switching services
- without the need to deploy new capabilities within each end office switch.
- 17 Q. WHAT AIN SERVICES ARE AVAILABLE TO CLECS?
- 18 A. The following AIN services are offered and available as an enhancement to a CLEC's
- SS7 capable network structure and operation of AIN Version 0.1 capable switches.

1		AIN Customized Services (ACS) permits a CLEC to use Qwest's AIN service
2		application development process to develop new AIN services or features. Services
3		developed through the ACS process can either be implemented in Qwest's network or
4		provided to the CLEC for installation in its own network.
5		AIN Platform Access (APA) permits a CLEC to provide to its end-users any AIN
6		service that is deployed by that CLEC using the ACS process in a Qwest Service
7		Connection Point (SCP).
8		AIN Query Processing (AQP) TCAP queries are used to collect information from the
9		AIN database for use in call processing of the AIN based services above. The CLEC
10		launches a query from an AIN-capable switch over the SS7 network to the Qwest
11		Signal Transfer Point (STP). This query is directed to Qwest's SCP to collect data for
12		the response to the originating switch.
13	Q.	WHAT RECURRING CHARGES APPLY TO AIN SERVICES?
14	A.	There are two recurring charges that apply to AIN services.
15		The AIN Platform Access recurring charge is assessed on a monthly individual case
16		basis.
17		An AIN Query Processing recurring charge is developed on an individual case base
18		and is assessed on a per query basis.
19		References to the AIN ICB recurring charges are included in Exhibit TKM-28.

WHAT NONRECURRING CHARGES APPLY TO AIN SERVICES?

20

Q.

1	A.	The nonrecurring rates for AIN Customized Services (ACS) and AIN Platform Access
2		(APA) will be determined on an individual case basis. Charges will be assessed in
3		accordance with the specific service requested by the CLEC. References to the AIN
4		ICB nonrecurring charges are included in Exhibit TKM-28.
5	Q.	WHY IS INDIVIDUAL CASE BASIS PRICING APPROPRIATE FOR AIN SERVICES?
6	A.	Individual Case Basis pricing is appropriate for AIN services because the feature
7		functionality of the service is defined by the CLEC. The complexity of the features
8		unique to each CLEC's requirements defines how it is priced.
9		F. 800 DATABASE, LINE INFORMATION DATABASE (LIDB) AND CALLING NAME
10		DATABASE (CNAM)
11	Q.	IS QWEST PROPOSING NEW RATES FOR 800 DATABASE, LIDB AND CNAM IN
12		THIS PROCEEDING?
13	A.	No, Qwest is not proposing new rates at this time. The rate for a database query was
14		established in Docket Nos. UT-960369, et al. in the Fourteenth Supplemental Order,
15		paragraph 59. This rate is based on the Hatfield model. Qwest believes that the rate is
16		equally applicable to other database queries such as 800 Database, LIDB, and CNAM
17		and that the rate is still appropriate at this time.
18		G. UNE COMBINATIONS
19	Q.	WILL QWEST PROVIDE ACCESS TO UNE COMBINATIONS?
20	A.	Yes.

- 1 Q. PLEASE DEFINE UNBUNDLED NETWORK ELEMENT (UNE) COMBINATIONS.
- 2 A. A "UNE Combination" is a combination of unbundled network elements provided to
- 3 CLECs in a combined state. UNE combinations include UNE-Platform (UNE-P) and
- 4 Enhanced Extended Loops (EEL). Mr. Robert Kennedy's testimony discusses EEL.
- 5 Q. WHAT RECURRING CHARGES DOES QWEST PROPOSE FOR UNE-P
- 6 COMBINATIONS?
- 7 A. Recurring monthly charges for each of the unbundled network elements that combine to
- 8 form the UNE-P apply when a UNE-P Combination is ordered.
- 9 Q. WHAT NONRECURRING CHARGES DOES QWEST PROPOSE FOR UNE-P
- 10 COMBINATIONS?
- 11 A. Nonrecurring charges are based upon the type of UNE-P combination ordered and on
- whether provisioning requires conversion or new connection to occur. In many cases,
- the nonrecurring charges are also broken out by whether additional combinations are
- ordered at one time. The nonrecurring charges are listed in Exhibit TKM-28.
- 15 Q. WHAT UNE COMBINATIONS ARE AVAILABLE FROM QWEST?
- 16 A. UNE Combinations are available in the following standard products:
- 17 UNE-P in the following forms: 1) 1FR/1FB Plain Old Telephone Service (POTS); 2)
- 18 ISDN either Basic or Primary rate; 3) PBX Direct Inward dial (DID); 4) PBX Trunks;
- 19 5) Centrex; and 6)Loop Mux Combination (LMC) for DS0 and DS1 Loops and LMC
- 20 Multiplixer for DS0 to DS1 and DS3 to DS1.

If a CLEC desires access to a UNE Combination that Qwest does not currently combine, the CLEC may request access through the Bona Fide Request (BFR) process that is discussed by Mr. Robert Kennedy.

#### H. UNBUNDLED PACKET SWITCHING

#### 5 Q. PLEASE DESCRIBE UNBUNDLED PACKET SWITCHING.

1

2

3

4

- A. Unbundled Packet Switching provides the functionality of delivering packet data units
  via a virtual channel between a CLEC demarcation point and the Remote Terminal
  Digital Subscriber Line Access Multiplexer (DSLAM). Unbundled Packet Switching
  includes transport facilities between the DSLAM and the Qwest central office, DSLAM
  functionality and the ATM electronics necessary to generate a virtual channel.
- 11 Q. PLEASE EXPLAIN A VIRTUAL CHANNEL AND DSLAM FUNCTIONALITY.
- A. A virtual channel is a non-permanent channel that is set up to route data from one location to another (rather than a dedicated permanent channel that can be used by only one entity). In the case of packet switching, the channel is set up in advance of routing the packets and is in place throughout the transmission of the packets. This creates the

<sup>1</sup> In the UNE Remand Order, the FCC defined the functionality of the packet switching unbundled network element. *In the Matter of Implementation of the Local Competition Provision of the Telecommunications Act of 1996*, Third Report and Order and Fourth Further Notice of Proposed Rulemaking, CC 96-98, FCC 99-238 ¶302 (rel. Nov. 5, 1999) (UNE Remand Order). The FCC stated:

In packet-switched networks, messages between network users are divided into units, commonly referred to as packets, frames, or cells. These individual units are then routed between network users. The switches that provide this routing function are "packet switches," and the function of routing individual units based on address or other routing information contained in the units is "packet switching."

- virtual path over which all packets for this particular transmission will go. Once the packets are transmitted, the path is released.<sup>2</sup> DSLAM functionality provides the capability and programming that allows for both up-stream and down-stream data feeds and is responsible for routing the virtual channel to the appropriate place.
- 5 Q. WHAT PART OF THE LOOP CAN A CLEC ACCESS WITH UNBUNDLED PACKET
- 6 SWITCHING?
- 7 A. Unbundled Packet Switching only covers the feeder portion of the loop from the
- 8 CLEC demarcation point in the central office out through, and including, the Feeder
- 9 Distribution Interface (FDI).
- 10 Q. WHAT OPTIONS DOES A CLEC HAVE FOR PURCHASING ACCESS TO THE
- 11 DISTRIBUTION PORTION OF THE LOOP?
- 12 A. A CLEC may choose from the following three distribution loop options when
- requesting unbundled packet switching:
- A CLEC can purchase the distribution subloop and is able to provide both voice and data services to the end-user customer.
- Another CLEC (CLEC2) can purchase the entire UNE loop via UNE-P, and the CLEC purchasing UPS (CLEC1) can purchase distribution from CLEC2.
- For loops over which Qwest provides voice service, a CLEC can line-share, but only over the distribution subloop.

With packet switching, the packet switches place data units on inter-switch trunks only when there are active communications between network users. When users are not sending each other messages or packets, no bandwidth is used on the trunks between the packet switches.

In footnote 592 of the <u>UNE Remand Order</u>, the FCC noted that:

1	Q.	DOES QWEST HAVE AN OBLIGATION TO OFFER UNBUNDLED PACKET
2		SWITCHING?
3	A.	Yes, but only in a limited circumstance.
4	Q.	PLEASE DESCRIBE THE CIRCUMSTANCE IN WHICH QWEST HAS AN
5		OBLIGATION TO OFFER UNBUNDLED PACKET SWITCHING.
6	A.	Qwest is obligated to offer unbundled packet switching when the following four
7		conditions exist:
8		• Qwest has deployed digital loop carrier systems ("DLC");
9		• There are no spare copper loops available capable of supporting xDSL services;
10		• Qwest has placed a DSLAM for its own use in a remote Qwest premises but has not
11		permitted the CLEC to collocate its own DSLAM at the same remote Qwest
12		premises; and
13		<ul> <li>Qwest has deployed packet switching capability for its own use.</li> </ul>
14	Q.	WHAT AUTHORITY DOES QWEST RELY UPON FOR ITS ASSERTION THAT
15		ACCESS TO UNBUNDLED PACKET SWITCHING IS REQUIRED ONLY IN A
16		LIMITED CIRCUMSTANCE?
17	A.	In its UNE Remand Order, the FCC found "one limited exception to [its] decision to
18		decline to unbundle packet switching." The FCC then laid out its criteria: where the
19		ILEC has deployed digital loop carrier (DLC) systems, no spare copper facilities are
20		available, and the incumbent has placed its DSLAM in a remote terminal. The FCC
21		went on to find that the ILEC will not be required to offer access to unbundled packet

3 <u>UNE Remand Order</u> at ¶313.

\_

switching "if it permits a requesting carrier to collocate its DSLAM in the incumbent's remote terminal, on the same terms and conditions that apply to its own DSLAM."<sup>4</sup>

# 3 Q. PLEASE DESCRIBE THE RATE ELEMENTS AND ASSOCIATED CHARGES THAT

- 4 QWEST PROPOSES FOR PACKET SWITCHING.
- 5 A. Qwest proposes a recurring rate for the following rate elements:
- 6 (1) Unbundled Packet Switch Customer Channel. This rate element provides the costs
  7 of the remotely deployed DSLAM and the virtual channel from the DSLAM to the
  8 CLEC demarcation point in the central office containing the Qwest ATM switch at
  9 an uncommitted bit rate. The CLEC demarcation point is between the Intermediate
  10 Connecting Distribution Frame (ICDF) and the Digital Cross Connect (DSX).
- 12 (2) Remote DSLAM functionality at the remote terminal. In order to utilize this
  12 element, the CLEC would need to provide its own feeder plant via its own facilities
  13 or an unbundled sub-loop feeder element.
  - (3) Unbundled Packet Switch Interface Port at DS1 or DS3 level. This element provides the port that the CLEC utilizes to connect to its own ATM switching network to its customers who are served via the UPS customer channels.
  - Qwest proposes a non-recurring charge for the three distribution loop options I described earlier in my testimony. The proposed recurring rates and non-recurring charges may be found in Exhibit TKM-28, which is attached to Ms. Million's direct testimony.

14

15

16

17

18

19

20

<sup>4 &</sup>lt;u>Id</u>.

- 1 Q. DOES THIS CONCLUDE YOUR TESTIMONY?
- 2 A. Yes it does.