BEFORE THE PUBLIC UTILITY COMMISSION OF OREGON

ARB 747

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IN THE MATTER OF BEAVER CREEK

COMPANY'S PETITION FOR

ARBITRATION OF THE TERMS,

CONDITIONS AND PRICES FOR

INTERCONNECTION AND RELATED)

ARRANGEMENTS WITH QWEST

CORPORATION.

DIRECT TESTIMONY

OF

ANN MARIE CEDERBERG

FOR

QWEST CORPORATION

JULY 14, 2006

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1		I. IDENTIFICATION OF WITNESS
2		
3	Q.	PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND POSITION
4		WITH QWEST CORPORATION.
5	Α.	I am Ann Marie Cederberg. My business address is 700 W. Mineral Ave.,
6		Littleton Colorado. I am employed as a Director within the Network Policy
7		Group of the Public Policy Organization of Qwest Services Corporation. I
8		am testifying on behalf of Qwest Corporation ("Qwest").
9		
10	Q.	PLEASE DESCRIBE YOUR EDUCATION, BACKGROUND AND
11		EMPLOYMENT EXPERIENCE.
12	A .	I have been employed in the telecommunications industry for over 28
13		years. I began my career in 1978 with Western Electric, then The
14		Mountain States Telephone and Telegraph Company, Mountain Bell,
15		which later became part of U S WEST Communications, Inc., now Qwest
16		Communications. I have been employed within network operations,
17		currently known as the Local Network Organization for the last 11 years.
18		As an employee of the Local Network Organization, I had responsibility for
19		projects that were designed to ensure and maintain adequate levels of
20		network capacity within the central offices as well as outside plant. My
21		Local Network Organization responsibilities have provided me with an
22		extensive background and in-depth experience in all aspects of the public
23		switched telephone network. From January 1, 1997 until May 2002, I

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1	worked exclusively on the 2002 Olympic Winter Games in Salt Lake City,
2	building the telecommunications network for the Games.
3	In June 2002, I accepted a position within Qwest's Outside Plant ("OSP")
4	Planning Organization as the Planning Manager for Outstate South
5	Colorado. While I held this position I gained experience in the deployment
6	strategies for outside plant facilities to better meet customer needs. I also
7	managed the Land Development Group engineers and coordinators, the
8	OSP Construction and Engineering group, and the Maintenance, Locate
9	and Buried Service wire groups.
10	In May 2005, I accepted my current position as a Director within the
11	Network Policy Group, where I am responsible for ensuring compliance
12	with the Telecommunications Act of 1996 (the "Act") and state
13	regulations. My responsibilities include, but are not limited to, providing
14	representation before the Federal Communications Commission ("FCC")
15	and state commissions on issues relating to the network elements and
16	architectures for both wireline and wireless networks. I am a graduate of
17	the University of Denver and have attended over 3500 hours of continuing
18	education in telecommunications.
19	
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21	

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1		II. PURPOSE OF TESTIMONY
2		
3	Q.	WHAT IS THE PURPOSE OF YOUR TESTIMONY?
4	Α.	The purpose of my testimony is to present and explain Qwest's position in
5		response to call routing issues identified in Beaver Creek's request for
6		arbitration of an Interconnection Agreement between Beaver Creek
7		Cooperative Telephone Company, the CLEC and Qwest. Beaver Creek
8		identifies five issues remaining that the parties have been unable to
9		resolve through negotiations. My testimony will show that Qwest's
10		positions, in contrast to Beaver Creek's, are appropriate, technically
11		sound, and non-discriminatory.
12		Specifically, my testimony will address Issue 2, the routing and trunking
13		issues associated with an interconnection between Qwest and Beaver
14		Creek. The specific Interconnection Agreement sections I will discuss are
15		7.2.2.1.2, 7.2.2.2.1, 7.2.2.3.1, 7.2.2.9.3.1, 7.2.2.9.3.2, 7.2.2.9.6 and
16		7.2.2.9.6.1. Mr. Freeberg will address Issue 1 and Issues 3-5.
17		My testimony will show that Qwest seeks to meet the reasonable and
18		appropriate interconnection needs of Beaver Creek, while at the same
19		time ensuring that the services that Qwest will be providing comply with
20		the governing law on these issues. The positions and language proposed
21		by Qwest should be adopted by the Commission, as they are consistent
22		with state and federal rulings.

1	Q.	HOW WILL YOU REFLECT THE PARTIES' RESPECTIVE POSITIONS
2		ON DISPUTED INTERCONNECTION AGREEMENT TEXT?
3	Α.	I will show undisputed text in normal font. I will show Beaver Creek's
4		proposed deletions that Qwest disputes as strikethrough font. I will show
5		Beaver Creek's proposed additions that Qwest disputes in underline font.
6 7		III. ISSUE # 2: ROUTING AND TRUNKING
8		A. Nature of the disputes in issue #2
9		
10	Q.	PLEASE DESCRIBE THE NATURE OF THE DISAGREEMENT
11		BETWEEN QWEST AND BEAVER CREEK REGARDING ROUTING
12		AND TRUNKING ISSUES FOR THE INTERCONNECTION
13		AGREEMENT?
14	Α.	In general, Qwest's position maintains that the parties should combine on
15		the same trunks a variety of traffic types, including Qwest-originated local
16		and toll traffic, as well as third-party originated local and toll traffic for
17		which Qwest serves only as a transit carrier. Beaver Creek's proposed
18		contract language would require Qwest to separate onto individual trunk
19		groups each of these types of traffic for delivery to Beaver Creek. Beaver
20		Creek is under the mistaken impression that by separating these types of
21		traffic, it will be able to consistently identify and bill the originator of the
22		traffic and therefore eliminate what it considers phantom traffic. ¹

¹ Tom Freeberg will discuss phantom traffic in detail in his testimony.

1		It is Qwest's position that the combination of Qwest-originated local and
2		toll traffic, as well as third-party originated traffic for which Qwest acts as a
3		transit carrier, over a single trunk group is a more efficient use of trunking
4		facilities. Moreover, combining these types of traffic on a single trunk
5		group does not cause billing problems. Further, it would be extremely
6		costly and inefficient for Qwest to further separate traffic for delivery to
7		Beaver Creek. Some separation, while technically feasible, is costly and
8		not the key to providing Beaver Creek the billing information it seeks.
9		Ultimate separation, according to Beaver Creek's proposed contract
10		language, is not technically feasible at any cost.
11		
12		B. Network Architectures and Impacts
12 13		B. Network Architectures and Impacts
	Q.	B. Network Architectures and Impacts PLEASE GIVE A BRIEF OVERVIEW OF BEAVER CREEK'S
13	Q.	
13	Q. A.	PLEASE GIVE A BRIEF OVERVIEW OF BEAVER CREEK'S
13 14 15		PLEASE GIVE A BRIEF OVERVIEW OF BEAVER CREEK'S PROPOSED ARCHITECTURE.
13 14 15 16		PLEASE GIVE A BRIEF OVERVIEW OF BEAVER CREEK'S PROPOSED ARCHITECTURE. Beaver Creek is proposing that Qwest separate all traffic that comes to
13 14 15 16 17		PLEASE GIVE A BRIEF OVERVIEW OF BEAVER CREEK'S PROPOSED ARCHITECTURE. Beaver Creek is proposing that Qwest separate all traffic that comes to Beaver Creek from Qwest's switch onto local and toll trunk groups.
13 14 15 16 17 18		PLEASE GIVE A BRIEF OVERVIEW OF BEAVER CREEK'S PROPOSED ARCHITECTURE. Beaver Creek is proposing that Qwest separate all traffic that comes to Beaver Creek from Qwest's switch onto local and toll trunk groups. Beaver Creek proposes that toll traffic not be delivered over local/EAS
13 14 15 16 17 18 19		PLEASE GIVE A BRIEF OVERVIEW OF BEAVER CREEK'S PROPOSED ARCHITECTURE. Beaver Creek is proposing that Qwest separate all traffic that comes to Beaver Creek from Qwest's switch onto local and toll trunk groups. Beaver Creek proposes that toll traffic not be delivered over local/EAS trunks, that local/EAS traffic should not be delivered over toll trunks, and

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1		set of trunks, but they would still be required to separate local and toll
2		traffic (Petition at p. 5).
3	Q.	HOW DOES BEAVER CREEK'S PROPOSED ARCHITECTURE DIFFER
4		FROM QWEST'S INTERCONNECTION AGREEMENTS WITH OTHER
5		SIMILAR CARRIERS?
6	Α.	Beaver Creek's proposal calls for Qwest to change the trunking that it has
7		in place today, which carries commingled traffic from many other carriers
8		that Qwest has agreements with, and separate Beaver Creek's traffic out.
9		
10	Q.	WHAT IS TRANSIT TRAFFIC?
11	Α.	Transit traffic is the traffic that originates from a telecommunications
12		carrier's network, transits an intermediate network, and terminates on
13		another carrier's network. In other words, a transit network does not
14		originate or terminate a transiting call. A transit network provides a routing
15		function in the middle of a call origination and the call termination.
16		
17	Q.	DOES TRANSIT TRAFFIC INVOLVE TANDEM SWITCHING?
18	Α.	Yes it does. Once a call originates on a network and is routed to a
19		different network, the second network either terminates the call or routes
20		the call to yet a third network for termination. Since transit traffic passes
21		through a network that is different from the network of the carrier that
22		originated the call, the call must be switched on the second network (non-
23		originating) to reach yet a third network for termination.

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2	Q.	WHAT IS TANDEM SWITCHING?
3	Α.	Tandem switching occurs when a call is received by a switch over a trunk
4		and the call does not terminate at this receiving switch. Rather, the
5		receiving switch performs a switching function and routes the call over a
6		different trunk to another switch for termination. This is referred to in the
7		industry as a trunk-to-trunk connection, or tandem switching.
8		
9	Q.	HOW DOES THE TANDEM SWITCH KNOW WHERE TO ROUTE THE
10		CALL?
11	Α.	The tandem switch looks at the dialed digits received from the originating
12		switch and performs a search of the software routing tables for an exact
13		match of the dialed digits. If a match is found, the routing table will tell the
 14		operating software the routing information or instructions on how to route
15		the call. The call is then routed by the tandem switch to another switch or
16		network for termination. If there is not an exact match in the routing table
17		to the dialed digits, the call is not completed, with the reason given to the
18		originating end user.
19		

TERMINATION OR TANDEM SWITCHING? 21

HOW ARE THE DIALED DIGITS SENT TO A SWITCH FOR

1

Q.

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1	Α.	Industry standards require the dialed digits to be delivered as dialed digits
2		when Multi-Frequency ("MF") signaling is used or as a Called Party
3		Number when SS7 signaling is used.
4		
5	Q.	HOW CAN THE NETWORK THAT ORIGINATED THE CALL BE
6		IDENTIFIED?
7	Α.	There are at least three ways for third party networks to identify the
8		originating network of transit calls. They are direct trunking, use of
9		incoming call signaling information, or the use of Category 11 records. My
10		colleague Mr. Freeberg will discuss these options available to Beaver
11		Creek in his testimony.
12		
14		
12	Q.	WHY IS IT TECHNICALLY INFEASIBLE FOR QWEST TO
	Q.	WHY IS IT TECHNICALLY INFEASIBLE FOR QWEST TO SEPARATELY TRUNK LOCAL AND INTEREXCHANGE TRAFFIC?
13	Q. A.	
13 14		SEPARATELY TRUNK LOCAL AND INTEREXCHANGE TRAFFIC?
13 14 15		SEPARATELY TRUNK LOCAL AND INTEREXCHANGE TRAFFIC? Qwest has many Interconnection Agreements with other carriers IXCs,
13 14 15 16		SEPARATELY TRUNK LOCAL AND INTEREXCHANGE TRAFFIC? Qwest has many Interconnection Agreements with other carriers IXCs, CLECs, and Wireless Service Providers that deliver traffic to Qwest for
13 14 15 16 17		SEPARATELY TRUNK LOCAL AND INTEREXCHANGE TRAFFIC? Qwest has many Interconnection Agreements with other carriers IXCs, CLECs, and Wireless Service Providers that deliver traffic to Qwest for termination on its network and/or that will transit the Qwest network
13 14 15 16 17 18		SEPARATELY TRUNK LOCAL AND INTEREXCHANGE TRAFFIC? Qwest has many Interconnection Agreements with other carriers IXCs, CLECs, and Wireless Service Providers that deliver traffic to Qwest for termination on its network and/or that will transit the Qwest network destined for termination on yet another carrier's network. To
13 14 15 16 17 18 19		SEPARATELY TRUNK LOCAL AND INTEREXCHANGE TRAFFIC? Qwest has many Interconnection Agreements with other carriers IXCs, CLECs, and Wireless Service Providers that deliver traffic to Qwest for termination on its network and/or that will transit the Qwest network destined for termination on yet another carrier's network. To accommodate Beaver Creek, Qwest's tandem switches would have to
 13 14 15 16 17 18 19 20 		SEPARATELY TRUNK LOCAL AND INTEREXCHANGE TRAFFIC? Qwest has many Interconnection Agreements with other carriers IXCs, CLECs, and Wireless Service Providers that deliver traffic to Qwest for termination on its network and/or that will transit the Qwest network destined for termination on yet another carrier's network. To accommodate Beaver Creek, Qwest's tandem switches would have to process each and every incoming call from each and every carrier

1		several certain separate trunk groups. However, no software package is
2		currently available from any vendor to enable tandem switches to
3		determine with confidence whether a call is local or toll. Comparison of
4		calling versus called number is not sufficient to make the determination. ²
5		Knowing the identity of the originating carrier is not sufficient. 3 Only the
6		knowledge of where a call began versus where the called party
7		responded, "Hello", can a call be confidently jurisdictionalized. A tandem
8		switch simply cannot know this information during call processing.
9		
10	Q.	WHAT MIGHT BE THE IMPACT TO OTHER CARRIERS OF
11		REQUIRING QWEST TO PROVIDE BEAVER CREEK WITH SEPARATE
12		TRUNKING?
12 13	A.	TRUNKING? Based on the existing interconnection architecture arrangements with
	Α.	
13	Α.	Based on the existing interconnection architecture arrangements with
13 14	Α.	Based on the existing interconnection architecture arrangements with other carriers, even if Qwest were to provide feasible, but costly, separate
13 14 15	Α.	Based on the existing interconnection architecture arrangements with other carriers, even if Qwest were to provide feasible, but costly, separate trunking, the desired routing may not be possible without other
13 14 15 16	Α.	Based on the existing interconnection architecture arrangements with other carriers, even if Qwest were to provide feasible, but costly, separate trunking, the desired routing may not be possible without other interconnecting carriers routing their calls differently. In the absence of
13 14 15 16 17	Α.	Based on the existing interconnection architecture arrangements with other carriers, even if Qwest were to provide feasible, but costly, separate trunking, the desired routing may not be possible without other interconnecting carriers routing their calls differently. In the absence of the tandem switch being capable of separating certain commingled traffic,
13 14 15 16 17 18	Α.	Based on the existing interconnection architecture arrangements with other carriers, even if Qwest were to provide feasible, but costly, separate trunking, the desired routing may not be possible without other interconnecting carriers routing their calls differently. In the absence of the tandem switch being capable of separating certain commingled traffic, the only other alternative would be to require all interconnecting carriers to
13 14 15 16 17 18 19	Α.	Based on the existing interconnection architecture arrangements with other carriers, even if Qwest were to provide feasible, but costly, separate trunking, the desired routing may not be possible without other interconnecting carriers routing their calls differently. In the absence of the tandem switch being capable of separating certain commingled traffic, the only other alternative would be to require all interconnecting carriers to separate their traffic before it is delivered to Qwest, or any other transit

² This is due to cellular subscriber roaming, use of Virtual NXX and Voice over Internet Protocol. ³ For example, classic Interexchange Carriers are also CLECs who sometimes originate local calls on Feature Groups.

1		CLECs in the State of Oregon to date. Acceptance of the Beaver Creek
2		proposed language could mean the disruption of 30 networks, at a huge
3		expense, all to accommodate a carrier unwilling to take advantage of
4		already existing solutions to address their concerns regarding
5		identification of incoming traffic. This is contrary to the terms of the 1996
6		Telecommunications Act that introduces "interconnection at any
7		technically feasible point" to new entrants.
8		
9	Q.	DOES BEAVER CREEK CURRENTLY HAVE A MEANS BY WHICH IT
10		CAN IDENTIFY THE TRAFFIC THAT IT RECEIVES FROM QWEST?
11	А.	Yes. As is its obligation as a transit provider, when Qwest receives a call
12		from one provider for Qwest to deliver to yet another provider, in this
13		instance Beaver Creek, Qwest passes along all call detail information that
14		it receives from the originating carrier to the terminating carrier, Beaver
15		Creek. In short, the Qwest network will accept a call and all associated
16		call detail information as sent by the originating carrier, move it across its
17		network, and deliver the call and detail information to Beaver Creek for
18		termination. It is important to note that as a transit provider, Qwest does
19		not populate, add to, or manipulate the call detail information in any
20		manner, but merely passes on whatever call detail information it has
21		received. Beaver Creek can then use the call detail information supplied

by the originating carrier to identify and bill the originating carrier for

terminating a call to one of its end users.

1		Qwest also records the identity of the carrier delivering the call to Qwest
2		(usually the originating carrier). Using that information, Qwest can make
3		those records available to terminating carriers. These records can assist
4		a terminating carrier in identifying the originating carrier in the absence of
5		sufficient call detail information delivered in intermachine signaling at the
6		time the call occurred. Qwest has made such records available to Beaver
7		Creek at a reasonable cost. ⁴ However, Beaver Creek, ignoring that the
8		billing relationship is between the originating and terminating carriers, has
9		taken the position that Qwest should assume the financial burden of
10		providing these electronic files to Beaver Creek at no cost. To date,
11		Beaver Creek has chosen not to purchase these records.
11		Deaver Greek has chosen not to purchase these records.
11		beaver creek has chosen not to purchase these records.
	Q.	WILL REQUIRING QWEST TO PROVIDE SEPARATE TRUNKING AS
12	Q.	
12	Q.	WILL REQUIRING QWEST TO PROVIDE SEPARATE TRUNKING AS
12 13 14	Q. A.	WILL REQUIRING QWEST TO PROVIDE SEPARATE TRUNKING AS BEAVER CREEK IS PROPOSING ALLOW MORE ACCURATE
12 13 14 15		WILL REQUIRING QWEST TO PROVIDE SEPARATE TRUNKING AS BEAVER CREEK IS PROPOSING ALLOW MORE ACCURATE IDENTIFICATION OF THE ORIGINATING CARRIER?
12 13 14 15 16		WILL REQUIRING QWEST TO PROVIDE SEPARATE TRUNKING AS BEAVER CREEK IS PROPOSING ALLOW MORE ACCURATE IDENTIFICATION OF THE ORIGINATING CARRIER? No. Requiring Qwest to have separate trunking of various transit and non-
12 13 14 15 16 17		WILL REQUIRING QWEST TO PROVIDE SEPARATE TRUNKING AS BEAVER CREEK IS PROPOSING ALLOW MORE ACCURATE IDENTIFICATION OF THE ORIGINATING CARRIER? No. Requiring Qwest to have separate trunking of various transit and non- transit traffic types would not assure Beaver Creek of knowing the source
12 13 14 15 16 17 18		WILL REQUIRING QWEST TO PROVIDE SEPARATE TRUNKING AS BEAVER CREEK IS PROPOSING ALLOW MORE ACCURATE IDENTIFICATION OF THE ORIGINATING CARRIER? No. Requiring Qwest to have separate trunking of various transit and non- transit traffic types would not assure Beaver Creek of knowing the source and jurisdiction of all calls. The fundamental problem of sometimes

- traffic from non-transit traffic, but would not provide Beaver Creek 22

⁴ Tom Freeberg explains in more detail the cost associated with the purchase of records in his testimony.

1		confidence that only toll calls, subject to access charges, flow through the
2		Qwest Access Tandem. If sufficient call detail information is not provided
3		by the originating carrier, Beaver Creek would still be unable to identify the
4		carrier even if the call were delivered on a new trunk group. Beaver
5		Creek's insistence on separate trunking is technically unnecessary and
6		would provide no greater call detail information. New routing yields no
7		increase in Beaver Creek's ability to know whether a certain call is local
8		versus toll or to identify carriers sending traffic to Beaver Creek. Beaver
9		Creek's proposed language should not be adopted.
10		
11		C. DISCUSSION OF SPECIFIC CONTRACT PROVISIONS
12		
13	Q.	WHAT IS QWEST'S PROPOSED LANGUAGE IN SECTION 7.2.2.1.2 OF
13 14	Q.	WHAT IS QWEST'S PROPOSED LANGUAGE IN SECTION 7.2.2.1.2 OF THE ICA AND BEAVER CREEK'S PROPOSED REVISIONS?
	Q. A.	
14		THE ICA AND BEAVER CREEK'S PROPOSED REVISIONS?
14 15		THE ICA AND BEAVER CREEK'S PROPOSED REVISIONS? Section 7.2.2.1.2 of the proposed ICA provides:
14 15 16		THE ICA AND BEAVER CREEK'S PROPOSED REVISIONS? Section 7.2.2.1.2 of the proposed ICA provides: As negotiated between the parties, the transport of Exchange
14 15 16 17		THE ICA AND BEAVER CREEK'S PROPOSED REVISIONS? Section 7.2.2.1.2 of the proposed ICA provides: As negotiated between the parties, the transport of Exchange Service traffic may occur in several ways.
14 15 16 17 18		THE ICA AND BEAVER CREEK'S PROPOSED REVISIONS? Section 7.2.2.1.2 of the proposed ICA provides: As negotiated between the parties, the transport of Exchange Service traffic may occur in several ways. The Parties agree to use two-way trunk groups. Neither Party may route IntraLATA Toll
14 15 16 17 18 19		THE ICA AND BEAVER CREEK'S PROPOSED REVISIONS? Section 7.2.2.1.2 of the proposed ICA provides: As negotiated between the parties, the transport of Exchange Service traffic may occur in several ways. The Parties agree to use two-way trunk groups. Neither Party may route IntraLATA Toll Exchange Access traffic of any kind on trunks used for Exchange
14 15 16 17 18 19 20		THE ICA AND BEAVER CREEK'S PROPOSED REVISIONS? Section 7.2.2.1.2 of the proposed ICA provides: As negotiated between the parties, the transport of Exchange Service traffic may occur in several ways. The Parties agree to use two-way trunk groups. Neither Party may route IntraLATA Toll Exchange Access traffic of any kind on trunks used for Exchange
14 15 16 17 18 19 20 21	Α.	THE ICA AND BEAVER CREEK'S PROPOSED REVISIONS? Section 7.2.2.1.2 of the proposed ICA provides: As negotiated between the parties, the transport of Exchange Service traffic may occur in several ways. The Parties agree to use two-way trunk groups. Neither Party may route IntraLATA Toll Exchange Access traffic of any kind on trunks used for Exchange Service.
14 15 16 17 18 19 20 21 22	Α.	THE ICA AND BEAVER CREEK'S PROPOSED REVISIONS? Section 7.2.2.1.2 of the proposed ICA provides: As negotiated between the parties, the transport of Exchange Service traffic may occur in several ways. The Parties agree to use two-way trunk groups. Neither Party may route IntraLATA Toll Exchange Access traffic of any kind on trunks used for Exchange Service.

1		local service originated by Beaver Creek or Qwest. Qwest's proposed
2		language would allow both parties to combine local and toll traffic they
3		originate on the same trunks, whereas Beaver Creek's proposed revisions
4		would require such traffic to be separated onto individual trunk groups. In
5		order to accommodate Beaver Creek, Qwest would need to perform
6		massive amounts of translations changes in its switches and, as
7		discussed previously, no software package is available to do this.
8		
9	Q.	WHAT IS QWEST'S PROPOSED LANGUAGE IN SECTION 7.2.2.2.1 OF
2	ω.	
10		THE ICA AND BEAVER CREEK'S PROPOSED REVISIONS?
11	Α.	Section 7.2.2.2.1 of the proposed ICA provides:
12		Exchange Access traffic shall be delivered to Qwest at the Access
13		Tandem Switch or via separate trunks to Qwest End Office Switch
14		(es), as designated by CLEC. Exchange Access traffic shall be
15		delivered to BCT at switch locations designated by BCT. Neither
16		Party may route Exchange Service traffic over trunks used for
17		Exchange Access traffic.
18		
19		With its proposed revisions, Beaver Creek (1) would require a change in
20		how Qwest configures its network by attempting to control where Qwest
21		can deliver Exchange Access traffic, and (2) again proposes to prohibit
22		Qwest from routing IntraLATA toll and local traffic over the same trunk.
23		
24	Q.	WHY IS QWEST OPPOSED TO THE PROPOSED CHANGE TO
25		SECTION 7.2.2.2.1?

1	Α.	Qwest and Qwest alone should determine how its network is configured
2		and operated. Qwest follows the industry standards followed by the entire
3		industry for establishing trunking that meets the requirements of all
4		carriers interconnecting with Qwest. It is entirely inappropriate for Beaver
5		Creek, or any other CLEC, to dictate how traffic is to be routed within
6		Qwest's network.
7		Qwest has successfully interconnected with over thirty other CLECs in
8		Oregon through various interconnection architectures, all of which are
9		available to Beaver Creek. Companies can interconnect via the trunk-side
10		of a Qwest switch using the Access Tandem, the trunk-side of a Local
11		Tandem, or they may elect to connect directly to the trunk-side of an End
12		Office switch. Qwest cannot limit the options that carriers have for trunk-
13		side connection when the interconnection requests comply with industry
14		standards. ⁵
15		
16	Q.	WHAT IS THE IMPACT OF BEAVER CREEK'S PROPOSED
17		REVISIONS?
18	Α.	Under its proposed language, Beaver Creek seeks to be allowed to dictate
19		how Qwest should configure its network, presumably to facilitate Beaver
20		Creek's ability to accurately bill terminating charges to other carriers. If
21		Beaver Creek is concerned that local transit calls should not be combined

⁵ This is per the effective arbitrated and negotiated agreements between Qwest and other CLECs. Section 251(c)(2) of the Telecommunications Act requires incumbent LECs to supply interconnection to any requesting telecommunication carrier *at any technically feasible point*, which presumably includes interconnection at its toll tandem switches.

1		with IntraLATA toll calls on the same trunk group, then Qwest, along with
2		other carriers, would be required to reconfigure their networks so that
3		Beaver Creek can choose when to accept traffic.
4		
5	Q.	WHAT IS QWEST'S PROPOSED LANGUAGE IN SECTION 7.2.2.3.1 OF
6		THE ICA AND BEAVER CREEK'S PROPOSED REVISIONS?
7	Α.	Section 7.2.2.3.1 of the proposed ICA provides:
8		Qwest will accept traffic originated by CLEC for termination to
9		another CLEC, existing LEC, or wireless Carrier that is connected
10		to Qwest's local and/or Access Tandem Switch. Qwest will also
11		terminate traffic from these other Telecommunications Carriers to
12		CLEC over separate trunks from Qwest originated traffic. For
13		purposes of the Agreement, transit traffic does not include traffic
14		carried by Interexchange Carriers. That traffic is defined as Jointly
15		Provided Switched Access. Neither party intentionally shall deliver
16		traffic from Interexchange Carriers through local or EAS tandems.
17		Intentional delivery does not include inappropriately routed calls to
18		either party or include unqueried LNP calls. Neither party shall
19		deliver traffic from Interexchange Carriers through local or EAS
20		Tandems. CLEC will accept traffic originated by Qwest for
21		termination to another CLEC, existing LEC or wireless Carrier that
22		is connected to CLEC's local or access tandem switch. While
23		CLEC may provide transit service to Qwest, Qwest shall not be
24		obligated to utilize transit services of CLEC and nothing in this
25		Agreement shall be construed as a waiver of Qwest's right to seek
26		direct interconnection to any Telecommunications Carriers that
27		CLEC may provide transiting services between the
28		Telecommunications Carrier and Qwest.

J	1	Q.	WHY IS QWEST OPPOSED TO THE CHANGES THAT BEAVER
4	2		CREEK HAS PROPOSED?
	3	Α.	With its proposed revisions, Beaver Creek seeks to require Qwest to
2	4		separately trunk traffic received from IXCs and other LECs and, further, to
4	5		separate such traffic from Qwest-originated traffic. Not only is it more
Ċ	6		efficient to combine such traffic over the same trunks, it is technically
	7		infeasible for Qwest to separate all this traffic between local calls and toll
8	8		calls, as discussed in the previous section.
Ç	9		
1(0	Q.	WHAT IS QWEST'S PROPOSED LANGUAGE IN SECTION 7.2.2.9.3.1
1	1		OF THE ICA AND BEAVER CREEK'S PROPOSED REVISIONS?
12	2	A.	Section 7.2.2.9.3.1 of the proposed ICA provides:
13	3		Exchange Service, ISP-Bound Traffic, Exchange Access
14	4		(IntraLATA Toll carried solely by Local Exchange Carriers), and
1:	5		Jointly Provided Switched Access (InterLATA and IntraLATA Toll
10			involving a third party IXC) may be combined in a single LIS trunk
1′			group or transmitted on separate LIS trunk groups. CLEC may
13	8		request a separate trunk group for Jointly Provided Switched
19	9		Access (InterLATA and IntraLATA Toll involving a third party IXC)
20	0		traffic and Qwest agrees to intentionally exchange only Jointly
2	1		Provided Switched Access (InterLATA and IntraLATA Toll involving
22	2		a third party IXC) traffic on that trunk.
23	3		Exchange Service traffic shall not be combined with Switched
24	4		Access or Jointly Provided Switched Access on the same trunk
2:			group, i.e. Exchange Service may not be combined with FGD to a

26 Qwest access tandem switch and/or end office switch. Nor may

1		Exchange Service be combined with FGC or Exchange Access
2		traffic for termination to CLEC.
3		
4 5	Q.	WHY IS QWEST OPPOSED TO THE CHANGES THAT BEAVER
6		CREEK HAS PROPOSED?
7	Α.	Qwest's proposed language for Exchange Service, ISP Bound Traffic,
8		Exchange Access (IntraLATA Toll carried solely by Local Exchange
9		Carriers), and Jointly Provided Switched Access (InterLATA and
10		IntraLATA Toll involving a third party IXC) to be combined on a single
11		trunk group accomplishes the same goal of identification of traffic that
12		Beaver Creek is asking for without requiring inefficient separate trunk
13		groups. Qwest properly signals its originating traffic and passes through
14		unaltered all signaling information that it receives from the originating
15		carriers that are using Qwest as a transit provider of indirect
16		interconnection. Qwest also provides Beaver Creek the ability to
17		purchase transit call records that would allow Beaver Creek to bill the
18		originator of the traffic. Qwest cannot be responsible when other carriers
19		fail to send accurate information in the signaling stream. Qwest is only
20		responsible for routing the call based on the information provided in the
21		signaling stream.
22		
23	Q.	HOW IS QWEST ABLE TO KEEP THE JPSA INTEREXCHANGE
24		CARRIER TRAFFIC SEPARATE?

1	Α.	Terminating JPSA traffic comes to Qwest from the interexchange carriers
2		("IXCs") on "Feature Group D" ("FGD") facilities that the IXCs have
3		purchased to Qwest's Access Tandems according to the Qwest Access
4		Tariffs. Existing Feature Group D billing systems generate JPSA records.
5		Qwest is able to separately trunk this traffic to Beaver Creek but it
6		accomplishes nothing except inefficiency. However, the other carriers'
7		local and IntraLATA traffic types come to Qwest in an intermingled
8		manner, coming to local tandems, end offices and access tandems with
9		certain CLECs or CMRS carriers utilizing an Single Point of Presence
10		("SPOP") while also exercising their right to secure ILEC access at any
11		technically feasible point in the LATA. ⁶ It is extremely difficult for Qwest to
		concertable truck FCD traffic, and it is to physically informible for the Owent
12		separately trunk FGD traffic, and it is technically infeasible for the Qwest
12 13		Access Tandem switch to instantly and absolutely separate what Beaver
13		Access Tandem switch to instantly and absolutely separate what Beaver
13 14		Access Tandem switch to instantly and absolutely separate what Beaver Creek considers local calls from what Beaver Creek might consider toll
13 14 15		Access Tandem switch to instantly and absolutely separate what Beaver Creek considers local calls from what Beaver Creek might consider toll calls.
13 14 15 16		Access Tandem switch to instantly and absolutely separate what Beaver Creek considers local calls from what Beaver Creek might consider toll calls. Beaver Creek has offered no compensation for this enormous potential
13 14 15 16 17		Access Tandem switch to instantly and absolutely separate what Beaver Creek considers local calls from what Beaver Creek might consider toll calls. Beaver Creek has offered no compensation for this enormous potential investment it demands of Qwest. Separate trunking provides no greater
13 14 15 16 17 18		Access Tandem switch to instantly and absolutely separate what Beaver Creek considers local calls from what Beaver Creek might consider toll calls. Beaver Creek has offered no compensation for this enormous potential investment it demands of Qwest. Separate trunking provides no greater protection for Beaver Creek and should be rejected by the Commission.
13 14 15 16 17 18 19		Access Tandem switch to instantly and absolutely separate what Beaver Creek considers local calls from what Beaver Creek might consider toll calls. Beaver Creek has offered no compensation for this enormous potential investment it demands of Qwest. Separate trunking provides no greater protection for Beaver Creek and should be rejected by the Commission. Qwest has also clarified in all interconnection agreements that traffic from

⁶ SPOP is a Local Interconnection Service ("LIS") interconnection trunking option that allows a requesting CLEC to establish one physical point of presence within a LATA in Qwest's territory and thus exchange traffic with Qwest at a single point.

1	Q.	WHAT IS QWEST'S PROPOSED LANGUAGE IN SECTION 7.2.2.9.3.2
2		OF THE ICA AND BEAVER CREEK'S PROPOSED REVISIONS?
3	Α.	Section 7.2.2.9.3.2 of the proposed ICA provides:
4		Exchange Service traffic and Switched Access traffic including
5		Jointly Provided Switched Access traffic may be combined on the
6		same trunk group. If combined, the originating Carrier shall provide
7		to the terminating Carrier, each quarter, Percent Local Use (PLU)
8		factor(s) that can be verified with individual call record detail. Call
9		detail or direct jurisdictionalization using Calling Party Number
10		(CPN) information may be exchanged in lieu of PLU if it is
11		available.
12		
13	Q.	WHAT IS QWEST'S POSITION ON SECTION 7.2.2.9.3.2?
14		
15	Α.	BCC's proposed deletion of this section again reflects its position that local
16		and toll traffic should not be combined on the same trunk group. For the
17		same reasons discussed above with respect to other sections of the ICA,
18		the Commission should approve Qwest's provision.
19		
20	Q.	WHAT IS QWEST'S PROPOSED LANGUAGE IN SECTION 7.2.2.9.6 OF
21		THE ICA AND BEAVER CREEK'S PROPOSED REVISIONS?
22	Α.	Section 7.2.2.9.6 of the proposed ICA provides:
23		CLEC may interconnect at either the Qwest local Tandem Switch or
24		the Qwest Access Tandem Switch for the delivery of local
25		exchange traffic. When CLEC is interconnected at the Access
26		Tandem Switch and where there would be a DS1's worth of local
27		traffic (512 BHCCS) between CLEC's Switch and those Qwest End
28		Office Switches subtending a Qwest local Tandem Switch, CLEC
29		will order a trunk group to the Qwest local Tandem Switch. As an

1		alternative, CLEC shall terminate traffic on Qwest End Office
2		Switches. When Qwest lacks available capacity at the Access
3		Tandem Switch, Qwest will arrange local Tandem Switch or End
4		Office Switch Interconnection at the same cost to CLEC as
5		Interconnection via the Qwest Access Tandem Switch.
6		The Parties shall terminate Exchange Service traffic on local
7		Tandem Switches or End Office Switches. When there is a DS1
8		level of traffic (512 BHCCS) between CLEC's Switch and a Qwest
9		End Office Switch, Qwest may request CLEC to order a direct trunk
10		group to the Qwest End Office Switch. CLEC shall comply with that
11		request unless it can demonstrate that such compliance will impose
12		upon it a material adverse economic or operations impact.
13		
14		
15	Q.	WHY IS QWEST OPPOSED TO THE CHANGES THAT BEAVER
16		CREEK HAS PROPOSED?
16 17	A.	CREEK HAS PROPOSED? Beaver Creek proposes to remove the language that describes the option
	A.	
17	A .	Beaver Creek proposes to remove the language that describes the option
17 1 8	Α.	Beaver Creek proposes to remove the language that describes the option for CLECs to interconnect at the Qwest Local Tandem or Access Tandem
17 18 19	A .	Beaver Creek proposes to remove the language that describes the option for CLECs to interconnect at the Qwest Local Tandem or Access Tandem and instead changed it to the Local Tandem or End office Switch. Qwest
17 18 19 20	Α.	Beaver Creek proposes to remove the language that describes the option for CLECs to interconnect at the Qwest Local Tandem or Access Tandem and instead changed it to the Local Tandem or End office Switch. Qwest has allowed all CLECs to interconnect at either the Qwest Local Tandem
17 18 19 20 21	Α.	Beaver Creek proposes to remove the language that describes the option for CLECs to interconnect at the Qwest Local Tandem or Access Tandem and instead changed it to the Local Tandem or End office Switch. Qwest has allowed all CLECs to interconnect at either the Qwest Local Tandem or Access Tandem for the delivery of local exchange traffic. Beaver Creek
17 18 19 20 21 22	A .	Beaver Creek proposes to remove the language that describes the option for CLECs to interconnect at the Qwest Local Tandem or Access Tandem and instead changed it to the Local Tandem or End office Switch. Qwest has allowed all CLECs to interconnect at either the Qwest Local Tandem or Access Tandem for the delivery of local exchange traffic. Beaver Creek can use this option or not. If they choose not to use it, they would not
17 18 19 20 21 22 23	A .	Beaver Creek proposes to remove the language that describes the option for CLECs to interconnect at the Qwest Local Tandem or Access Tandem and instead changed it to the Local Tandem or End office Switch. Qwest has allowed all CLECs to interconnect at either the Qwest Local Tandem or Access Tandem for the delivery of local exchange traffic. Beaver Creek can use this option or not. If they choose not to use it, they would not originate any local exchange traffic to Qwest through the access tandem.
17 18 19 20 21 22 23 24	A .	Beaver Creek proposes to remove the language that describes the option for CLECs to interconnect at the Qwest Local Tandem or Access Tandem and instead changed it to the Local Tandem or End office Switch. Qwest has allowed all CLECs to interconnect at either the Qwest Local Tandem or Access Tandem for the delivery of local exchange traffic. Beaver Creek can use this option or not. If they choose not to use it, they would not originate any local exchange traffic to Qwest through the access tandem. This language should be in the ICA so Qwest has a route to send local

.....

1	workshops. If Beaver Creek seeks to use the Qwest Access Tandem for
2	transit of local exchange calls to other carriers, then this language would
3	allow it to get its traffic to these other carriers, without having to direct
4	trunk to each of these other carriers.

Q. HOW DOES QWEST'S LANGUAGE CREATE EFFICIENT USE OF THE 7 NETWORK?

Α. 8 Qwest's language establishes a threshold that facilitates efficient 9 interconnection between Qwest and all CLEC switches. The threshold allows Qwest to offload traffic through Access Tandem switches when 10 traffic volumes justify direct connection with a local tandem switch or 11 specific end office. When traffic that is destined for a Qwest end office 12 reaches or exceeds 512 BHCCS or a DS1's capacity, then it becomes 13 14 economic for both carriers to direct trunk to the local tandem or to that end office. This creates network efficiencies by eliminating the need to provide 15 additional switching through the access tandem. Qwest's language should 16 17 be in the ICA in order to cover the circumstance if Beaver Creek chooses to interconnect at the access tandem or Local Tandem. Beaver Creek's 18 19 proposed language allowing it not to establish a direct trunk if that "will 20 impose upon it a material adverse economic or operations impact" creates ambiguity and non-specificity that may lead to later disputes. Therefore, 21 22 Beaver Creek's proposed language changes should not be adopted by the 23 Commission.

1		
2	Q.	WHAT IS QWEST'S PROPOSED LANGUAGE IN SECTION 7.2.2.9.6.1
3		OF THE ICA AND BEAVER CREEK'S PROPOSED REVISIONS?
4		
5	А.	Section 7.2.2.9.6.1 of the proposed ICA provides:
6		Qwest will allow Interconnection for the exchange of local traffic at
7		Qwest's Access Tandem Switch without requiring Interconnection at
8		the local Tandem Switch, at least in those circumstances when
9		traffic volumes do not justify direct connection to the local Tandem
10		Switch; and regardless of whether capacity at the Access Tandem
11		Switch is exhausted or forecasted to exhaust.
12		
13	Q.	WHY DOES QWEST REQUIRE THIS LANGUAGE IN THE
14		INTERCONNECTION AGREEMENT?
15	Α.	As was addressed in section 7.2.2.9.6, Qwest feels that this section
16		should remain in the interconnection agreement for purposes of clarifying
17		what connections need to be present in order for Qwest to terminate all
18		traffic that it receives that is destined for Beaver Creek, or away from
19		Beaver Creek. This language was also approved by the OR Commission
20		during the section 271 workshops.
21		
22		IV. CONCLUSION
22 23	Q.	IV. CONCLUSION WHAT IS YOUR RECOMMENDATION TO THE OREGON

1	Α.	For the reason stated previously in my testimony, I ask the Oregon
2		Commission to find that the language that Qwest has suggested for the
3		Interconnection Agreement with Beaver Creek be adopted. I have
4		supplied proposed text for sections, 7.2.2.1.2, 7.2.2.2.1, 7.2.2.3.1,
5		7.2.2.9.3.1, 7.2.2.9.3.2, 7.2.2.9.6, and 7.2.2.9.6.1 of the ICA.
6	Q.	DOES THIS CONCLUDE YOUR TESTIMONY?
7	Α.	Yes it does.
8		
9		
10		
11		
12		
13		
14		
15		

1			
2			
3	BEFORE THE PUBLIC UTILITY COMMISSION OF OREGON		
4	ARB 747		
5	In the Matter of Beaver Creek Cooperative		
6	Telephone Company's Petition for Arbitration of the Terms, Conditions, and Prices for	CERTIFICATE OF SERVICE	
7	Interconnection and Related Arrangements	CERTIFICATE OF SERVICE	
8	with Qwest Corporation.		
9			
10	I certify that I have this day served the DIRECT TESTIMONY OF ANN MARIE		
11	CEDERBERG by causing a copy to be sent via electronic mail and U.S. mail to:		
12	8	Law Office of Richard A.Corporate CounselFinniganQwest Corporation	
13	Finnigan Qwest		
14	Olympia, WA 98512 421 S	W Oak Street	
15	Portland, OR 97204 DATED: July 14, 2006.		
16			
17	PERKINS COIE		
18	P (M/M		
19	By <u>Lawrence H. Reichman, OSB No. 86083</u>		
20	Attorneys for Qwest Corporation		
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PAGE	1- CERTIFICATE OF SERVICE	Perkins Coie LLP 1120 N.W. Couch Street, Tenth Floor	