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IN THE MATTER OF QWEST CORPORATION'S PETITION FOR ARBITRATION AND APPROVAL OF INTERCONNECTION AGREEMENT WITH NORTH COUNTY COMMUNICATIONS CORPORATION OF ARIZONA PURSUANT TO SECTION 252(B) OF THE COMMUNICATIONS ACT OF 1934 AS AMENDED BY THE TELECOMMUNICATIONS ACT OF 1996 AND APPLICABLE STATE LAWS.

DOCKET NOS. : T-01051B-09-0383
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NOTICE OF FILING DIRECT TESTIMONY OF PHILIP LINSE AND RENEE ALBERSHEIM

Pursuant to the Procedural Order issued on November 3, 2010, Qwest hereby files the attached direct testimony of Philip Linse and Renee Albersheim, in preparation for the Arbitration set in this matter for February 8, 2011.

RESPECTFULLY SUBMITTED this 15th day of December, 2010.

QWEST CORPORATION

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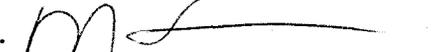
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DIRECT TESTIMONY OF PHILIP LINSE

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I. IDENTIFICATION OF WITNESS

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

A. My name is Philip Linse. My business address is Qwest Network Reliability Center at 700 West Mineral Avenue in Littleton, Colorado. I am employed as Director – Legal Issues for Network. I am testifying on behalf of Qwest Corporation (“Qwest”).

Q. PLEASE GIVE A BRIEF DESCRIPTION OF YOUR EDUCATIONAL BACKGROUND AND TELEPHONE COMPANY EXPERIENCE.

A. I earned a Bachelors degree from the University of Northern Iowa in 1994. I began my career in the telecommunications industry in 1995 when I joined the engineering department of CDI Telecommunications in Missoula, Montana where I designed and managed the installation of Outside Plant Infrastructure consistent with customer demand. In 1998, I accepted a position with Pacific Bell as a Technology Planner with responsibility for the economic implementation of outside plant capital additions ensuring appropriate levels of network capacity. In 2000, I accepted a similar position with U S WEST as a Tactical Planning Manager.

In 2001, I was promoted to a staff position in Technical Regulatory Interconnection Planning for Qwest. In this position, I developed network strategies for interconnection and the unbundling of Qwest’s local switches,

1 (MF) signaling technology. My testimony will explain why Qwest uses
2 modern Signaling System No. 7 ("SS7") and how the use of SS7
3 interconnection to Qwest's network appropriately allows Qwest to record
4 local traffic for billing and bill validation purposes. My testimony will also
5 explain that Qwest's proposed language accommodates North County's use
6 of MF signaling while also allowing Qwest to ensure that North County's
7 billing of Qwest is as accurate as possible. While my testimony will explain
8 the technical interconnection issues, Ms. Renee Albersheim will discuss the
9 compensation and billing terms proposed by Qwest in the Interconnection
10 Agreement.

11 III. INTERCONNECTION AND NETWORK SIGNALING

12 Q. WHAT IS NETWORK SIGNALING?

13 A. Network signaling is the network control information that is sent between
14 network elements. Such network control signals include supervisory
15 information used to initiate and terminate network connections (i.e., voice or
16 data calls), indicate network connection status (i.e., whether the line is busy,
17 etc.), management of network connection and general information
18 transactions. This includes signaling between network elements within a
19 service provider's network such as between two or more switches and
20 between switches and databases. This also includes signaling between

1 end user networks and service providers' networks and between one or
2 more service provider networks or databases.

3 **Q. WHAT TYPES OF SIGNALING CAN BE USED BETWEEN NETWORK**
4 **SWITCHES?**

5 A. SS7 and MF signaling are the most common signaling technologies used in
6 the Public Switched Telephone Network (PSTN) for what is generally
7 referred to as trunk signaling.¹ Trunk signaling is used for setting up or
8 taking down conversation/talk paths between network switches.

9 **Q. WHAT IS SS7 SIGNALING?**

10 A. SS7 signaling is a digital code that is used to manage connections between
11 telecommunications switches and call related databases. SS7 signaling is a
12 type of signaling known as Common Channel Signaling ("CCS") or out-of-
13 band signaling. This means the path that the signaling uses to manage the
14 trunk connections between switches is not the same trunk connection as the
15 conversation/talk path (see Exhibit PL-1 (A)).

¹ Telephone calls are sometimes made between people that are served by different switches. The connections used to provide a communication path between switches are called trunks.

1 **Q. WHAT IS MF SIGNALING?**

2 A. MF or multi frequency signaling is generally an audible analog code² (a
3 series of tones) that is used to manage connections between
4 telecommunications switches. As explained above, trunk signaling is used
5 for setting up or taking down communications paths between network
6 switches. MF signaling is a type of signaling known as in-band signaling.
7 This means that the path that the signaling uses to manage the trunk
8 connections between switches is also the same trunk connection as the
9 conversation/talk path (see Exhibit PL-1 (B)).

10 **Q. WHAT ARE THE BASIC FUNCTIONS THAT MF AND SS7 SIGNALING**
11 **PROVIDE?**

12 A. Both MF and SS7 signaling accomplish several basic functions. They both
13 can provide call supervision, call set-up, and call take-down necessary to
14 establish connections associated with local and long distance calling,
15 Operator Services, Directory Assistance, and 911.

16 **Q. WHAT ARE THE DIFFERENCES BETWEEN SS7 AND MF SIGNALING?**

17 A. The main differences are that SS7 is digital rather than analog, and that
18 SS7 is out-of-band as opposed to in-band signaling. These factors make

² These audible tones are similar to the tones that subscribers may hear when dialing numbers on a touch tone phone.

1 SS7 different from MF signaling and make it more efficient, more flexible,
2 and it can also be more reliable.

3 SS7 signaling is more efficient than MF signaling in at least two important
4 ways. First, SS7 uses a digital protocol that is transmitted, received and
5 interpreted by switches much faster than the MF audible tones³. The length
6 of time necessary to send and receive MF signaling tones is multiplied when
7 multiple switches and MF signaled connections are used to originate and
8 terminate a call. Secondly, SS7's more efficient call set-up process
9 reserves the talk path only until the busy status of the called is determined.
10 The reservation of the talk path is digitally released once the terminating
11 office has determined that the called party's line is busy. The calling party's
12 switch then sends the audible busy signal to the calling party using only the
13 loop between the switch and the calling party. The talk path between
14 switches is not used to transmit the busy status and thus is made available
15 for other calls.

16 When MF signaling is used, a call connection is built and maintained to the
17 called party's switch before the busy status of the called party's line is

³ MF signaling requires seconds (ranging from approximately 3 to 8 seconds) to complete for call set-up while SS7 signaling requires only milliseconds to complete. From the perspective of the caller experience, only upon the completion of the call set up will the caller begin to hear either ringing or a busy signal. This translates into a noticeable and significant delay where MF signaling is use and translates to no noticeable delay when SS7 signaling is used.

1 known. When a busy status is discovered, an audible busy signal is sent
2 over the call connection to the calling party. This call connection is
3 maintained until the calling party recognizes the sound of the busy signal
4 and decides to disconnect by hanging up. This is an extremely inefficient
5 use of the network between switches and results in extended hold times
6 due to the calling party listening to audible busy signals.

7 SS7 provides the flexibility for service providers to offer useful services
8 between telecommunication networks beyond mere call set-up and take-
9 down, such as Caller ID and Last Call Return. SS7 signaling further
10 enhances the ability of service providers to use an Advanced Intelligent
11 Network ("AIN") platform to offer complex services such as No Solicitation
12 and Security Screen. SS7 can accomplish everything MF accomplishes
13 and more.

14 SS7 signaling can also be more reliable than MF signaling. SS7 signaling
15 was implemented within Qwest's network in the late 80s to early 90s and is
16 now ubiquitously available across Qwest's local network.⁴ Further, SS7 has
17 become the dominant and preferred signaling method between

1 telecommunications networks⁵ because of its reliability. On the other hand,
2 MF signaling has been in use since well before divestiture, is generally
3 limited to performing basic call set-up take-down functions, and is
4 susceptible to trunk quality conditions. For example, the analog tones
5 associated with MF signaling can be adversely affected by noise that may
6 exist on the signaling path.⁶ Such noise can interfere with the transmission
7 and duration of the frequencies that MF signaling relies upon. However,
8 SS7 uses digital technology that is not impacted by noise to the same
9 degree as MF signaling. This is because digital transmission is binary and
10 relies upon the fundamental electrical state of the circuit. Digital
11 transmission consists of the presence or absence of electrical current.⁷
12 Noise is less likely to affect presence or absence of electrical current of a

⁴ “The use of circuit-associated interoffice in-band analog signaling call-completion and call-supervision methods and techniques covered in Sections 6.5 and 6.6 [i.e., MF signaling] have almost become obsolete in modern LEC interoffice networks. Their use has been replaced by CCS methods described in Section 6.23. In general, in-band analog signaling call-supervision methods are encountered only in special applications, such as operator system trunks, E911 trunks, and busy-verification trunks.” SR-2275 Telcordia Notes on the Networks, Issue 4 October 2000.

⁵ SS7 is the dominant signaling protocol in a Time Division Multiplex (TDM) network. As Internet Protocol networks carry telecommunication traffic, IP compatible signaling protocols are being developed and used for similar purposes as SS7 signaling.

⁶ “Noise” is defined as “Unwanted electrical signals introduced into telephone line by circuit components or natural disturbances which tend to degrade the performance of the line.” Newton’s Telecom Dictionary 25th Edition 2009.

1 digital circuit. Thus, the transmission of a digital signal can tolerate the
2 existence of noise to a greater degree than an analog signal. Today, MF
3 signaling is not typically used for the interconnection of networks where SS7
4 signaling is available.

5 **Q. DOES SIGNALING FACILITATE THE ABILITY TO BILL FOR TRAFFIC**
6 **BETWEEN TELECOMMUNICATION CARRIERS?**

7 A. Yes. Both MF and SS7 signaling provides important billing information
8 either directly or indirectly such as the type of call (e.g. long distance and
9 Operator Service/Directory Assistance ("OS/DA")), billable number, call
10 duration, and feature usage. However, SS7 provides more information than
11 MF does, and provides it more efficiently.

12 **Q. WHY IS SS7 SIGNALING IMPORTANT FOR QWEST'S ABILITY TO BILL**
13 **FOR TRAFFIC BETWEEN COMPETITIVE LOCAL EXCHANGE**
14 **CARRIERS ("CLECS")?**

15 A. Prior to 1996 both MF and SS7 signaling were used to initiate the switch
16 recording of traffic that was usage sensitive such as long distance traffic.
17 Until the passage of the Telecommunications Act of 1996 recording of local
18 traffic was not common. This was because there was no reciprocal

⁷ A digital signal can also be transmitted over fiber optic cables in the form of light. Similar to the presence or absence of electrical current associated with digital transmission, optical transmission of digital information relies upon the presence or absence of light.

1 compensation requirement between local carriers. Further, ubiquitous
2 recording of local traffic was not generally a capability that existed in the
3 network because the local service provided to end users was predominately
4 billed on a flat monthly rate basis.

5 **Q. DID THE NEED FOR THE RECORDING OF LOCAL TRAFFIC CHANGE**
6 **AS THE RESULT OF THE TELECOMMUNICATIONS ACT OF 1996?**

7 A. Yes. As the result of the Telecommunications Act of 1996, arrangements
8 for reciprocal compensation for the transport and termination of
9 telecommunications traffic was required of Local Exchange Carriers
10 (LECs).⁸ Because local traffic was not previously recorded between local
11 exchange carriers on local trunks, a method of recording local traffic was
12 developed using the capabilities that existed with SS7 signaling technology
13 and implemented by Qwest in the late 1990s.

14 **Q. WHY WAS THE RECORDING OF LOCAL TRAFFIC IMPLEMENTED**
15 **BASED UPON SS7 SIGNALING TECHNOLOGY AS OPPOSED TO MF**
16 **SIGNALING?**

17 A. As described above, SS7 signaling is more efficient, more modern and
18 more flexible. In addition, with the use of MF signaling, the legacy recording
19 capabilities of the switch were limited by the number of different carriers
20 (Interexchange Carriers) that would potentially exchange traffic with Qwest.

1 Further, the size of Qwest's switch recording capacity was not sufficient to
2 capture the high volume of local traffic if MF signaling were to be used.
3 Unlike MF, the use of SS7 signaling technology for local call recording was
4 not restricted by the number of carriers or the recording capacity of Qwest's
5 switches. Thus, Qwest implemented an SS7 Link Monitoring solution. This
6 solution relied upon the out-of-band nature of SS7 technology where the
7 separate transmission paths (Links) that carried the SS7 signals were
8 monitored to record local traffic.⁹ The data created by SS7 Link Monitoring
9 is stored in a centralized database that is separate from the memory of
10 Qwest's individual switches thus, relieving the need for time consuming and
11 costly switch memory upgrades. This data was then used to create bills
12 similar to the bills that were created from the data obtained from each
13 switch. The data is also used to validate other carriers' reciprocal
14 compensation charges to Qwest.

⁸ 47 U.S.C. Section 251(b) 5

⁹ Qwest monitors its SS7 links to record originating and terminating local traffic between Qwest local exchange customers and CLEC networks. In addition Qwest also uses SS7 Link Monitoring to record transit traffic.

1 Q. YOU EXPLAIN ABOVE THAT ONE REASON THAT QWEST CHOSE TO
2 RECORD TRAFFIC USING SS7 RATHER THAN MF WAS BECAUSE
3 THE LEGACY RECORDING CAPABILITIES OF THE SWITCH WERE
4 LIMITED BY THE NUMBER OF DIFFERENT CARRIERS THAT WOULD
5 POTENTIALLY EXCHANGE TRAFFIC WITH QWEST. PLEASE
6 EXPLAIN.

7 A. Since divestiture and prior to the Telecom Act of 1996, Carrier Identification
8 Codes ("CICs") were typically assigned and used to identify Interexchange
9 Carriers ("IXCs"). CICs are used by LECs for the routing and billing of
10 access service to IXCs. In 1995, Feature Group D CICs were expanded
11 from 3 digits to 4 digits to accommodate the increased consumption of CIC
12 codes by IXCs. After 1996 and the opening of local markets, the Feature
13 Group D functions [i.e., the functions that allow equal access toll calling] of
14 telecom switches were considered for recording local CLEC traffic. Although
15 the number of CICs had been increased with the change from 3 to 4 digits,
16 of the 9,999 CICs, only CICs in the range of 9000-9199 were made
17 available for local network use (e.g. Qwest's internal assignment of CICs to
18 CLECs).¹⁰ Of course in the late 1990s, 200 CICs did not provide a sufficient
19 resource to assign to the potential number of CLECs that would

¹⁰ Carrier Identification Code (CIC) Assignment Guidelines, November 12, 2010, ATIS Standard, ATIS-0300050, Alliance for Telecommunications Industry Solutions, Inc.

1 interconnect with Qwest.¹¹ Further, by assigning CICs to CLECs the network
2 would be faced with non-standard use of CICs. This could result in having
3 the same CIC used for an IXC also be used for a CLEC, making the
4 appropriate billing for traffic based upon the switch recording difficult and
5 requiring manual validation of records. However, as the result of Qwest's
6 implementation of the Telecom Act of 1996, Qwest's decision to use SS7 as
7 a basis for recording local CLEC traffic eliminated this CIC limitation. This
8 resulted in local CLEC traffic being recorded using the SS7 link monitoring
9 method of recording and the traffic of other service providers such as IXC's
10 being recorded using Qwest's switch based method of recordings. The
11 result of using the different recording methods enables Qwest to distinguish
12 between records associated with IXC and CLEC traffic that may use the
13 same CIC.¹²

¹¹ The only CICs that have officially been made available for local network use are those in the range of 9000-9199. Many of the LECs have already exhausted the number of entities this affords and consequently use CICs that, technically, should not be used. (Section 15.6.1 Existing LEC-to-LEC Interfaces, SR-2275 Telcordia Notes on the Networks, Issue 4 October 2000)

¹² Billing Automatic Message Accounting Format (BAF) Generic Requirements, Table 2: Sensor Type, GR-1100-CORE, 14, June 2010

1 **Q. HAS QWEST'S CAPABILITY TO BILL FOR TRAFFIC OVER MF**
2 **SIGNALED TRUNKS CHANGED SINCE QWEST'S NETWORK USED MF**
3 **SIGNALED TRUNKS EXCLUSIVELY?**

4 A. No. The same capabilities and limitations generally remain. When Qwest
5 relied exclusively upon MF trunk signaling, there was no intercarrier
6 compensation requirement for local or transit traffic. However, the same
7 limitations of MF signaling existed when Qwest's network was exclusively
8 MF as still exist today. Qwest bills its local exchange customers generally
9 using flat rate service. However, measured rate service is also available.
10 The capability for Qwest to bill local exchange customers for measured rate
11 service relies upon the recording capability of the switch and is determined
12 by the line class code associated with the customer's service and is
13 generally set at the line level for originating traffic and is not a function of
14 trunk groups of the switch that may carry such originating traffic. Qwest
15 was able to bill other carriers based upon the type of trunks, e.g. Feature
16 Group D, since implementation of equal access as a result of the divestiture
17 of AT&T in 1984. However, prior to the 1996 Act there was no reciprocal
18 compensation requirement for local traffic thus, there was no need to
19 ubiquitously bill other carriers for local traffic. Qwest's ability to bill its
20 customers or other carriers if MF (multi-frequency) trunking is used has not
21 changed since the implementation of equal access.

1 **Q. YOU PREVIOUSLY EXPLAINED THAT ANOTHER REASON QWEST**
2 **CHOSE TO RECORD TRAFFIC USING SS7 RATHER THAN MF WAS**
3 **BECAUSE THE SIZE OF QWEST'S SWITCH RECORDING CAPACITY**
4 **WAS NOT SUFFICIENT TO CAPTURE THE POTENTIALLY HIGH**
5 **VOLUME OF LOCAL TRAFFIC IF MF SIGNALING WERE TO BE USED.**
6 **PLEASE EXPLAIN.**

7 A. After the Telecom Act of 1996 there was a need to record local traffic
8 associated with the interconnection between Qwest and CLECs. The
9 increase in switch recordings necessary to record local traffic associated
10 with CLECs in addition to non-local traffic associated with IXC and other
11 billable traffic would have required Qwest to increase the memory of its
12 switches. This would have required significant investment in upgrading
13 many of the over 1,100 Qwest switches. However, in addition to Qwest's
14 own initiative to convert its network to SS7, in the late 1990s, the new
15 CLECs were also deploying SS7 capable switches and interconnecting with
16 Qwest using SS7. Such SS7 switches signal Calling Party Number
17 information and other SS7 based features such that CLECs could
18 competitively offer similar features that Qwest also provided such as Caller
19 ID. Because CLECs were also actively deploying modern SS7 capable
20 switches and demanding SS7 interconnection from Qwest, it made sense to
21 use the SS7 technology to record local traffic exchanged between CLECs
22 and Qwest. It is for these reasons that Section XXXIII of the parties' original

1 June, 1997 Interconnection Agreement anticipated North County's
2 conversion to SS7 interconnection with Qwest.

3 **Q. WHEN WAS THE LAST TIME THAT QWEST OPERATED A SWITCH**
4 **EXCLUSIVELY WITH MF TRUNK SIGNALING?**

5 A. The last switch that relied exclusively upon MF signaled trunking was
6 upgraded to use SS7 on April 30, 2010 and was located in the small town of
7 Westport, OR. Westport is a relatively small local exchange with no
8 interconnected CLECs. Thus, there was no need to track interconnected
9 CLEC traffic at the Westport switch. The upgrade to SS7 in Westport was
10 recently triggered by the need to support Qwest's voice mail system.
11 However, a CLEC request for interconnection would have also triggered the
12 upgrade to SS7 trunk signaling.

13 **Q. IS MF SIGNALLED TRUNKING STILL IN USE BY QWEST FOR**
14 **SPECIALIZED SERVICES?**

15 A. Yes. Some one-way MF trunking is still in use for one-way services such as
16 OS/DA and Emergency Service (911). The MF trunk signaling associated
17 with OS/DA and 911 is unique and specific to the respective service. Thus,
18 the originating switch and terminating switch are specifically programmed to
19 send and receive signaling information that is specific to each service, and
20 the trunks are dedicated exclusively to one type of service. The MF trunk
21 signaling that is used for signaling of OS/DA or 911 is not the same as the

1 signaling used for Local Interconnection Service ("LIS") trunks. LIS trunks
2 may be used for the two-way exchange of Interstate and Intrastate long
3 distance and Local/EAS traffic. In addition, the signaling requirements can
4 be different depending upon the direction of the traffic.

5 **Q. CAN YOU PROVIDE AN EXAMPLE OF HOW SIGNALING CAN BE**
6 **DIFFERENT DEPENDING UPON THE DIRECTION OF TRAFFIC OVER**
7 **LIS TRUNKS?**

8 A. Yes. For example, originating equal access (Feature Group D) traffic from a
9 LEC over LIS trunks is signaled with information that allows the traffic to be
10 routed to the appropriate Interexchange Carrier's ("IXC") network.
11 Additionally, customer billing information is also signaled to enable the IXC
12 to appropriately bill its subscribers. However, traffic that terminates to a
13 LEC over LIS MF trunks that comes from an IXC does not contain such
14 routing and originating subscriber billing information. Similarly, because
15 there is no IXC routing or subscriber billing requirement for local traffic, MF
16 signaling of local traffic does not contain CIC or calling party information.
17 This is not a limitation of SS7 signaling and is another reason SS7 link
18 monitoring is used by Qwest to validate bills and bill CLECs for local traffic.

1 **Q. IS THE CAPABILITY THAT MF SIGNALING PROVIDES SUFFICIENT**
2 **FOR QWEST TO IDENTIFY DIFFERENT TYPES OF TRAFFIC OVER**
3 **LOCAL INTERCONNECTION FACILITIES?**

4 A. No. There are generally two capabilities available to Qwest when
5 interconnection is established using MF signaled local trunking. The first is
6 "peg count." Peg count is merely the number of calls that were placed or
7 received during a certain period of time. Peg count does not provide the
8 call duration or other call detail information. The second capability that MF
9 signaled local trunks can provide is total usage. This usage does not
10 provide the call detail that would be required to generate individual billing
11 records for calls. Thus, there is no information that can be used to identify
12 individual call duration. Both the peg count as well as the total usage can
13 include the cumulative totals for long distance, transit and local traffic
14 without the ability for Qwest to distinguish the difference. Further, MF
15 signaling of local traffic does not contain the necessary calling party
16 information to assist in accurately determining the actual network that
17 originated the call, or the calling party's number.

18 **Q. HOW DOES THE RECORDING OF FEATURE GROUP D DIFFER FROM**
19 **LOCAL TRUNKS AS DESCRIBED ABOVE?**

20 A. Feature Group D is recorded in detail at the first point of switching within the
21 LATA. In other words, Feature Group D traffic is recorded at the originating

1 end office switch when a call is destined from a LEC end office switch to an
2 IXC. Similarly, Feature Group D traffic is recorded at the tandem LEC
3 switch when the traffic is destined from an IXC to the LEC end office.¹³ The
4 detail provided by these recordings most importantly identifies the specific
5 carrier responsible for access charges. Thus, recordings of Feature
6 Group D traffic are unlike the information that is captured for local traffic as
7 described above. Such information associated with local traffic does not
8 provide the identification of the originating or terminating LECs.

9 **Q. HOW IS A LOCAL MF TRUNK SIGNALING FROM A CLEC TO A LEC**
10 **DIFFERENT THAN FEATURE GROUP D MF TRUNK SIGNALING FROM**
11 **A CLEC TO AN IXC?**

12 A. Local traffic is signaled with simply the seven or 10 digits dialed by the
13 originating local service subscriber. Qwest would merely route the call
14 locally based upon these dialed digits. However, Feature Group D traffic is
15 signaled by first signaling the carrier information necessary to route the call
16 to the appropriate IXC of the originating long distance service subscriber.
17 Next the subscriber's billing information (ANI) is signaled followed by the 10
18 digit long distant number that was dialed by the long distance service
19 subscriber. The IXC first validates that the billing information is valid. If the

¹³ Sometimes the first point of switching can be the end office switch for traffic destined both to and from an IXC when the IXC directly connects to the LEC end office.

1 billing information is valid then the IXC would proceed to route the call
2 based upon the dialed digits. Once the call ends, the IXC would then bill the
3 long distance service subscriber based upon the billing information that was
4 signaled and recorded by the IXC. The billing information is provided on a
5 long distance call so that the IXC can bill its long distance subscriber for
6 long distance charges. Contrary to Feature Group D, there is no subscriber
7 to bill for local traffic and, therefore, there is no need for billing information
8 (ANI) to be signaled for local traffic. Thus, the industry standard for MF
9 signaling is to provide billing information for long distant calling using an IXC
10 and only the dialed digits for local traffic.¹⁴

11 **Q. ARE THERE SIGNIFICANT TECHNICAL OBSTACLES THAT LIMIT THE**
12 **USE OF MF SIGNALLED INFORMATION SUCH AS IS PROVIDED WITH**
13 **FEATURE GROUP D?**

14 A. Yes. As MF signaling and SS7 signaling interwork, information must be
15 converted from one signaling protocol to the other in order to ensure the
16 appropriate corresponding information is signaled. MF signaled FGD allows
17 for the signaling of Automatic Number Identification ("ANI") that allows an
18 IXC to bill the originator long distance charges. However, ANI is not the
19 same as Calling Party Number ("CPN") that is used by SS7 network to

¹⁴ Call Processing, Section 9 Routing, Telcordia GR-505-core, Issue 1, December 1997, A Module of LSSGR, FR-64

1 display on Caller ID devices. Additionally, MF signaling does not have the
2 capability to transmit the necessary privacy indicator to be accurately
3 forwarded into the SS7 signaling protocol associated with CPN and the
4 display of Caller ID.¹⁵ Thus, traffic that originates on North County's
5 Network can not accurately reflect Caller ID information or the restriction of
6 displaying such Caller ID information when converted to SS7 signaling.
7 Again, this is because ANI is a billing number and not CPN and cannot be
8 accurately relied upon to determine call origination. This is especially
9 important when traffic is destined for other service providers such as ILECs,
10 CLECs and Wireless service providers.

11 **IV. DISPUTED ISSUE NO. 1: SIGNALING**

12 **Q. WHAT LANGUAGE IS QWEST PROPOSING?**

13 A. The Interconnection Agreement between the parties includes terms for
14 reciprocal compensation for the exchange of local traffic.¹⁶ With the use of
15 MF signaling, there are specific concerns that need to be addressed
16 associated with the capabilities of the parties to create and validate bills for

¹⁵ "Although it is technically possible to generate address information for the CPN from ANI information, this procedure may provide incorrect address information and the correct presentation restricted indication is not known at an interworking point." Common Channel Signaling Network Interface Specification (CCNIS) Supporting Network Interconnection, Message Transfer Part (MTP) and Integrated Services Digital Network User Part, Telcordia GR-905-CORE Issue 8 December 2004

¹⁶ See section 7.3.4 of Qwest's proposed ICA

1 terminating local traffic. Ms. Albersheim's testimony addresses sections of
2 Qwest's template language as proposed to North County, with modifications
3 shown in bold and underline. This language generally reflects the
4 accommodation of North County's continued use of MF signaled
5 interconnection trunking with Qwest. Additionally, where the routing of
6 traffic becomes two-way, Qwest's language also enables Qwest's ability to
7 validate bills from North County for Qwest traffic that North County
8 terminates, bill transit charges for Qwest's transit of North County traffic,
9 and bill reciprocal compensation charges for North County traffic that Qwest
10 terminates.

11 **Q. HOW DOES QWEST'S LANGUAGE IN SECTION 7.1.1 ACCOMMODATE**
12 **NORTH COUNTY'S CONTINUED USE OF MF SIGNALING?**

13 A. As discussed by Ms. Albersheim, Qwest has agreed to North County's use
14 of MF signaling in the second sentence of the following Qwest language:

15 The Parties understand and agree that CLEC currently sends no
16 traffic to Qwest and instead terminates traffic either originated by
17 Qwest or originated by other carriers and passed through Qwest to
18 CLEC. **The Parties further understand and agree that CLEC**
19 **currently uses multi-frequency ("MF") signaling in its receipt**
20 **of traffic from Qwest and does not utilize SS7 signaling.** The
21 Parties agree that, should CLEC subsequently wish to originate
22 traffic to send to Qwest for termination or passing of traffic to other
23 Telecommunications Carriers, the Parties will mutually negotiate an
24 amendment to this Agreement which will also include requirements
25 for use of SS7 signaling in the mutual exchange of traffic.
26

1 **Q. HOW DOES QWEST'S LANGUAGE IN SECTION 7.1.1 ALLOW QWEST**
2 **TO VALIDATE NORTH COUNTY'S BILLS TO QWEST?**

3 A. The first sentence of the above-quoted Qwest language describes the
4 current one-way nature of the traffic from Qwest to North County. Section
5 7.8 then provides the methodology that allows Qwest to validate North
6 County's bill to Qwest, as discussed in Ms Albersheim's testimony.

7 **Q. HOW DOES QWEST'S LANGUAGE IN SECTION 7.1.1 ENABLE QWEST**
8 **TO APPROPRIATELY BILL FOR NORTH COUNTY TRAFFIC THAT**
9 **QWEST TERMINATES?**

10 A. The third sentence of the Qwest proposed language explains that if the one-
11 way nature of the traffic changes to two-way then North County would
12 upgrade its interconnected network to use SS7 signaling.

13
14 **Q. WHY IS IT IMPORTANT THAT NORTH COUNTY USE SS7**
15 **CONNECTIONS IF ORIGINATING LOCAL TRAFFIC TO QWEST?**

16 A. The main reason SS7 signaling is necessary is that Qwest does not record
17 the traffic that North County routes to Qwest over MF signaled trunking. MF
18 trunk signaling technology, as I have explained above, does not allow for
19 Qwest's network recording or call information necessary for Qwest to
20 appropriately record and bill for the different types of traffic (e.g., local,
21 transit, jointly provided switched access, and Qwest terminated). Qwest's

1 language reflects Qwest's need to appropriately record and bill traffic that
2 may originate from North County.

3 **Q. IS NORTH COUNTY'S INSISTENCE ON USING MF SIGNALING FOR**
4 **LOCAL INTERCONNECTION WITH QWEST UNIQUE COMPARED TO**
5 **OTHER CLECS?**

6 A. Yes. North County is the only CLEC across Qwest's 14 state region that
7 interconnects with Qwest exclusively using MF trunking. I am unaware of
8 any other CLEC that has insisted on interconnection using MF signaling.

9 **V. SUMMARY/CONCLUSION**

10 **Q. PLEASE SUMMARIZE YOUR TESTIMONY.**

11 A. My testimony explains the difference between SS7 and MF signaling and
12 why the nature of the Interconnection Agreement that requires reciprocal
13 compensation for the mutual exchange of local traffic requires SS7 signaled
14 interconnection. Specifically, my testimony explains that although Qwest
15 can accommodate North County's use of MF signaled interconnection for
16 traffic that terminates to North County, there are technical obstacles that
17 prevent Qwest from recording and billing for local or transit traffic that North
18 County routes to Qwest.

19 Finally, my testimony explains that Qwest's proposed Interconnection
20 Agreement language accommodates North County's continued use of MF

1 signaling. Qwest's language also provides the ability for Qwest to record
2 traffic necessary to validate North County's bills to Qwest as well as bill
3 North County in the event that North County decides to change the one-way
4 nature of the traffic that exists today.

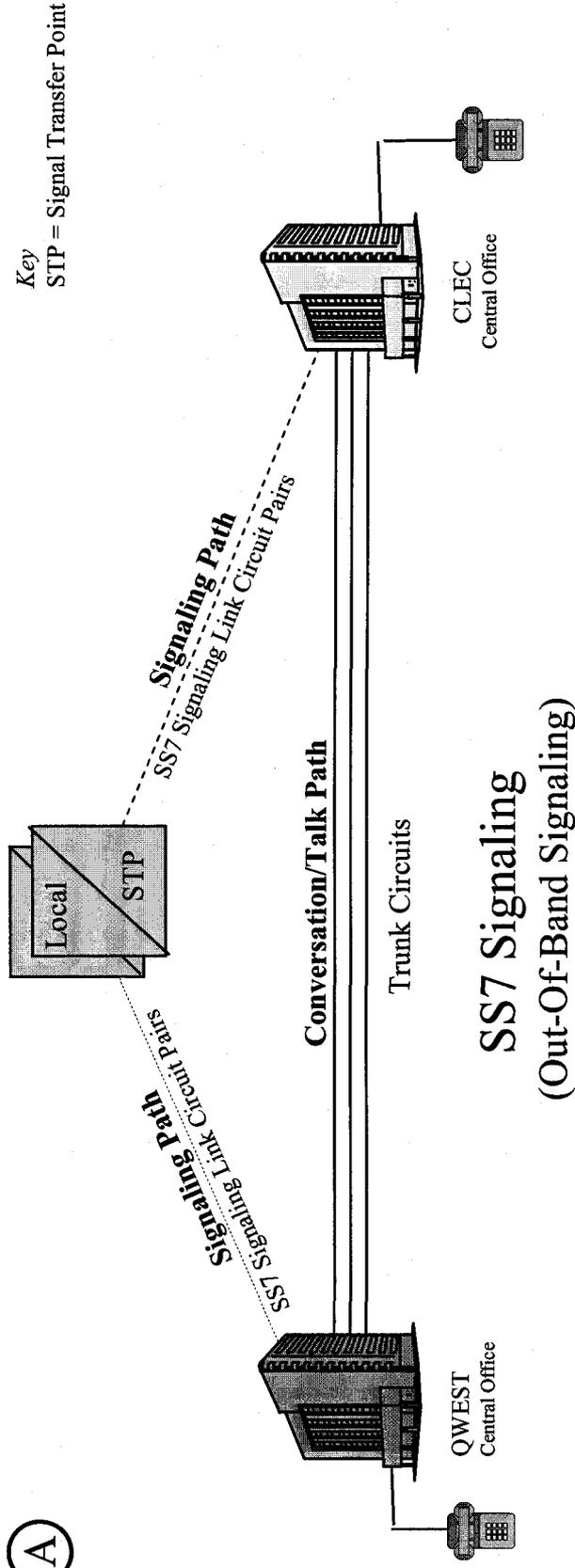
5 Qwest has proposed Interconnection Agreement language that is
6 reasonable and accommodates both North County and Qwest. Thus, the
7 Commission should approve Qwest's language.

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

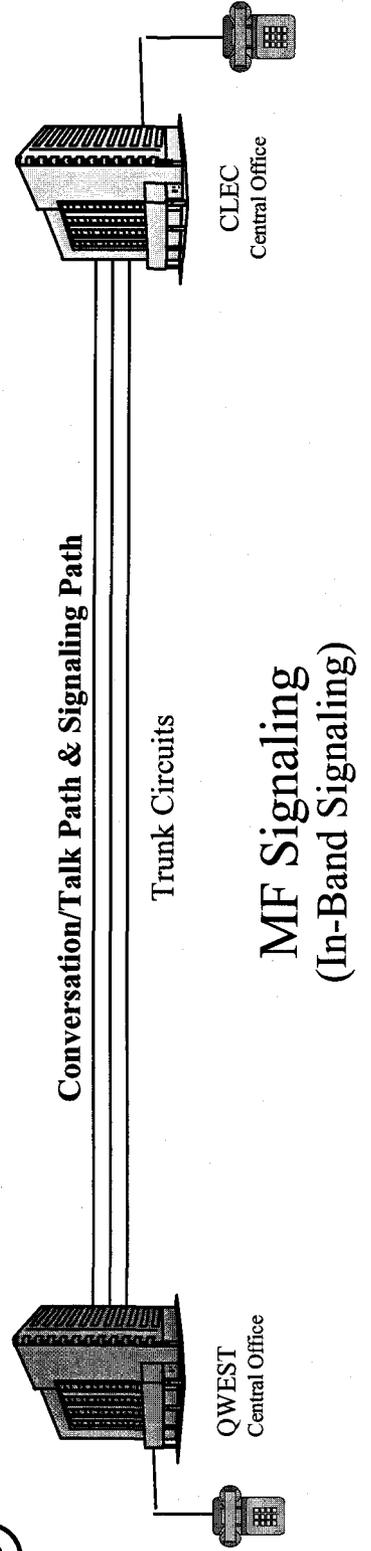
9 A. Yes.

Interconnection Trunk Signaling Signaling System No. 7 ("SS7") Vs. Multi Frequency ("MF")

(A)



(B)



BEFORE THE ARIZONA CORPORATION COMMISSION

KRISTIN K. MAYES
Chairman
GARY PIERCE
Commissioner
PAUL NEWMAN
Commissioner
SANDRA D. KENNEDY
Commissioner
BOB STUMP
Commissioner

**IN THE MATTER OF QWEST)
CORPORATION'S PETITION FOR)
ARBITRATION AND APPROVAL OF)
INTERCONNECTION AGREEMENT)
WITH NORTH COUNTY)
COMMUNICATIONS CORPORATION)
OF ARIZONA PURSUANT TO)
SECTION 252(B) OF THE)
COMMUNICATIONS ACT OF 1934 AS)
AMENDED BY THE)
TELECOMMUNICATIONS ACT OF)
1996 AND APPLICABLE STATE)
LAWS.)
)**

Docket No. **T-01051B-09-0383**
T-03335A-09-0383

DIRECT TESTIMONY
OF
RENÉE ALBERSHEIM
ON BEHALF OF
QWEST CORPORATION
DECEMBER 15, 2010

**DIRECT TESTIMONY OF RENEE ALBERSHEIM
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1

I. IDENTIFICATION OF WITNESS

2 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

3 A. My name is Renée Albersheim. I am employed by Qwest Corporation ("Qwest"),
4 as a Staff Witnessing Representative. I am testifying on behalf of Qwest. My
5 business address is 930 15th Street, 6th floor, Denver, Colorado, 80202.

6 **Q. PLEASE GIVE A BRIEF DESCRIPTION OF YOUR EDUCATIONAL**
7 **BACKGROUND AND TELEPHONE COMPANY EXPERIENCE.**

8 A. I have been working in Qwest's Global Wholesale Markets organization since
9 December 2003. Before December 2003, I had worked in Qwest's Information
10 Technologies Wholesale Systems organization since joining Qwest in October
11 1999.

12 Prior to becoming a Qwest employee, I worked for 15 years as a consultant on
13 many systems development projects and in a variety of roles, including the
14 following: programmer and systems developer, systems architect, project
15 manager, information center manager and software training consultant. I worked
16 on projects in a number of different industries, including: oil and gas; electric,
17 water and telephone utilities; insurance; fast food; computer hardware; and the
18 military. I also designed and developed a number of applications, including
19 electronic interfaces. During that time, I worked on several of Qwest's
20 Operations Support Systems ("OSS") as a consultant on Human Resources and
21 Interactive Access Billing Systems ("IABS") projects.

22 In addition to working full-time at Qwest, I also earned a Juris Doctor degree from
23 the University of Denver College of Law and passed the Colorado Bar
24 Examination in October 2001. Prior to attending law school, I received a Master
25 of Business Administration in Management Information Systems from the

1 University of Colorado College of Business and Administration in 1985 and a
2 Bachelor of Arts degree from the University of Colorado in 1983.

3 **II. PURPOSE OF TESTIMONY**

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

5 A. The purpose of my testimony is to explain Qwest's positions with regard to
6 language contained in its proposed interconnection agreement ("ICA") with North
7 County Communications Corporation, Inc. ("North County"). At present, three
8 sub-sections of the ICA are at issue, Section 7.1.1 and 7.2.1.1 regarding the
9 exchange of traffic and the use of Multi-Frequency ("MF") signaling, and Section
10 7.8, proposed by Qwest to address Qwest's right to receive accurate bills while
11 accommodating for MF signaling. In addition, I discuss Sections 7.3.1.1.3.1 and
12 7.3.2.2.1 of the ICA, addressing the relative use factor, or "RUF," and Virtual
13 NXX ("VNXX"). These sections were not at issue at the time Qwest filed its
14 petition, but are at issue as a result of North County's recently filed issues list.

15 **Q. NORTH COUNTY HAS STATED THAT THE PROPOSED ICA WAS**
16 **"DRAFTED BY QWEST, SOLELY FOR THE BENEFIT OF QWEST." DOES**
17 **QWEST AGREE WITH THIS CHARACTERIZATION OF THE PROPOSED ICA.**

18 A. No. The proposed ICA is based on Qwest's template contract which contains
19 many provisions that originated in Qwest's Statement of Generally Available
20 Terms and Conditions ("SGAT"). The SGAT was created and produced by an
21 industry collaboration during the Section 271 process in which industry
22 participants played a significant role in drafting the language that governs
23 Qwest's relationship with CLECs. The proposed agreement was therefore not
24 drafted by Qwest, and is certainly not solely for the benefit of Qwest.

1 **Q. HOW WAS THE ORIGINAL, EXPIRED ICA BETWEEN QWEST AND NORTH**
2 **COUNTY CREATED?**

3 A. The original, expired ICA between Qwest and North County was the result of an
4 arbitration proceeding between Qwest's predecessor U S WEST and MFS
5 Communications Company in 1996. Pursuant to the requirements of Section
6 252(i) of the Telecom Act of 1996, U S WEST was required to allow North
7 County to opt in to that ICA. Aside from changing the name of the CLEC from
8 MFS to North County, the agreement is the same as the 1996 arbitrated
9 agreement.

10 **Q. NORTH COUNTY HAS PREVIOUSLY REQUESTED A REDLINE**
11 **COMPARISON BETWEEN THE EXPIRED ICA AND QWEST'S PROPOSED**
12 **ICA. WOULD IT BE USEFUL FOR QWEST TO CREATE A REDLINE**
13 **DOCUMENT THAT COMPARES THE ORIGINAL EXPIRED ICA TO QWEST'S**
14 **PROPOSED ICA?**

15 A. No. Producing a redline comparing North County's old expired ICA to Qwest's
16 proposed ICA would be an exercise in futility, as the entire document would be
17 redlined. Qwest's contracts have changed in form, organization and content over
18 the past 13 years. Qwest's current contracts reflect Qwest's current product
19 offerings and current business processes. The most significant changes to
20 Qwest's contract template were created as a result of the industry collaboration
21 with Qwest during the Section 271 proceedings that produced the Statement of
22 Generally Available Terms and Conditions ("SGAT"). Many of the terms and
23 conditions in Qwest's current contracts and negotiations template originated in
24 the SGAT. To my knowledge, Qwest has never prepared a redline of the
25 predecessor ICA, as the only ICA at issue is the proposed ICA, and there is no
26 requirement under 252 or the Commission's arbitration rules to do so.

27 As noted above, the arbitrated agreement that North County opted into was
28 arbitrated and executed between Qwest and MFS in December 1996, and was

1 opted into by North County in June 1997. This was all well before the
2 completion, or even the start, of the SGAT process. The SGAT was first filed in
3 Arizona in February 1999 (Docket T-01051-B-99-0068). It was modified a
4 number of times through the collaborative Section 271 process, and has been
5 modified a number of times since the completion of that process to reflect
6 changes of law, changes resulting from Commission arbitration orders, and the
7 addition of services.

8 **Q. GIVEN THAT A REDLINE OF THE PROPOSED ICA IS NOT PRACTICAL, OR**
9 **EVEN ADVISABLE, IS IT POSSIBLE FOR QWEST TO IDENTIFY FOR NORTH**
10 **COUNTY ALL THE SUBSTANTIVE DIFFERENCES BETWEEN THE EXPIRED**
11 **AGREEMENT AND THE PROPOSED ICA?**

12 **A.** No. North County has argued that Qwest should identify for North County all the
13 substantive differences between the two ICAs. This is not realistic for a number
14 of reasons. First, Qwest would only be able to do so from the perspective of
15 what Qwest considers substantive; Qwest cannot define what North County
16 considers substantive, as Qwest is not privy to North County's business plan.

17 Whether the ICA contains substantive changes depends on how it is viewed. On
18 the one hand, it could be said that in general, it is substantively similar because it
19 implements Qwest's obligations under Section 251 of the Act consistent with the
20 requirements of the law, just as the 1996 contract did at the time it was executed.
21 On the other hand, it is clear that certain provisions are substantively different
22 from the current contract. For example, the provisions that Qwest has drafted in
23 Section 7 to permit North County's continued use of MF signaling for Qwest-
24 originated traffic are different from the expired ICA.

25 In general, Qwest considers the entire updated ICA to be a substantive
26 improvement to the form of the 1996 contract. It contains, to list only a few
27 examples, updated terms and conditions regarding Resale (Section 6),
28 Interconnection (Section 7), Collocation (Section 8), UNEs (Section 9), Ancillary

1 Services (Section 10), and many other provisions, including updated definitions
2 in Section 4 that reflect current terms and practices.

3 Qwest is only made aware of a CLEC's substantive issues based on the
4 feedback that Qwest receives during the ICA negotiations and by the issues
5 raised in an arbitration. Also, there is no presumption that the expired ICA will
6 serve as the baseline document for a new ICA. Qwest starts all ICA negotiations
7 with a current negotiations template which contains many provisions from
8 Qwest's SGAT. North County must do its own analysis of what it considers
9 substantive issues in the negotiations template. North County has had a
10 proposed ICA from Qwest for more than a year. North County has had that time
11 to identify what it considers substantive issues to Qwest. During negotiations
12 with North County, Qwest responded to all of the issues that North County raised
13 with proposed changes to the ICA. The proposed ICA that Qwest filed for this
14 arbitration illustrates Qwest's efforts to be responsive to North County's known
15 substantive issue at the time, with its accommodation of MF signaling.

16 **Q. WHY DOES QWEST WISH TO REPLACE THE EXPIRED ICA?**

17 A. Qwest wishes to replace the outdated ICA between Qwest and North County with
18 Qwest's current form of ICA. North County seems to presume that the expired
19 ICA is the baseline agreement, and that all changes from that expired ICA must
20 be explained and justified. Qwest does not agree with this position. Qwest
21 wishes to enter into a ICA with North County that reflects Qwest's current product
22 descriptions, processes, and the revised contract structure because the
23 proposed structure is better aligned with how Qwest currently does business.
24 Further, billing disputes have arisen under the expired ICA, and the new contract
25 would better address the circumstances that led to those billing issues.

1 **III. NEGOTIATIONS BETWEEN QWEST AND NORTH COUNTY**

2 **Q. WHEN DID QWEST INITIATE NEGOTIATIONS WITH NORTH COUNTY?**

3 A. Qwest sent a formal notice to North County on July 2, 2008, pursuant to Section
4 252(a) of the Telecommunications Act of 1996, requesting that North County
5 undertake negotiations with Qwest to establish a successor ICA.¹ This letter also
6 informed North County that if the parties were not able to execute a successor
7 agreement, then pursuant to Section 251(b) of the Act, Qwest would seek
8 arbitration from the respective state commissions with which agreements were
9 previously established. The initiation of negotiations established the window to
10 file for arbitration of a new ICA from November 14, 2008 through December 9,
11 2008.

12 **Q. DID NORTH COUNTY BEGIN TO NEGOTIATE WITH QWEST UPON RECEIPT**
13 **OF THE LETTER?**

14 A. No. Qwest had to send a follow-up email after receiving no response from North
15 County. North County then questioned the need for a new ICA, and the parties
16 exchanged a number of emails. Finally, on December 2, 2008, Qwest sent a
17 follow-up email to North County asking the company to agree to a 30-day
18 negotiation plan or to adopt an existing ICA to replace the existing (expired)
19 agreements in Arizona, Washington and Oregon.² North County finally agreed to
20 a 30-day negotiation plan.³

21 **Q. DID NEGOTIATIONS COMMENCE IMMEDIATELY?**

22 A. No. North County expressed its concern that a new ICA could impact the
23 company financially, and continued to resist entering into a new agreement.
24 Finally, in mid-December 2008, discussions commenced regarding Signaling

¹ See Exhibit RA-1 Letter requesting negotiations. This letter included a link to the template negotiations agreement that is used by Qwest as the starting point for all new contract negotiations.

² See Exhibit RA-2 - Qwest 12/2/2008 Email seeking negotiation plan or opt-in.

³ See Exhibit RA-3 - North County 12/2/08 Email agreeing to 30-day negotiation plan.

1 System 7 ("SS7") versus MF signaling. For the next several months discussions
2 continued but were sporadic, as North County missed scheduled meetings.
3 During this time it was necessary for the parties to execute extensions of the
4 arbitration window, in order for discussions to continue. In June 2009, Qwest
5 communicated that negotiations needed to come to a conclusion.⁴ At the end of
6 June, Qwest agreed to one more extension of the arbitration window, but
7 indicated that Qwest did not want any further extensions.⁵ This final arbitration
8 window closed on August 3, 2009.

9 Throughout this period, Qwest proceeded in a good faith belief that both parties
10 intended to establish a new ICA based on the negotiations that took place during
11 this time.

12 **Q. WHAT PROMPTED QWEST TO FILE FOR ARBITRATION?**

13 A. Qwest filed for arbitration on the last date of the arbitration window that was
14 established by the last extension agreed to by the parties. Qwest continued
15 negotiations with North County subsequent to the filing for arbitration, but the
16 parties have still not come to agreement on the issues that existed at the time
17 Qwest filed for arbitration.

18 **Q. WHAT OTHER MATTERS ARE AT ISSUE IN THIS CASE?**

19 A. The parties have identified following issues in the Joint Disputed Issues List:

- 20 • MF Signaling
- 21 • Relative Use Factor and VNXX
- 22 • Multiplexing Charges
- 23 • Trunk Non-Recurring Charges
- 24 • Third Party Transit Providers

⁴ See Exhibit RA-4 - 6/15/2009 Email from Jeff Nodland of Qwest to North County.

⁵ See Exhibit RA-5 - 6/25/2009 Email from Jeff Nodland of Qwest to North County.

1 **Q. DID NORTH COUNTY PROVIDE ANY ALTERNATIVE LANGUAGE FOR ANY**
2 **OF THE ISSUES IDENTIFIED IN THE JOINT DISPUTED ISSUES LIST?**

3 A. No.

4 **IV. MF SIGNALING**

5 **Q. HOW WILL QWEST PRESENT TESTIMONY REGARDING SIGNALING IN**
6 **THIS CASE?**

7 A. Philip Linse of Qwest will testify to the technical differences between MF
8 signaling and SS7 signaling. My testimony will concentrate on the impact these
9 technical differences have on billing.

10 **Q. TO PUT YOUR TESTIMONY IN CONTEXT, WHAT DOES MR. LINSE SAY**
11 **ABOUT THE TECHNICAL DIFFERENCES BETWEEN SS7 AND MF**
12 **SIGNALING?**

13 A. Mr. Linse's testimony and Exhibit explain that SS7 signaling is a digital code that
14 is used to manage connections between telecommunications switches and call
15 related databases. SS7 signaling is a type of signaling known as out of band
16 signaling or Common Channel Signaling ("CCS"). This means that the path that
17 the signaling uses to manage the trunk connections between switches is not the
18 same trunk connection as the communication path.

19 MF or multi-frequency signaling is generally an audible analog code that is used
20 to manage connections between telecommunications switches. MF signaling is a
21 type of signaling known as in-band trunk signaling. This means that the path that
22 the signaling uses to manage the trunk connections between switches is also the
23 same trunk connection as the communication or talk path. As Mr. Linse explains,
24 SS7 signaling differs from MF signaling because it is more efficient, more flexible,
25 and can be more reliable.

1 **Q. WHAT IS THE DIFFERENCE BETWEEN MF AND SS7 SIGNALING WITH**
2 **REGARD TO BILLING?**

3 A. The difference is that Qwest cannot measure or determine the jurisdiction of
4 different types of traffic on interconnection circuits that use MF signaling. On the
5 other hand, because SS7 signaling is a more sophisticated and advanced
6 technology, Qwest can measure and determine the different types of traffic on
7 circuits that use SS7 signaling. Because North County still uses MF signaling,
8 Qwest is unable to easily verify that the bills it receives from North County are
9 accurate. This can result in billing disputes, and in fact, such a dispute arose
10 during the course of the negotiations between North County and Qwest. Qwest
11 determined that it had significantly overpaid North County, because North County
12 had inappropriately included Jointly Provided Switched Access ("JPSA") minutes
13 of use in the total minutes of use subject to local reciprocal compensation from
14 Qwest.

15 **Q. WHAT DOES QWEST HAVE TO DO TO INVESTIGATE BILLING FROM A**
16 **CLEC THAT USES MF SIGNALING?**

17 A. Because Qwest cannot validate billing for traffic using connections that rely upon
18 MF signaling, Qwest is forced to rely on the information provided by the CLEC.
19 Otherwise, Qwest must try to find other sources of information to determine if it is
20 being billed properly. Such sources are not always available and cannot be
21 considered a realistic alternative for billing verification. The problems that can
22 arise in this circumstance are best illustrated by a discussion of the JPSA dispute
23 that arose between Qwest and North County.

24 **Q. PLEASE DESCRIBE THAT DISPUTE.**

25 A. In recognition of North County Communication's use of MF signaling, Qwest and
26 North County in 2001 agreed upon a methodology for use by North County for its
27 reciprocal compensation invoices to Qwest. One step in that process involved
28 the subtraction of the minutes of use associated with the Qwest-provided Jointly

1 Provided Switched Access ("JPSA"), or Meet Point Billing, records from the total
2 minutes of use terminating to North County over the LIS trunk groups
3 interconnected with Qwest's tandems. This is necessary because Qwest pays
4 North County for the local traffic that Qwest sends to North County's network, but
5 not for JPSA traffic. North County stopped identifying and removing that traffic
6 from its total terminating usage beginning with its October 2003 invoices to
7 Qwest. Instead, it indicated that the calls and associated minutes of use for the
8 "Meet Point Billing Records" were "N/A." In 2008, Qwest identified information
9 that could be used to quantify the number of JPSA records and associated
10 minutes of use, and through this information verified that North County was not
11 removing JPSA traffic from its bills to Qwest. Qwest's proposed contract
12 language, discussed below, attempts to address Qwest's right to receive
13 accurate bills when MF signaling is used.

14 **Q. HAS QWEST HAD ANY OTHER ISSUES WITH NORTH COUNTY'S BILLS?**

15 A. Yes. Of the 335 invoices that Qwest has received from North County, Qwest has
16 disputed 147 for a variety of reasons.⁶

17 **Q. CAN QWEST BILL A CLEC THAT USES MF SIGNALING FOR LOCAL**
18 **TRAFFIC ORIGINATING FROM THE CLEC'S NETWORK?**

19 A. No, Qwest is unable to bill for such traffic. Information necessary to bill
20 reciprocal compensation is unavailable to Qwest when the CLEC originates local
21 traffic that terminates or transits Qwest's network using MF signaling. Qwest
22 understands that most traffic today is one-way from Qwest customers to North
23 County, and it was Qwest's understanding throughout the negotiations that North
24 County intended to continue using one-way Local Interconnection Services
25 ("LIS") trunks. However, North County's response to Qwest's petition and its list
26 of disputed issues now appears to reconsider the possibility of two-way traffic. In
27 addition to the difficulties of validating North County's bills, North County's use of

⁶ See Exhibit RA-6 - Summary of Billing Disputes.

1 MF signaling means that Qwest would be unable to bill North County for North
2 County's originated local traffic that terminates to Qwest, or bill North County for
3 traffic that transits Qwest's network.

4 This is unacceptable for Qwest due to the limitations of MF signaling that
5 preclude Qwest from billing North County for such traffic. In addition there is a
6 potential for abuse if inappropriate traffic is sent over LIS trunks that Qwest is not
7 able to identify.

8 **Q. WHAT SECTION OF THE CONTRACT DEALS WITH THE EXCHANGE OF**
9 **TRAFFIC AND SIGNALING?**

10 A. The terms and conditions relating to the exchange of traffic, signaling and
11 compensation between the parties are contained in Section 7 of the ICA, which
12 deals specifically with Interconnection.

13 **Q. WHAT IS QWEST'S STANDARD LANGUAGE FOR THE EXCHANGE OF**
14 **TRAFFIC AND SIGNALING?**

15 A. Qwest's standard language for Section 7 begins:

16 7.1.1 This Section describes the Interconnection of Qwest's network and
17 CLEC's network for the purpose of exchanging Exchange Service
18 (EAS/Local traffic), IntraLATA LEC Toll and Jointly Provided Switched
19 Access traffic. Intercarrier traffic exchange will be mutual and reciprocal
20 and all traffic exchanged between the Parties must be provisioned
21 pursuant to this Agreement. A Party that has interconnected or gained
22 access under sections 251 (a) (1), 251 (c)(2), or 251 (c)(3) of the Act, may
23 offer information services through the same arrangement, so long as it is
24 offering Telecommunications Services through the same arrangement(s)
25 as well. Enhanced or information service providers (providers or
26 "Information Services" as that term is defined in 47 U.S.C. § 153 (20)) that
27 do not also provide domestic or international telecommunications are not
28 Telecommunications Carriers as defined by the Act and thus may not
29 interconnect under this Agreement. Qwest will provide Interconnection at
30 any Technically Feasible point within its network, including but not limited
31 to, (i) the Line Side of a local Switch (i.e., local switching); (ii) the Trunk
32 Side of a local Switch, (iii) the trunk connection points for a Tandem
33 Switch, (iv) Central Office Cross Connection points, (v) out-of-band

1 Signaling Transfer Points necessary to exchange traffic at these points
2 and access call-related databases, and (vi) points of access to Unbundled
3 Network Elements. Section 9 of this Agreement describes Interconnection
4 at points (i), (iv), (v), and (vi), although some aspects of these
5 Interconnection points are described in Section 7. "Interconnection" is as
6 described in the Act and refers, in this Section of the Agreement, to the
7 connection between networks for the purpose of transmission and routing
8 of Telephone Exchange Service traffic and IntraLATA LEC Toll traffic at
9 points (ii) and (iii) described above. Interconnection, which Qwest
10 currently names "Local Interconnection Service" (LIS), is provided for the
11 purpose of connecting End Office Switches to End Office Switches or End
12 Office Switches to local or Access Tandem Switches for the exchange of
13 Exchange Service (EAS/Local traffic); or End Office Switches to Access
14 Tandem Switches for the exchange of IntraLATA LEC Toll or Jointly
15 Provided Switched Access traffic. Qwest Tandem Switch to CLEC
16 Tandem Switch connections will be provided where Technically Feasible.
17 New or continued Qwest local Tandem Switch to Qwest Access Tandem
18 Switch and Qwest Access Tandem Switch to Qwest Access Tandem
19 Switch connections are not required where Qwest can demonstrate that
20 such connections present a risk of Switch exhaust and that Qwest does
21 not make similar use of its network to transport the local calls of its own or
22 any Affiliate's End User Customers.

23 The contract continues with language relevant to the exchange of traffic in
24 Section 7.2 as follows:

25 7.2.1.1 This Section 7.2 addresses the exchange of traffic between
26 CLEC's network and Qwest's network. Where either Party interconnects
27 and delivers traffic to the other from third parties, each Party shall bill such
28 third parties the appropriate charges pursuant to its respective Tariffs or
29 contractual offerings for such third party terminations. Unless otherwise
30 agreed to by the Parties, via an amendment to this Agreement, the Parties
31 will directly exchange traffic between their respective networks without the
32 use of third party transit providers.

33 Finally, the contract makes reference to signaling requirements as follows:

34 7.2.2.9.5 The Parties will provide Common Channel Signaling (CCS) to
35 one another in conjunction with all trunk circuits, except as provided
36 below.

1 a) The Parties will provision all trunking using SS7/CCS capabilities.
2 Exceptions to this arrangement would be limited to operator services
3 trunking, Directory Assistance trunking and 911 trunking.

4 **Q. HOW MANY CLECS HAVE OPTED INTO QWEST'S STANDARD LANGUAGE**
5 **IN ARIZONA?**

6 A. Of the 93 CLECs with ICAs in Arizona, 48 have opted into Qwest's template
7 language,⁷ which includes Qwest's standard language for SS7 signaling.⁸

8 **Q. WHY WAS MF SIGNALING PERMITTED IN THE EXPIRED ICA?**

9 A. The expired ICA had provisions that allowed the use of MF signaling because at
10 the time the ICA was executed, U S WEST and other carriers had a few switches
11 that used MF signaling in their networks, as the update to the modern SS7
12 system was not yet complete for all carriers or all central offices.

13 **Q. IN THIS CASE, DID QWEST ATTEMPT TO ACCOMMODATE NORTH**
14 **COUNTY'S DESIRE TO CONTINUE TO USE MF SIGNALING?**

15 A. Yes. Through its proposed language, Qwest agreed to interconnect
16 with North County using MF signaling. But to enable Qwest to receive accurate
17 bills, and verify those bills, Qwest also added language to the contract that
18 placed certain requirements on North County's bills. Additionally, Qwest's
19 language recognizes the present one-way flow of traffic.

20 **Q. WHAT LANGUAGE DID QWEST PROPOSE IN THE ICA IT FILED WITH ITS**
21 **PETITION FOR ARBITRATION?**

22 A. Qwest proposed to modify its language to allow North County to continue to use
23 MF signaling, but also to address Qwest's right to receive accurate bills. Qwest's

⁷ Qwest's negotiations template agreement can be found at <http://www.qwest.com/wholesale/clecs/nta.html>.

⁸ Of the remaining CLECs, 23 adopted agreements negotiated between Qwest and other CLECs, 17 negotiated agreements, and five went to arbitration to complete negotiated agreements. None of these agreements resulted in altered terms to accommodate MF signaling for the purposes of interconnection.

1 proposal to North County as filed in this arbitration is as follows, with changes
2 from the template language shown in bold and underlined:

3 7.1.1 This Section describes the Interconnection of Qwest's network and
4 CLEC's network for the purpose of exchanging Exchange Service
5 (EAS/Local traffic), IntraLATA LEC Toll and Jointly Provided
6 Switched Access traffic. Intercarrier traffic exchange ~~will~~**may** be
7 mutual and reciprocal and all traffic exchanged between the Parties
8 must be provisioned pursuant to this Agreement. **The Parties**
9 **understand and agree that CLEC currently sends no traffic to**
10 **Qwest and instead terminates traffic either originated by**
11 **Qwest or originated by other carriers and passed through**
12 **Qwest to CLEC. The Parties further understand and agree that**
13 **CLEC currently uses multi-frequency ("MF") signaling in its**
14 **receipt of traffic from Qwest and does not utilize SS7**
15 **signaling. The Parties agree that, should CLEC subsequently**
16 **wish to originate traffic to send to Qwest for termination or**
17 **passing of traffic to other Telecommunications Carriers, the**
18 **Parties will mutually negotiate an amendment to this**
19 **Agreement which will also include requirements for use of SS7**
20 **signaling in the mutual exchange of traffic.** A Party that has
21 interconnected or gained access under sections 251 (a) (1), 251
22 (c)(2), or 251 (c)(3) of the Act, may offer information services
23 through the same arrangement, so long as it is offering
24 Telecommunications Services through the same arrangement(s) as
25 well. Enhanced or information service providers (providers or
26 "Information Services" as that term is defined in 47 U.S.C. § 153
27 (20)) that do not also provide domestic or international
28 telecommunications are not Telecommunications Carriers as
29 defined by the Act and thus may not interconnect under this
30 Agreement. Qwest will provide Interconnection at any Technically
31 Feasible point within its network, including but not limited to, (i) the
32 Line Side of a local Switch (i.e., local switching); (ii) the Trunk Side
33 of a local Switch, (iii) the trunk connection points for a Tandem
34 Switch, (iv) Central Office Cross Connection points, (v) out-of-band
35 Signaling Transfer Points necessary to exchange traffic at these
36 points and access call-related databases, and (vi) points of access
37 to Unbundled Network Elements. Section 9 of this Agreement
38 describes Interconnection at points (i), (iv), (v), and (vi), although
39 some aspects of these Interconnection points are described in
40 Section 7. "Interconnection" is as described in the Act and refers,
41 in this Section of the Agreement, to the connection between
42 networks for the purpose of transmission and routing of Telephone

1 Exchange Service traffic and IntraLATA LEC Toll traffic at points (ii)
2 and (iii) described above. Interconnection, which Qwest currently
3 names "Local Interconnection Service" (LIS), is provided for the
4 purpose of connecting End Office Switches to End Office Switches
5 or End Office Switches to local or Access Tandem Switches for the
6 exchange of Exchange Service (EAS/Local traffic); or End Office
7 Switches to Access Tandem Switches for the exchange of
8 IntraLATA LEC Toll or Jointly Provided Switched Access traffic.
9 Qwest Tandem Switch to CLEC Tandem Switch connections will be
10 provided where Technically Feasible. New or continued Qwest
11 local Tandem Switch to Qwest Access Tandem Switch and Qwest
12 Access Tandem Switch to Qwest Access Tandem Switch
13 connections are not required where Qwest can demonstrate that
14 such connections present a risk of Switch exhaust and that Qwest
15 does not make similar use of its network to transport the local calls
16 of its own or any Affiliate's End User Customers.

17 7.2.1.1 This Section 7.2 addresses the exchange of traffic
18 between CLEC's network and Qwest's network. Where either Party
19 interconnects and delivers traffic to the other from third parties,
20 each Party shall bill such third parties the appropriate charges
21 pursuant to its respective Tariffs or contractual offerings for such
22 third party terminations. Unless otherwise agreed to by the Parties,
23 via an amendment to this Agreement, the Parties will directly
24 exchange traffic between their respective networks without the use
25 of third party transit providers. **In addition, as discussed in**
26 **Section 7.1.1 above, unless a later amendment is mutually**
27 **negotiated by the Parties, CLEC will send no traffic to Qwest**
28 **either for termination or for Qwest to send to other**
29 **Telecommunications Carriers connected to Qwest.**

30 7.8 Billing Methodology for MF Signaled Traffic Terminated to CLEC

31 7.8.1 While the traffic between Qwest and CLEC is as described in
32 Section 7.1.1 and this Agreement has not been **amended**
33 **otherwise, CLEC will use the following process to determine**
34 **the amount of traffic originated by Qwest that CLEC is entitled**
35 **to receive intercarrier compensation from Qwest for its**
36 **determination.**

37 **7.8.1.1 CLEC will determine the total number of non-**
38 **VNXX minutes terminating to CLEC's end office switch**
39 **from Qwest each calendar month over the LIS trunk**
40 **groups interconnecting Qwest and CLEC. That**

1 information will be provided to Qwest on a per-trunk
2 group basis.

3 7.8.1.2 The minutes determined in Section 7.8.1.1 will be
4 identified as end office versus tandem minutes, e.g.
5 minutes terminating to CLEC that were delivered to
6 CLEC from a Qwest end office ("End Office Minutes")
7 versus those minutes terminating to CLEC that were
8 delivered to CLEC from a Qwest tandem ("Tandem
9 Minutes"). Qwest will have the right, once per calendar
10 year, to request reports of the detail and methodology
11 discussed on this Section 7.8.1.2 in order to audit the
12 usage underlying the billed reciprocal compensation
13 minutes of use. At no time shall the total number of
14 minutes of use per in-service DS1 exceed 400,000 on a
15 calendar month basis.

16 7.8.1.3 In determining the number of minutes for which CLEC
17 is entitled to receive intercarrier compensation for
18 termination from Qwest, CLEC will subtract from the
19 total monthly minutes of use determined in Section
20 7.8.1.1. the following:

21 CLEC will subtract from the sum of each switch's Tandem
22 Minutes for the calendar month (subject to the limitation
23 described in Step 7.8.1.2 above):

24 (a) All wireline-originating minutes of use that transits
25 Qwest's network and terminates to CLEC's switch
26 during that calendar month. Qwest will provide CLEC
27 summary level messages and minutes each month for
28 these wireline-originating transit records.

29 (b) All wireless-originating minutes of use for traffic that
30 transits Qwest's network and terminates to CLEC's switch
31 during that calendar month. Qwest will provide CLEC
32 summary level messages and minutes each month for
33 these wireless-originating transit records.

34 (c) All minutes of use for Jointly Provided Switched
35 Access ("JPSA") traffic originating from or terminating
36 to CLEC's switch during that calendar month. Qwest
37 will provide CLEC summary level messages and
38 minutes each month for these JPSA records.

1 (d) All Qwest-originated IntraLATA LEC Toll for which
2 Qwest is the originating intraLATA toll provider. Qwest
3 will provide CLEC summary level messages and
4 minutes each month for these intraLATA toll records.

5 (e) All ILEC-originating minutes of use for traffic that
6 transits Qwest's network and terminates to CLEC's
7 switch during that calendar month. (These minutes of
8 use are not included in the wireline-originating minutes
9 reflected in (a) above) Qwest will provide CLEC
10 summary level messages and minutes each month for
11 these ILEC-originating transit records.

12 (f) For clarification, as discussed generally in Section 7
13 of this Agreement, Qwest has no obligation to
14 compensate CLEC for local minutes terminating to
15 CLEC that are originated by third party providers,
16 IntraLATA LEC Toll minutes terminating to CLEC for
17 which Qwest is not the originating toll provider, and
18 JPSA Traffic.

19 The language in Section 7 and the associated sub-sections was proposed by
20 Qwest for North County to facilitate accurate billing when MF signaling is used.

21 **Q. CAN YOU EXPLAIN THE PURPOSE OF THE LANGUAGE PROPOSED IN**
22 **SECTION 7.8?**

23 A. Yes. This language requires North County to produce accurate bills for Qwest in
24 light of the fact that Qwest is not able to verify traffic when MF signaling is used.
25 It also clarifies that Qwest is not required to pay for minutes associated with
26 JPSA, non-Qwest intraLATA LEC toll, wireless traffic, and minutes originated by
27 third-party providers. In essence, the responsibility for the tracking and billing of
28 traffic is given to North County, because Qwest is essentially at North County's
29 mercy with regard to traffic sent using MF signaling.

30 **Q. CAN QWEST ACCEPT MF SIGNALING FOR TWO-WAY LIS TRUNKS?**

31 A. No. If North County wishes to originate traffic over the two-way LIS trunks,
32 Qwest must insist that SS7 signaling be used. In that case, Qwest would
33 propose its standard template language for the relevant sections of an

1 amendment to the ICA as contemplated in Section 7.2.1.1. of the proposed ICA.
2 The standard language is listed at the beginning of this section of my testimony.
3 It should be noted that the standard language does not include a Section 7.8.

4 **Q. WITHIN THE ISSUE OF MF SIGNALING IN THE JOINT DISPUTED ISSUES**
5 **LIST, NORTH COUNTY CLAIMS THAT THE CAP ON MINUTES IS AN**
6 **ARBITRARY 60% DISCOUNT FOR QWEST. IS THAT AN ACCURATE**
7 **REFLECTION OF THE BASIS FOR THE CAP ON MINUTES?**

8 A. No. The cap of 400,000 minutes is not arbitrary. It is a reasonable number,
9 based on past usage patterns, and is designed to protect Qwest since Qwest
10 does not have an automated way to verify North County's total minutes, because
11 MF signaling is being used. Qwest needs some level of certainty that North
12 County's measurement of minutes is accurate, especially given our past billing
13 disputes. This cap reflects the total traffic that is originated by Qwest and others
14 that is terminated at North County using North County's most recent bills to
15 Qwest for Arizona as well as Qwest's experience with other CLECs. Qwest's cap
16 in Washington and Oregon is 240,000. Qwest nearly doubled that cap for
17 Arizona. Qwest would be willing to negotiate the limit if traffic terminating to
18 North County were to increase, but this would have to be done following a
19 manual study of North County's traffic.

20 **Q. HOW EXACTLY IS THE CAP CALCULATED?**

21 A. Qwest first took the total number of minutes of use, as reported by North County,
22 terminating to North County's Arizona switches each month over the Local
23 Interconnection Service ("LIS") trunk groups interconnecting Qwest and North
24 County, and divided that total by the number of in-service DS1s for the respective
25 month. (There were no originating minutes to include in the calculation based on
26 North County's assertion that it originated no traffic over the LIS trunk groups.)
27 Qwest did this calculation for each month during the period of January 2007
28 through July 2008, excluding August and September 2007 because the in-

1 service trunk information was not available. In its calculation, Qwest used the
2 total minute of use data provided by North County in its monthly reciprocal
3 compensation invoices to Qwest; however Qwest did not have an independent
4 source to validate the minutes of use reflected on North County's invoices.
5 Qwest's calculation resulted in an average number of minutes of use per DS1 for
6 each month. The seventeen month average of the monthly minutes of use per
7 DS1 was 419,551.

8 **Q. IF QWEST'S CALCULATION OF THE AVERAGE OF THE MINUTES OF USE**
9 **PER MONTH PER DS1 EXCEEDED 419,000 PER MONTH, WHY DID QWEST**
10 **PROPOSE TO NORTH COUNTY A 400,000 MAXIMUM AVERAGE NUMBER**
11 **OF MINUTES OF USE PER MONTH PER DS1?**

12 **A.** Qwest did not believe that the 419,551 monthly average per DS1 that was
13 calculated using North County's unvalidated billing data was reasonable. Prior to
14 Qwest proposing the 400,000 maximum number of average minutes of use per
15 month per DS1 during the interconnection agreement negotiations, Qwest
16 advised North County that it believed that a monthly average of 200,000 minutes
17 per DS1 was more appropriate. In an effort to reach an agreement with North
18 County during the interconnection agreement negotiations, Qwest doubled the
19 200,000 minutes of use per month per DS1 and proposed a 400,000 maximum
20 number of average minutes per month per DS1. Because Qwest believes that
21 the 419,551 average usage includes non-compensable minutes, a cap of
22 400,000 is a reasonable number.

1 Q. **ARE THERE ANY OTHER CLECS IN ARIZONA THAT ARE CURRENTLY**
2 **EXCHANGING TRAFFIC WITH QWEST OVER LIS TRUNKS THAT HAVE**
3 **AVERAGE MINUTES OF USE PER MONTH PER DS1 THAT APPROACH**
4 **400,000 MINUTES PER MONTH?**

5 A. No. Qwest calculated the average number of minutes of use per DS1 using
6 October 2010 data for those CLECs interconnected to Qwest using Signaling
7 System 7 for their LIS trunks. All of these CLECs originated and terminated
8 traffic over the LIS trunks. The average number of total minutes of use per
9 month per DS1 for the 23 companies was 107,965 minutes. The range of
10 monthly minutes per DS1 for these CLECs was 25,639 – 233,619.
11 Consequently, Qwest's proposal that there be a maximum 400,000 average
12 minutes of use per month per DS1 is generous.

13 Q. **IS THE 400,000 CAP APPLIED TO INDIVIDUAL DS1 CIRCUITS?**

14 A. No. The cap applies to the average of the total minutes over all in-service DS1
15 circuits. Consistent with its calculations described above, Qwest would divide the
16 total number of minutes of use terminating to North County's Arizona switches in
17 the month, as provided by North County, by the total number of in-service DS1s
18 for that month to obtain an average number of minutes of use per month per
19 DS1. That average would then be compared with the 400,000 maximum number
20 of minutes of use per DS1 per month to determine whether that maximum
21 number had been exceeded.

22 Q. **WHAT HAPPENS TO THE TRAFFIC THAT EXCEEDS THE 400,000**
23 **AVERAGE?**

24 A. Nothing happens to the traffic itself. In other words the traffic will not be blocked
25 or prevented. The cap applies to the number of minutes for which Qwest will pay
26 compensation to North County. Any traffic in excess of the maximum in a given
27 month will not be counted toward compensation to North County.

1 **Q. IS THE CAP BASED ON THE PHYSICAL CAPACITY OF A DS1?**

2 A. No. North County's assertion of a 60% discount is based on the physical
3 capacity a DS1 and it assumes 100% utilization of that capacity. As shown by
4 the actual usage figures discussed earlier in my testimony, the cap of 400,000
5 minutes is greater than any other CLEC's usage.

6 **Q. DOES ANY OTHER CLEC HAVE A SIMILAR CAP?**

7 A. No. Because of this, NCC claims the cap is discriminatory, but the important
8 point is that no other CLEC exclusively uses MF signaling. Thus, there are no
9 other CLECs similarly situated to NCC. All of the provisions in Section 7.8, such
10 as the cap, are the terms Qwest considers necessary to permit North County to
11 continue using MF signaling for Qwest-originated local traffic.

12 **Q. YOU STATED THAT THE CAP IS INTENDED TO PROTECT QWEST. WHAT**
13 **IS THE CAP PROTECTING QWEST FROM?**

14 A. It is intended to protect Qwest from arbitrage, not just from North County but from
15 any carrier that opts into this agreement. This protection is necessary because
16 of the limitations placed on Qwest by the use of MF signaling.

17 **Q. WOULD THE CAP ON MINUTES BE AT ISSUE IF THE CONTRACT WERE**
18 **ESTABLISHED USING BILL-AND-KEEP INSTEAD OF RECIPROCAL**
19 **COMPENSATION FOR BILLING OF LOCAL INTERCONNECTION TRAFFIC?**

20 A. No, it would not. Qwest is willing to use bill-and-keep for this contract.

21 **V. RELATIVE USE FACTOR ("RUF") AND VNXX**

22 **Q. WHAT IS THE RUF?**

23 A. The relative use factor, or RUF, is applicable to recurring direct-trunked transport
24 and entrance facility charges for two-way LIS trunks to allow each carrier to
25 account for its relative proportion of traffic exchanged on those trunks.

1 **Q. WAS LANGUAGE REGARDING THE RUF AT ISSUE WHEN QWEST FILED**
2 **FOR ARBITRATION?**

3 A. No. North County raised concerns regarding the traffic types when calculating
4 the RUF in the Joint Disputed Issues List and in negotiations subsequent to the
5 filing for arbitration. At the time that Qwest filed for arbitration of this agreement,
6 the parties had not exchanged language regarding the calculation of the RUF.
7 North County has not presented any language regarding the RUF.

8 **Q. WHAT IS QWEST'S STANDARD LANGUAGE FOR THE RUF?**

9 A. Qwest's standard language reads as follows:

10 7.3.1.1.3.1 The provider of the LIS two-way Entrance Facility (EF) will
11 initially share the cost of the LIS two-way EF by assuming an initial relative
12 use factor (RUF) of fifty percent (50%) for a minimum of one (1) quarter if
13 the Parties have not exchanged LIS traffic previously. The nominal
14 charge to the other Party for the use of the EF, as described in Exhibit A,
15 shall be reduced by this initial relative use factor. Payments by the other
16 Party will be according to this initial relative use factor for a minimum of
17 one (1) quarter. The initial relative use factor will continue for both bill
18 reduction and payments until the Parties agree to a new factor, based
19 upon actual minutes of use data. If CLEC's End User Customers are
20 assigned NPA-NXXs associated with a rate center different from the rate
21 center where the End User Customers are physically located, traffic that
22 does not originate and terminate within the same Qwest Local Calling
23 Area, regardless of the called and calling NPA-NXXs involving those End
24 User Customers, is referred to as "VNXX traffic." For purposes of
25 determining the relative use factor, the terminating carrier is responsible
26 for VNXX traffic. If either Party demonstrates with traffic data that actual
27 minutes of use during the previous quarter justifies a new relative use
28 factor that Party will send a notice to the other Party. The new factor will
29 be calculated based upon Exhibit H. Once the Parties finalize a new
30 factor, bill reductions and payments will apply going forward from the date
31 the original notice was sent. Qwest has never agreed to exchange VNXX
32 traffic with CLEC.

33 7.3.2.2.1 The provider of the LIS two-way DTT facility will initially share
34 the cost of the LIS two-way DTT facility by assuming an initial relative use
35 factor of fifty percent (50%) for a minimum of one (1) quarter if the Parties
36 have not exchanged LIS traffic previously. The nominal charge to the
37 other Party for the use of the DTT facility, as described in Exhibit A, shall

1 be reduced by this initial relative use factor. Payments by the other Party
2 will be according to this initial relative use factor for a minimum of one (1)
3 quarter. The initial relative use factor will continue for both bill reduction
4 and payments until the Parties agree to a new factor. If CLEC's End User
5 Customers are assigned NPA-NXXs associated with a rate center other
6 than the rate center where the End User Customers are physically
7 located, traffic that does not originate and terminate within the same
8 Qwest Local Calling Area, regardless of the called and calling NPA-NXXs
9 involving those End User Customers, is referred to as "VNXX traffic." For
10 purposes of determining the relative use factor, the terminating carrier is
11 responsible for VNXX traffic. If either Party demonstrates with data that
12 actual minutes of use during the previous quarter justifies a new relative
13 use factor that Party will send a notice to the other Party. The new factor
14 will be calculated based upon Exhibit H. Once the Parties finalize a new
15 factor, bill reductions and payments will apply going forward from the date
16 the original notice was sent. Qwest has never agreed to exchange VNXX
17 traffic with CLEC.

18 **Q. HOW MANY CLECS HAVE OPTED INTO QWEST'S STANDARD LANGUAGE**
19 **FOR THE RUF?**

20 A. Of the 93 CLECs with ICAs in Arizona, 48 opted into Qwest's template language,
21 which includes Qwest's standard language for the RUF.

22 **Q. HAS NORTH COUNTY PROPOSED ALTERNATIVE CONTRACT LANGUAGE**
23 **FOR THE RUF?**

24 A. No.

25 **Q. WHAT IS VNXX?**

26 A. Per the definition contained in the proposed interconnection agreement, VNXX,
27 or Virtual NXX, is:

28 all traffic originated by a Party's End User Customer and dialed with a
29 local dialing pattern that is not terminated to the other Party's End User
30 Customer physically located within the same Qwest Local Calling Area (as
31 approved by the state Commission) as the originating caller, regardless of
32 the NPA-NXX dialed. VNXX does not include originating 8XX traffic.

1 **Q. WAS VNXX AN ISSUE WHEN QWEST FILED FOR ARBITRATION?**

2 A. No. North County raised concerns regarding the treatment of VNXX traffic in the
3 calculation of the RUF in subsequent negotiations. At the time that Qwest filed
4 for arbitration of this agreement, the parties had not exchanged contract
5 language regarding VNXX beyond what was filed by Qwest in Section 7.8 and
6 Exhibit H regarding the RUF and the treatment of VNXX traffic in North County's
7 bills to Qwest. The parties continued negotiations after Qwest filed for
8 arbitration, but there has still been no agreement on contract language regarding
9 the VNXX traffic, and North County did not propose any alternative contract
10 language with its list of disputed issues in this case.

11 **Q. WHAT IS NORTH COUNTY'S OBJECTION TO THE REFERENCE TO VNXX IN**
12 **THE CALCULATION OF THE RUF?**

13 A. North County makes three statements regarding VNXX in the Joint Disputed
14 Issue List:

15 1. That the agreement should remain silent on the meaning and application
16 of VNXX traffic, and that this should be regulated by the Commission.

17 2. North County also claims that Qwest offers foreign exchange services
18 which falls under the definition of VNXX, and that Qwest should not be
19 allowed to offer a service that NCC can't offer. North County makes the
20 same claim regarding Remote Call Forwarding, and

21 3. If language is to be included regarding VNXX, then Foreign Exchange
22 Service and Remote Call Forwarding should not apply.

23 I will address each of these claims separately.

1 Q. SHOULD THE AGREEMENT STAY SILENT WITH REGARD TO VNXX
2 TRAFFIC?

3 A. No. The purpose of an interconnection agreement is to establish certainty in the
4 relationship between the parties. The notion that VNXX should be regulated by
5 the Commission rather than specifically addressed in the agreement invites
6 future unnecessary litigation. It is also inconsistent with the purpose of the ICA,
7 which is to memorialize all of the terms and conditions between the parties. This
8 also means that any VNXX traffic, which is normally not attributed to the
9 originating carrier, would by default be attributed to Qwest. This would be a clear
10 and invalid advantage for North County, which claims that Qwest originates all of
11 the traffic that is exchanged between the parties.

12 Q. HAS THIS COMMISSION MADE ANY RULINGS REGARDING THE USE OF
13 VNXX?

14 A. Yes. In the Level 3 Arbitration, the Commission determined that VNXX would not
15 be permitted, and that the parties could negotiate an "FX-Like" alternative to
16 VNXX in the interim until the Commission completes an investigation into VNXX.⁹

17 IT IS FURTHER ORDERED that Qwest shall work with Level 3 to
18 implement within thirty (30) days of the effective date of this
19 Decision an interim replacement for VNXX which we shall refer to
20 as FX-like traffic. **Such ISP-bound and VoIP FX-like traffic shall**
21 **be routed over a direct end office trunk between Level 3's**
22 **network and the Qwest end office serving the local calling area**
23 **of the originating Qwest end user. The direct end office trunk**
24 **shall be established and paid for by Level 3 under the terms of**
25 **this Agreement.**

26 IT IS FURTHER ORDERED that intercarrier compensation for FX-like
27 traffic exchanged between Level 3 and Qwest during the interim
28 period shall be set at \$0.0007 per MOU consistent with the rate for
29 ISP-bound traffic established by the FCC.

⁹ To date this investigation has not taken place.

1 IT IS FURTHER ORDERED that, within sixty (60) days of the effective
2 date of this Decision, Level 3 shall cease using VNXX.

3 IT IS FURTHER ORDERED that the interim use of FX-like traffic shall be
4 allowed to continue until such time as the Commission issues a
5 Decision resolving the issues concerning the use of VNXX.

6 The Commission further ordered that VNXX traffic be exchanged on a bill and
7 keep basis until the parties implement an interim replacement for VNXX known
8 as FX-Like Traffic.¹⁰

9 The Commission's language does not permit the use of VNXX over LIS trunks
10 but rather requires the establishment of direct trunks for the exchange of what it
11 calls FX-like traffic. The Commission's order allows the CLEC to offer an
12 equivalent to Qwest's FX product offering, thus doing away with North County's
13 objection to Qwest's FX product.

14 Qwest's proposed language does not expressly prohibit VNXX on North County's
15 LIS trunks, however it does treat VNXX traffic in a manner consistent with the
16 Commission's order above, in that North County will not be compensated for any
17 VNXX traffic under the RUF calculation as described in Qwest's proposed Exhibit
18 H to the Interconnection agreement.

19 **Q. NORTH COUNTY CLAIMS THAT REMOTE CALL FORWARDING SHOULD**
20 **NOT APPLY TO THE CALCULATION OF THE RUF. IS REMOTE CALL**
21 **FORWARDING IN ANY WAY EQUIVALENT TO VNXX OR TO FX?**

22 **A. No. Remote Call Forwarding is not equivalent to VNXX or to FX because access**
23 **charges and toll charges are not avoided with this product. Qwest's product**

¹⁰ See *In the Matter of the Petition of Level 3 Communications LLC for Arbitration of an Interconnection Agreement with Qwest Corporation pursuant to Section 252(b) of the Telecommunications Act of 1996*, Docket No. T-03654A-05-0350, T-01051B-05-0350, Decision Nos. 68817, and 69176, June 29 and December 5, 2006, at pages 57, and 5-6. (Emphasis added).

1 documentation clearly states that access charges will apply to calls forwarded to
2 a number outside the local calling area, and that subscribers will pay applicable
3 toll charges.

4 **Q. HAS NORTH COUNTY PROPOSED ALTERNATIVE LANGUAGE FOR THE**
5 **RUF OR FOR THE TREATMENT OF VNXX IN THE CONTRACT?**

6 A. No.

7 **Q. WHAT SHOULD THIS COMMISSION DECIDE WITH REGARD TO THE RUF**
8 **AND REFERENCES TO VNXX IN THE CONTRACT BETWEEN QWEST AND**
9 **NORTH COUNTY?**

10 A. The Commission should adopt Qwest's proposed language for sections
11 7.3.1.1.3.1, 7.3.2.2.1, the definition of VNXX, and Exhibit H, as this creates
12 certainty between the parties as to the treatment of VNXX traffic, and is
13 consistent with prior Commission rulings and with Commission approved
14 agreements in Arizona.

15 **VI. MULTIPLEXING CHARGES**

16 **Q. WERE MULTIPLEXING CHARGES DISCUSSED IN NEGOTIATIONS WITH**
17 **NORTH COUNTY?**

18 A. No.

19 **Q. WHAT IS QWEST'S STANDARD LANGUAGE FOR MULTIPLEXING**
20 **CHARGES?**

21 A. Qwest's standard language states:

22 7.3.2.3 Multiplexing options (DS1/DS3 MUX or DS0/DS1 MUX) are
23 available at the rates specified in Exhibit A.

1 **Q. DID NORTH COUNTY PAY MULTIPLEXING CHARGES UNDER ITS EXPIRED**
2 **AGREEMENT?**

3 A. Yes. North County paid multiplexing charges under the existing (expired) ICA.

4 **Q. IS ANY OTHER CARRIER GIVEN THE EXEMPTION FROM MULTIPLEXING**
5 **CHARGES THAT NORTH COUNTY IS SEEKING HERE?**

6 A. No. No other carrier has been granted an exemption from paying multiplexing
7 charges such as the one North County is seeking in this contract. Multiplexing is
8 only established and the cost is only charged if the CLEC has requested
9 multiplexing. In effect, North County is asking to receive multiplexing from Qwest
10 for free.

11 **Q. DID NORTH COUNTY PROPOSE ALTERNATIVE LANGUAGE REGARDING**
12 **MULTIPLEXING?**

13 A. No.

14 **Q. WHICH LANGUAGE SHOULD THIS COMMISSION ADOPT WITH REGARD**
15 **TO MULTIPLEXING?**

16 A. This Commission should adopt Qwest's language for section 7.3.2.3 for the
17 agreement between Qwest and North County.

18 **VII. TRUNK NON-RECURRING CHARGES**

19 **Q. WERE TRUNK NON-RECURRING CHARGES DISCUSSED IN**
20 **NEGOTIATIONS WITH NORTH COUNTY?**

21 A. No. Qwest does not believe that trunk non-recurring charges should be at issue
22 in this arbitration. This topic was not discussed in the negotiations prior to or
23 subsequent to the filing for arbitration, and is newly raised in the Joint Disputed
24 Issues List.

1 **Q. WHAT IS QWEST'S STANDARD LANGUAGE FOR TRUNK NON-**
2 **RECURRING CHARGES?**

3 A. Qwest's standard language states:

4 7.3.3 Trunk Nonrecurring charges

5
6 7.3.3.1 Installation nonrecurring charges may be assessed by the
7 provider for each LIS trunk ordered. Qwest rates are specified in Exhibit A.

8 7.3.3.2 Nonrecurring charges for rearrangement may be assessed by the
9 provider for each LIS trunk rearrangement ordered, at one-half (1/2) the
10 rates specified in Exhibit A.

11 **Q. DID NORTH COUNTY PAY TRUNK NON-RECURRING CHARGES UNDER**
12 **ITS EXPIRED AGREEMENT?**

13 A. Yes.

14 **Q. IS ANY OTHER CARRIER GIVEN THE EXEMPTION FROM TRUNK NON-**
15 **RECURRING CHARGES THAT NORTH COUNTY IS SEEKING HERE?**

16 A. No. No other carrier has been given an exemption from paying trunk non-
17 recurring charges. Qwest only installs a trunk at the request of the CLEC, and
18 therefore it is appropriate that the CLEC pay the non-recurring cost of this
19 installation. In effect, North County is asking to have trunks installed for free.

20 **Q. DID NORTH COUNTY PROPOSE ALTERNATIVE LANGUAGE FOR TRUNK**
21 **NON-RECURRING CHARGES?**

22 A. No.

23 **Q. WHICH LANGUAGE SHOULD THIS COMMISSION ADOPT WITH REGARD**
24 **TO TRUNK NON-RECURRING CHARGES?**

25 A. This Commission should adopt Qwest's language for section 7.3.3, 7.3.3.1 and
26 7.3.3.2 for the agreement between Qwest and North County.

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VIII. THIRD PARTY TRANSIT PROVIDERS

Q. WHAT IS NORTH COUNTY'S ISSUE AS DESCRIBED IN THE ISSUES MATRIX?

A. Generally, North County asserts that it should be able to interconnect with Qwest via a third party tandem provider.

Q. DOES QWEST'S PROPOSED LANGUAGE ADDRESS THE ISSUE OF NORTH COUNTY'S USE OF A THIRD PARTY FOR THE PURPOSED OF INDIRECT INTERCONNECTION WITH QWEST?

A. Yes, Qwest's language disallows such interconnection until a separate amendment is negotiated.

Q. WHAT LANGUAGE DOES NORTH COUNTY APPEAR TO CONSIDER IN DISPUTE?

A. It appears North County objects to the following language in Section 7.2.1:

Unless otherwise agreed to by the Parties, via an amendment to this Agreement, the Parties will directly exchange traffic between their respective networks without the use of third party transit providers.

Q. CAN SUCH A PROVISION ALSO BE FOUND WITHIN THE EXISTING EXPIRED ICA?

A. Yes. A similar provision exists and can be found in the last sentence of section V(A) and which states:

1 Absent a separately negotiated agreement to the contrary, the Parties will
2 directly exchange traffic between their respective networks, without the
3 use of third party transit providers.

4 **Q. WAS THE USE OF A THIRD PARTY TRANSIT PROVIDER RAISED DURING**
5 **NEGOTIATIONS?**

6 A. No.

7 **Q. HAS NORTH COUNTY INITIATED ANY DISCUSSIONS WITH QWEST**
8 **REGARDING ITS WISH TO NEGOTIATE AN AMENDMENT TO THE**
9 **PROPOSED OR PREVIOUS INTERCONNECTION AGREEMENT?**

10 A. No.

11 **Q. IS QWEST WILLING TO NEGOTIATE AN AMENDMENT TO NORTH COUNTY'S**
12 **INTERCONNECTION AGREEMENT?**

13 A. Yes.

14 **Q. WHY IS SUCH AN AMENDMENT REQUIRED WHEN A CLEC LIKE NORTH**
15 **COUNTY DECIDES TO USE A THIRD PARTY TRANSIT PROVIDER?**

16 A. An amendment will address issues raised by the use of a third party transit
17 provider that are not covered in the terms and conditions of the proposed
18 interconnection agreement. Some of the issues include:

- 19
- 20 • What agreements or amendments between Qwest and the third party
should also exist
 - 21 • How the CLEC should appropriately notify the industry of such an
22 arrangement

- 1 • How the transit arrangement will affect Qwest's obligation to route other
- 2 service provider's traffic to the CLEC
- 3 • What compensation arrangements will be agreed upon
- 4 • The conditions for the exchange of records between the parties
- 5 • What minimum signaling information should be required
- 6 • What type of traffic may be restricted from being routed through a third
- 7 party

8 None of these issues have been discussed or negotiated. Therefore, the parties
9 should be allowed to negotiate an amendment to address these issues and any
10 other concerns that North County or Qwest may have associated with the use of a
11 third party transit provider. Qwest respectfully requests that this issue be removed
12 from this arbitration in an attempt to allow the parties to negotiate an amendment
13 that would address the terms and conditions for the use of a third party transit
14 provider.

15 IX. CONCLUSION

16 Q. PLEASE SUMMARIZE YOUR TESTIMONY.

17 A. Qwest has made every effort to accommodate North County's desire to continue
18 using MF signaling instead of industry standard SS7 Signaling. The language
19 Qwest has proposed in this arbitration strikes a balance by allowing North County
20 to continue using MF signaling, but compensating the fact that different types of
21 traffic cannot be tracked by Qwest if MF signaling is used by spelling out the
22 requirements that North County must fulfill when it submits bills to Qwest for
23 terminating traffic.

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

2 **A.** Yes, it does.



Qwest Corporation
1801 California St., Suite 2400
Denver, Colorado 80202
Phone: 303-965-3887
Email: Nancy.Donahue@qwest.com
Nancy Donahue
Staff Advocate Policy & Law

July 2, 2008

Todd Lesser
North County Communications Corporation
3802 Rosecrans Street, Suite 485
San Diego, CA 92110

Re: Termination of Interconnection Agreements

Dear Mr. Lesser:

This letter provides formal notice to North County Communications Corporation ("North County") that Qwest Corporation ("Qwest") intends to terminate the existing Interconnection Agreements (ICAs) in the states of Arizona, Oregon and Washington. Qwest requests that, pursuant to Section 252(a) of the Telecommunications Act of 1996, North County undertake negotiations with Qwest for successor ICAs in the respective states.

Please review the following options that you may elect to obtain successor ICAs:

Option 1. Adopt the Multi-State Negotiation Interconnection Agreement (including Exhibits), Qwest's latest offering, which provides up to date terms and conditions including all the latest products that Qwest has made available and aligns with current operational processes. The Multi-State Negotiation Interconnection Agreement and the state specific Exhibits can be found at: <http://www.qwest.com/wholesale/clecs/sgatswireline.html>

Option 2. Adopt an existing recently approved state specific ICA of another CLEC. Upon your request, Steve Dea will provide a state specific list of ICAs that are available for adoption.

Option 3. The Multi-state Negotiations Interconnection Agreement template can be used as the basis to negotiate the terms and conditions for successor ICAs in the respective states. For purposes of negotiations, please review the electronic version of the Multi-State Negotiation Interconnection Agreement template and e-mail suggested revisions in a red-lined form directly to me at Nancy.Donahue@Qwest.com. Upon receipt of North County's red-line, we will schedule negotiation session to discuss North County's proposed modifications.

If we are unable to execute successor ICAs as set forth in the Federal Telecommunications Act of 1996 ("Act"), Qwest intends to ask the respective Commissions to arbitrate agreements pursuant to Section 251(b) of the Act. Based on the date of this notification letter, the arbitration window during which either party may file for arbitration commences on November 14, 2008 and ends on December 9, 2008, inclusive.

Please let me know which option North County would like to pursue for successor ICAs or contact me if you have any questions.

Sincerely yours,

Nancy J. Donahue

From: Nodland, Jeff
Sent: Tuesday, December 02, 2008 1:04 PM
To: Nodland, Jeff; Todd Lesser; Donahue, Nancy
Subject: RE: North County Communications Corporation ("North County")

Mr. Lesser:

I am sending you this communication to confirm that, unless North County either agree to a 30 day negotiation plan or adopts another interconnection agreement to replace its expired agreements in Arizona, Washington and Oregon, Qwest will file arbitration petitions asking that the respective commissions impose it's template agreement in those states. You have not responded to my last email which responded to your questions, nor have you negotiated or requested an adoption, leaving Qwest no other options to proceed. I am available to assist you in one of the options I discussed, but they must be done immediately. Please contact me at your convenience.

Jeff Nodland

Jeffrey T. Nodland
303-383-6657

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From: Todd Lesser [todd@nccom.com]
Sent: Tuesday, December 02, 2008 1:14 PM
To: Nodland, Jeff
Cc: Donahue, Nancy
Subject: Re: North County Communications Corporation ("North County")

I would be willing to agree to a 30 day negotiaton plan.

On 2008-12-02 at 14:03, Nodland, Jeff (jeff.nodland@qwest.com) wrote:

> Mr. Lesser:

>

> I am sending you this communication to confirm that, unless North County either agree to a 30 day negotiation plan or adopts another interconnection agreement to replace its expired agreements in Arizona, Washington and Oregon, Qwest will file arbitration petitions asking that the respective commissions impose it's template agreement in those states. You have not responded to my last email which responded to your questions, nor have you negotiated or requested an adoption, leaving Qwest no other options to proceed. I am available to assist you in one of the options I discussed, but they must be done immediately. Please contact me at your convenience.

>

> Jeff Nodland

>

> Jeffrey T. Nodland

> 303-383-6657

>

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From: Nodland, Jeff
Sent: Monday, June 15, 2009 11:07 AM
To: 'Todd Lesser'; Donahue, Nancy
Cc: 'Hazzard, Michael'
Subject: RE: North County (Arizona, Oregon and Washington) Arbitration Window Extension

Todd and Michael:

I wanted to touch base with you on our trying to complete the negotiations for the Interconnection Agreements. It has been a significant amount of time now since we sent our language proposal that resolved all of the deal points we had general agreement to in our negotiations. Unfortunately, we have not received North County's edits, and although Michael did say that North County was reviewing opt-in choices, I did relate that any other existing agreement would have the SS7 requirement language already in, thus making that rather difficult. We need to move this to completion and while Qwest does not want to arbitrate an agreement needlessly, I am becoming concerned that this may be the only option to move forward. I know that this is not your choice of how we move forward, so we need a precise timeline of how we will complete this within the next two days, so that Qwest can evaluate whether we need to move forward immediately. Please let us know, thank you, Todd.

Jeff

Jeffrey T. Nodland
303-383-6657

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From: Nodland, Jeff
Sent: Thursday, June 25, 2009 2:05 PM
To: Donahue, Nancy; 'Hazzard, Michael'; 'todd@nccom.com'
Subject: RE: North County (Arizona, Oregon and Washington) Arbitration Window Extension

Attachments: North County Arbitration Window Extension (Arizona Oregon and Washington) 6-25-09.doc

Michael & Todd:

Unfortunately, we have come to the end of another window and we need to extend the window. It is my hope that this is the last such extension needed. Please execute this and get it back to Nancy and I. Also, please get back to us on our proposal. Thanks.

Jeff
Jeffrey T. Nodland
303-383-6657

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