EXHIBIT ____ (MDG-1T)

BEFORE THE
WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION

QWEST CORPORATION, Complainant, v. LEVEL 3 COMMUNICATIONS, LLC; PAC-WEST TELECOM, INC.; NORTHWEST TELEPHONE INC.; TCG-SEATTLE; ELECTRIC LIGHTWAVE, INC.; ADVANCED TELECOM GROUP, INC. D/B/A ESCHELON TELECOM, INC.; FOCAL COMMUNICATIONS CORPORATION; GLOBAL CROSSING LOCAL SERVICES INC; AND , MCI WORLDCOM COMMUNICATIONS, INC. Respondents.	Docket No. UT-063038

DIRECT TESTIMONY OF

MACK D. GREENE

ON BEHALF OF

LEVEL 3 COMMUNICATIONS, LLC

February 2, 2007

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I. INTRODUCTION

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

A. My name is Mack D. Greene. I am a Director with Level 3 Communications, LLC. My business address is 1025 Eldorado Blvd, Colorado, 80021. I am filing this testimony on behalf of Level 3 Communications, LLC of Broomfield, CO.

Q. PLEASE REVIEW YOUR EDUCATION AND RELEVANT WORK EXPERIENCE.

A. I have been employed by Level 3 Communications, LLC ("Level 3") since 2003. Presently, I serve Level 3 as the Director of Interconnection Services. In this position, I am responsible for negotiation, implementation and enforcement of interconnection agreements with over one hundred and fifty incumbent LECs (including RBOCs and rural LECs), competitive LECs, CMRS providers, cable MSOs and other communications providers nationwide. Prior to my appointment as Director of Interconnection Services, I served as Director Customer Access Solutions for Level 3. As such, I directed all product management activities for Access Solutions to the Level 3 Network. I managed pricing and design support for direct and indirect sales teams and I managed leased network expense supporting business unit product profit and loss.

Before joining Level 3, I worked for Qwest Communications. At Qwest, I held a variety of product positions, most recently serving as Vice President-Strategy and Implementation, and Vice President-Voice and Data Product Management. I attended Howard University in Washington D.C. participating in the Bachelor of Science, mechanical engineering program.

II. STATEMENT OF SCOPE AND SUMMARY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. I am testifying on behalf of Level 3, regarding how the Level 3 network interconnects with the Qwest network from a technical point of view and what the implications of that interconnection are in the context of this proceeding. Specifically, I address how the networks treat Level 3's locally dialed ISP-bound traffic and its wholesale interconnected voice over Internet protocol ("VoIP") services.

Q. PLEASE INTRODUCE YOUR TESTIMONY, INCLUDING YOUR APPROACH AND ORGANIZATION OF INFORMATION.

A. My testimony explains Level 3's network configuration and operations. It then reviews the fundamentals of interconnection and call routing relevant to this issue. Finally, it includes an examination of Level 3's locally dialed ISP service and wholesale VoIP offerings that compete with Qwest (or Qwest's affiliates) in the communications marketplace today.

Against this real world background, my testimony explains why Level 3's position is consistent with established interconnection rules, reflects a reasonable application of technical telecommunications principles, and is in the public interest of the State of Washington. Finally, I address the practical implications of Qwest's complaint in the competitive marketplace in which national networks vie for the same sets of customers.

III. LEVEL 3'S NETWORK AND SERVICES

Q. PLEASE INTRODUCE LEVEL 3 COMMUNICATIONS, LLC.

A. Level 3 is one of the largest providers of wholesale locally dialed services to ISPs in North America and is also a primary provider of Internet connectivity for millions of broadband subscribers through its cable and DSL customer partners.

The world's largest telecom carriers all continue to use Level 3 services, as do the 10 largest U.S. Internet Service Providers, and the 10 largest European telecom carriers.

The company offers a wide range of communications services over its approximately 33,300 mile broadband fiber optic network connecting 16 countries. These services include Internet Protocol (IP) services, broadband transport, collocation services, and patented Softswitch-based managed modem and voice services. Services offered under the "Level 3 Communications" brand include:

- Internet access services
- Managed modem dial-up services
- Broadband transport
- IP-centric voice services
- Private packet-switched services
- DSL Aggregation
- Collocation
- Metropolitan and intercity dark fiber

Based on the amount of Internet traffic on Level 3's IP backbone, Level 3 is among the largest Internet carriers in the world. Through Level 3's dial-up ISP customers, the company's dial-up infrastructure is accessible to approximately 90% of the U.S. population. When a typical Internet user at home dials the Internet using a modem in the U.S., there is better than a one-in-three chance that their call is being completed by Level 3.

Level 3 began building this network beginning in 1997. Upon its completion in 2001 the Smithsonian Institution declared it "the biggest change in communications technology in 100 years." This is a literal truth. No other network of this scale had ever been designed and built entirely around the very technology that enables the Internet: TCP/IP. All others had been built just as they were beginning in 1870 – end-to-end circuit switches. As former FCC Chairman Michael Powell stated in the July 2004 issue

of Fortune, "VoIP represents the most significant paradigm shift in the entire history of modern communications, since the invention of the telephone."

To make all of this possible Level 3 connects to the Internet via hundreds of Internet peering arrangements at Level 3 Gateways, located in 29 metropolitan areas.[1] These gateway facilities range in size from 50,000 to 550,000 square feet of advanced secure communications space. Level 3's Gateways connect its local and intercity fiber networks and house its high-speed transmission equipment. They are also where Level 3's routers and softswitch equipment is located.

Q. IS LEVEL 3 RECOGNIZED AS A TECHNOLOGY INNOVATOR?

A. Yes. Level 3 is widely recognized for its culture of technology innovation and leadership. The company has played a key role in helping to lead the global communications industry through a true revolution – the shift away from the legacy circuit-based technologies in place for the past century to new Internet Protocol (IP) technologies.

The company built the first international, continuously upgradeable network optimized for IP technology. Level 3 now operates one of the largest Internet backbones in the world, as well as one of the world's largest softswitch platforms carrying billions of minutes of IP-based voice and data calls every week.

Level 3 engineers and scientists include some of the industry's most notable network architects and developers. They are responsible for innovations in many of the

[1] Peering arrangements, as used here, refer to locations at which Level 3 exchanges traffic with other providers of Internet connectivity. Suppose an end user connected to an ISP that uses Level 3 for its Internet connectivity seeks to download information from a web site that is hosted by an ISP that uses some other entity (say, UUNet) for its Internet connectivity. For the information to get from the UUNet network to the Level 3 network, there must be connections between them.

most important areas of IP-based communications, including softswitch networking, Multi-Protocol Label Switching, bandwidth provisioning, and network optimization.

Beyond advanced voice, video, and data services, Level 3 envisions IP technology becoming the foundation for a wide variety of communications companies that specialize in audio, video, and collaborative services for both businesses and consumers.

Today, Level 3 stands as an acknowledged leader in the communications industry, and continues to aggressively develop new technologies, pushing the boundaries as one of the key players in the technology revolution.

Q. HAVE OTHERS RECOGNIZED LEVEL 3'S ROLE IN THE DEVELOPMENT AND INNOVATION OF COMMUNICATIONS TECHNOLOGY?

A. Yes. The Smithsonian Institution has recognized the Level 3 network as an important component of the ongoing revolution in communications and information technology. In April 2000, the Smithsonian cited Level 3 as a Computerworld Laureate for its historic achievement in "helping to stimulate the biggest change in communications technology in 100 years."

Q. WHERE DOES LEVEL 3 OFFER SERVICE?

A. The Level 3 Network serves 99 markets with its own network facilities – 77 in the U.S. and 22 in Europe. In addition, the network delivers wholesale dial access coverage to more than 93 percent of the U.S. population. Using Level 3's wholesale VoIP and other service offerings, Level 3's customers offer voice services using our network in more than 300 markets across North America.

Q. PLEASE DESCRIBE LEVEL 3'S NETWORK IN THE STATE OF WASHINGTON.

A. Level 3 owns and operates collocation space in Seattle as well as a fiber optic backbone throughout Washington. Level 3 also provides direct interconnection to Tier 1 Internet backbone facilities at the following Seattle locations:

- 14808 SE 16th St
- 18715 120th Ave NE
- 20307 North Creek Pkwy
- 1121 SE Everett Mall Way - Suite 220
- 14676 NE 95th St
- 1000 2nd Ave
- 1000 Denny Way
- 1122 3rd Ave
- 120 Lenora St
- 1200 3rd Ave
- 1501 4th Ave
- 1511 6th Ave
- 1914 3rd Ave
- 2001 6th Ave
- 3433 S 120th Pl
- 955 Broadway

But this is not the whole story. Level 3 has also invested significantly in a vast interconnection architecture in Washington to ensure the seamless exchange of both Internet and voice traffic between Qwest customers and Level 3 customers.

IV. SUMMARY OF THE DISPUTE

Q. PLEASE DESCRIBE YOUR UNDERSTANDING OF WHAT THIS CASE IS ABOUT.

A. Last year, both Level 3 and PacWest Communications were forced to seek the assistance of the Washington Commission in implementing the FCC's *Core Forbearance Order* in their Qwest interconnection agreements in Washington. The result of that enforcement action against Qwest was a finding that Qwest must follow the FCC's revisions to the reciprocal compensation structure for locally dialed ISP-bound traffic under the

interconnection agreements in effect with Level 3 and PacWest.[2] However, in both Orders, the Commission noted that its decision was based on the terms of the interconnection agreements between the parties and that it was not making a general declaration about the propriety of "VNXX" arrangements. Based on that statement, Qwest filed complaints against all the competitive providers in Washington that Qwest believes offer services that employ what is know as "Virtual NXX" architectures.

Q. PLEASE EXPLAIN THE CONCEPT OF A VIRTUAL NXX OR VNXX CALL AS YOU UNDERSTAND IT.

A. VNXX calls involve the assignment of numbers associated with a local calling area to customers physically located outside of the calling area. In this regard, the use of VNXX is no different than FX services, which also assign numbers in this manner.

Q. WHAT IS THE FUNDAMENTAL POINT OF DISPUTE IN THE VNXX DEBATE?

A. As Qwest witness Mr. Brotherson acknowledges in his testimony at pages 3 and 20, this case is fundamentally about intercarrier compensation for locally dialed calls that Qwest's end users make to reach their chosen Internet Service Providers ("ISPs").[3] Qwest and CLECs disagree on the appropriate compensation for these locally dialed calls. In fact, as Mr. Brotherson acknowledges, the Commission recently determined that "Qwest was obligated to pay terminating compensation on VNXX traffic to Level 3 and PacWest" in the Level 3 complaint case (Docket No. UT-053039) and the PacWest complaint case (Docket No. UT-053036).[4] Qwest effectively seeks to relitigate these

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[2] Level 3 Communications LLC v. Qwest Corporation, Docket No. UT-053039, Order No. 5 (Feb. 10, 2006); Pac-West v. Qwest Corporation, Docket No. UT-053036, Order No. 5 (Feb. 10, 2006).

3 Exhibit LBB-IT, Direct Testimony of Larry B. Brotherson, at 3:13-19, 20:16-24 (Nov. 20, 2006); see, Exhibit PL-1T, Direct Testimony of Philip Linse, at 7:9 (Nov. 20, 2006) ("In short, the significance is compensation.").

4 Exhibit LBB-IT, at 3:13-19.

issues using a novel approach. I understand that the Commission has determined that the FCC has implemented a solution for how carriers ought to compensate one another for terminating *all* ISP-bound traffic,[5] including ISP-bound traffic that terminates to a modem that is not located in the local calling area of the calling party.[6] Notwithstanding this Commission's previous findings, through its testimony, Qwest asks the Commission to require Qwest's competitors to in effect duplicate Qwest's century-old network architecture in order to engage in the same numbering assignment practices that Qwest engages in today and to receive compensation under the FCC's ISP regime. Alternatively, Qwest appears to suggest that its competitors must become a Qwest customer rather than provide an equivalent service as a competing co-carrier. In other words, Qwest seeks to impose on its competitors a physical location requirement for the competitor's (but not Qwest's) customer that has not previously existed in Washington and is not necessary based on interconnection or network architecture.

Q. WHAT DOES LEVEL 3 BELIEVE THE INTERCARRIER COMPENSATION STRUCTURE OUGHT TO BE?

A. Level 3 believes the established intercarrier compensation regime applies to all ISP and ESP-bound calls. The FCC's rate structure established in the *ISP Remand Order* and *Core Forbearance Order* already addresses Qwest's stated objections and need only be enforced to resolve the issues presented in this case. Level 3 also believes that the Commission should apply the same compensation rule to VoIP traffic that applies to ISP-

5 In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, Intercarrier Compensation for ISP-Bound Traffic, CC Docket Nos. 96-98, 99-68, FCC 01-131, Order on Remand and Report and Order, at ¶¶ 31, 78-79, 82, 89 (April 27, 2001) ("ISP Remand Order"); Petition of Core Communications, Inc. for Forbearance Under 47 U.S.C. § 160(c) from Application of the ISP Remand Order, WC Docket No. 03-171, FCC 04-241, Order, at ¶ 24 (Oct. 18, 2004) ("Core Forbearance Order") ("carriers likely incur the same costs when delivering a call to a local end user and a data call to an ISP.")

6 Level 3, Order No. 05, at ¶¶ 25-30.

bound traffic. The networks supporting ISP-bound and VoIP are the same. So are the costs. A clear and unambiguous finding in this docket that established Commission precedent will control compensation for all ISP and ESP-bound traffic will end the ILEC litigation and ease contractual administration in Washington going forward.

V. NETWORK INTERCONNECTION FUNDAMENTALS AND LEVEL 3'S WASHINGTON NETWORK

Q. HOW DO TWO NETWORKS EXCHANGE TRAFFIC?

A. At its most fundamental level, in order for two different networks to exchange traffic – whatever type of traffic it might be – the networks have to be interoperable and connect at some point. Interoperability is simply the ability of each network to understand what the other network is saying and to act upon this understanding.

Q. WHAT IS A POI?

A. A "point of interconnection" or "POI" is the location where two local exchange carriers connect their networks for the purpose of exchanging traffic. In this case, it is the point to which Level 3 brings its traffic to connect with Qwest's network to exchange traffic. Each party pays for its network on its respective side of the POI. This allows each party to provide service according to the technical requirements of their network. A POI can consist of any number of leased or owned facilities including a fiber meet point, a collocation arrangement or at other mutually agreed to points. Either party has the choice of constructing or leasing facilities up to the POI. The POI also defines the point at which each company takes its traffic from a financial point of view. The technical and financial aspects of POIs are intermixed and must be addressed together.

Q. WHAT IS A TRUNK?

A. A trunk is a logical connection between two switches, provisioned by means of physical facilities between those two switches. The physical facility is not the trunk. It may be any appropriate medium - copper, optical fiber, microwave radio, coaxial cable, etc. The trunk is the logical path carried on the physical facility. The term "trunk" arises from within the public switched telephone network ("PSTN") and it refers to a single voice-grade connection, capable of carrying one voice call between two switches.

Q. WHAT IS A TRUNK GROUP?

A. A trunk group is a collection of trunks, normally (but not necessarily) provisioned over the same physical facility connecting two switches, configured to operate as a cohesive unit when delivering multiple voice connections between the two switches. You can think of the physical facility carrying a trunk group as a completely unmarked road - just a wide concrete path between two cities. Each individual lane that we paint on the highway is a trunk. All the lanes going together in the same direction are a trunk group. The wider the highway, the more lanes it has, and the more traffic it can carry.

Q. HOW ARE CALLS ROUTED ON THE PSTN?

A. Local calls are routed between switches according to the routing tables in each switch. Depending on the number dialed (putting aside number portability), a switch either handles a call entirely on its own (such as a call between next-door neighbors); or it sends the call off to some other switch by routing it outbound on a particular trunk port. Toll calls - that is, calls carried by IXCs - are routed according to the Local Exchange Routing Guide ("LERG"). The LERG is a database that identifies switches and other entities, routing points and numbers associated with those entities. Thus, for example, in the normal course within the PSTN, the LERG would indicate that a call to a number within the "208" NPA should be delivered to a particular carrier, at a particular location or

routing point in Washington. Billing systems used with switches within a local calling area know which numbers are associated with the local calling area and which numbers are not for rating purposes.

Q. SO CALLS BETWEEN TWO LOCAL NUMBERS ARE TREATED AS LOCAL CALLS?

A. Yes. Each end office switch has a table of NPA-NXXs that the particular switch views as "local." For all such NPA-NXXs, the switch has to make only one decision: "Is this call 'mine' or do I need to send it to some other switch?" If the dialed number "belongs" to the originating switch, as noted above, the call stays there. But if the dialed number "belongs" to some other switch, the only thing the originating switch needs to know is which trunk port to send the call out on.

Long ago, retail local calling plans grew to include customers served by many different switches. As a result, what constitutes a "local" call for a retail customer is not really a technical matter at all. While intrastate tariffs were originally developed to regulate service in a monopoly environment, and while state jurisdiction is still very important to interconnection, when one examines the actual network configurations of providing service, the designation "local" simply reflects a retail marketing decision by the originating carrier. It is essentially an arbitrary decision which NPA-NXXs to include on the programmed list of "local" calls and which to exclude (which means, usually, that the customer has to dial a "1" before the NPA-NXX-XXXX in order to complete the call).

Q. MR. BROTHERSON TESTIFIES THAT IF A LEC OR CUSTOMERS IN A PARTICULAR AREA WISH TO EXPAND A LOCAL CALLING AREA, THE COMMISSION MUST APPROVE THAT PROCESS.[7] HE IMPLIES THAT BY OFFERING VNXX SERVICES, CLECS UNLAWFULLY AVOID REGULATORY APPROVAL.[8] DO YOU AGREE?

A. No. Again, Qwest is attempting to impose discriminatory requirements on its competitors in the market for FX-like services. If it were the case that assigning a number associated with local calling area A to a customer located in calling area B violated the Commission's process for expanding a calling area, then Qwest would not be permitted to offer FX service without violating the same requirements. In fact, Qwest and other ILECs have engaged in this type of numbering assignment practice for years. Moreover, the use of FX and VNXX arrangements does not expand the local calling area to include new communities of interest. Customers in calling area A are not permitted to call *all* customers located in local calling area B without paying toll charges, but only those FX or VNXX customers located in calling area B that purchase FX or VNXX service for calling area A.

Q. DO QWEST SWITCHES HAVE ANY WAY OF RATING CALLS BETWEEN TWO LOCAL NUMBERS AS OTHER THAN LOCAL CALLS?

A. No. Qwest admits that network routing changes would have to be implemented to route Qwest's FX traffic and CLEC VNXX differently from other locally dialed traffic.[9] However, I know of no way to accomplish such routing changes. Qwest does not explain how such routing changes could be technically implemented and admits that it does not have an estimate of the cost of its proposed routing change.[10] A switch has no way of

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7 Exhibit LBB-IT, Direct Testimony of Larry B. Brotherson, at 14:1-4 (Nov. 20, 2006).

8 Exhibit LBB-IT, Direct Testimony of Larry B. Brotherson, at 14:1-17.

9 Exhibit MDG-4, Qwest Response to Level 3 DR 01-034I in UT 053039 and Broadwing DR 01-02.

10 *Id.*

storing information regarding the ISP server location (or other customer physical location) associated with a phone number assigned to that switch, and likewise has no way of receiving or storing information about the physical location assigned to a phone number of an originating caller served by that switch. Similarly, the SS7 protocol that sends information between switches for call set-up and billing purposes does not have any parameters to identify the premises locations of calling or called parties. In the end, Qwest presents the Commission with two choices—prohibit the CLEC's (but not Qwest's) assignment of numbers associated with a local calling area to customers physically located outside of the calling area or require carriers to implement a billing change.[11] Again, Qwest does not explain how such a billing change could be implemented or what it would cost the industry.

Q. FROM A TECHNICAL NETWORK PERSPECTIVE, IS THERE ANY LIMITATION ON THE DISTANCE THAT A "LOCAL" CALL CAN TRAVEL, THE SIZE OF A "LOCAL" CALLING AREA, OR THE NUMBER OF CUSTOMERS IN A "LOCAL" CALLING AREA?

A. None at all. And, in fact, the size and scope of "local calling areas" varies greatly from place to place around the country. Some states have large local calling areas; others have small local calling areas. Again, the technical network personnel have no basis to care one way or another. The carrier's marketing and/or regulatory personnel just have to tell the engineers which NPA-NXXs to include on the "local" list for any given switch. The originating switch does not "care" (in the sense of doing anything at all technically different) where it is actually sending a "local" call to a number served by some other switch; and the terminating switch does "care" (in the same sense) where a "local" call is coming from. These are retail marketing questions, not technical questions.

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11 *Id.*

Q. HOW DOES LEVEL 3 PROVIDE CONNECTIVITY WITH QWEST IN WASHINGTON?

A. In Washington as well as nationwide, Level 3 primarily deploys a fiber optic network, but modifies that approach according to technical demands and business realities. In the core of its network, therefore, Level 3 deploys and maintains an extensive network of intercity and metro fiber facilities. The intercity fiber facilities interconnect at network gateways, which I previously described as massive collocation and interconnection facilities. In addition to this fiber optic core network, Level 3 utilizes leased facilities to establish connectivity to Qwest tandem offices where construction of entirely new plant is infeasible. Regardless of the method chosen – leased or constructed transport facilities, **Confidential Exhibit MDG-1**, attached, illustrates how deeply Level 3 has built out its interconnection network in Washington, while **Exhibit MDG-2** presents a schematic of the interconnection architecture deployed by Level 3 in Washington.

Q. WHAT INFRASTRUCTURE DOES LEVEL 3 HAVE IN WASHINGTON AND WHERE DOES LEVEL 3 ESTABLISH POINTS OF INTERCONNECTION?

A. Level 3 has invested in a substantial amount of facilities in Washington and has a large number of points of interconnection. The map at **Confidential Exhibit MDG-1** shows the Level 3 fiber routes, fiber distribution points and points of interconnection in Washington. Points of interconnection are located at collocation sites in Qwest offices, at Qwest offices where Level 3 has leased facilities and in Qwest offices where Direct End Office Trunks (DEOTs) terminate. These trunks are shared with Qwest and each company pays their fair share of the trunk cost based on originating traffic, as required by Washington rules.

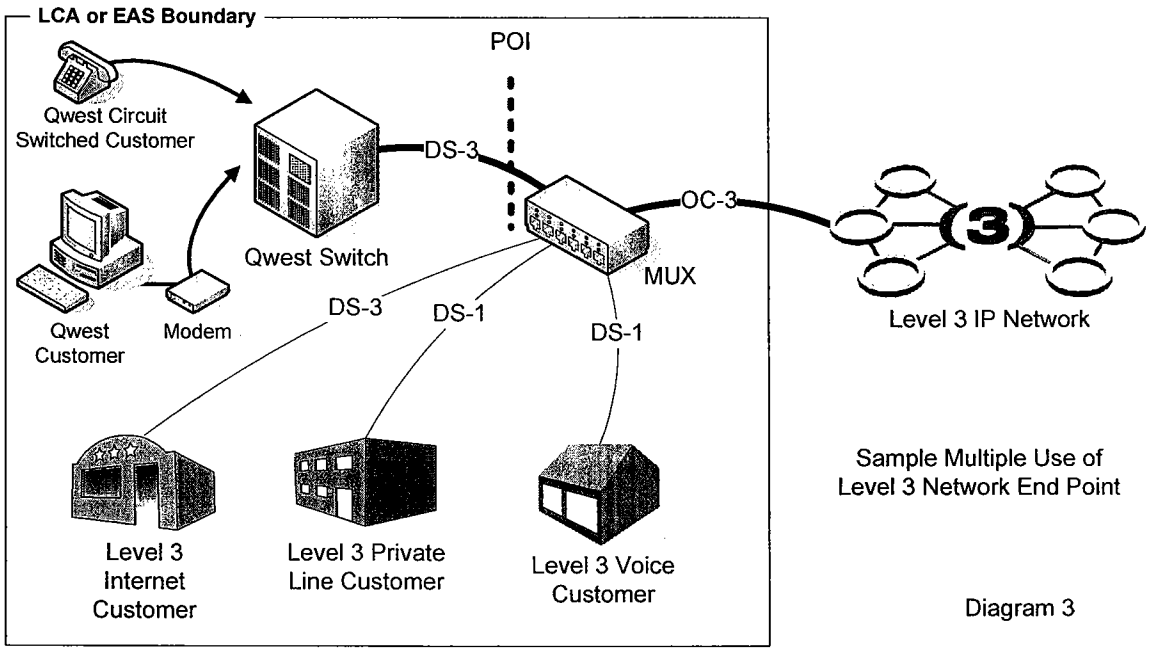
Q. DOES LEVEL 3 HAVE POINTS OF INTERCONNECTION IN ALL LATAS IN WASHINGTON?

A. Yes. Level 3 has one or more points of interconnection in every Washington LATA. In some LATAs Level 3 has a large number of points of interconnection.

Q. EXPLAIN IN PRACTICAL TERMS WHAT LEVEL 3'S INTERCONNECTION PERMITS IN WASHINGTON?

A. This configuration allows Level 3 to maximize the use of transport to extend the reach of its network and bring traffic back to centrally located switches and routers. The Level 3 network is based upon Internet Protocol ("IP") but must have interfaces based upon Time Division Multiplexing (TDM) in order to exchange traffic with circuit switched networks, such as the one Qwest deploys in Washington.[12] In addition, local loops to customer facilities are based upon TDM even if they are used for Internet connectivity, Private Line Connectivity or Voice Service. The diagram below illustrates a Tandem POI configuration in Washington. Level 3 uses this configuration to provide many services from the "network end point," including connectivity for still popular low cost dialup as well as increasingly popular VoIP services. This diagram roughly corresponds to the red dots shown in **Confidential Exhibit MDG-1,** which reflect locations where Level 3 provides such connectivity at Qwest Tandem Offices within Washington.

12 Qwest has been working since 2001 to upgrade to an all-IP network. See "Qwest First Local Carrier to Serve Customers Using Voice Over Packet Network Architecture" available at: http://www.nortelnetworks.com/corporate/news/newsreleases/2001d/10_11_01_qwest.html ("Qwest intends to use to replace traditional, circuit-switched networks throughout its 14-state region with a softswitch packet network and serve customers using a voice over packet network architecture.").



Q. DOES THE NETWORK THAT LEVEL 3 USES AND HAS INTERCONNECTED TO QWEST'S NETWORK IMPOSE INORDINATE OR INAPPROPRIATE COST UPON QWEST?

A. No. If one examines the actual physical configuration of Level 3's network, one can see that Level 3 establishes connectivity at POIs throughout the state. Moreover, as I demonstrate below, even if we assume a carrier only establishes a single POI for a particular LATA as it is allowed to do, the incremental cost to Qwest of a single POI architecture is extremely low.

Q. IS QWEST'S INTERCONNECTION TRUNKING THE SAME NO MATTER WHERE THE LEVEL 3 ISP OR ESP CUSTOMER IS LOCATED?

A. Yes. Qwest's trunking is always to the POI, no matter where the Level 3 ISP or ESP customer is located. It doesn't matter if the Level 3 customer is 500 yards, 2 miles, or 200 miles from the POI. Level 3 carries the traffic to its end-user customer, no matter

where they are located. Qwest's interconnection trunking to the POI is the same no matter where the called Level 3 customer is actually located.

Q. FROM A TECHNICAL PERSPECTIVE, HOW DOES LEVEL 3 ENABLE WHOLESALE ISP SERVICES?

A. At a high level, Level 3 deploys a vast national network using the latest generations of communications equipment. Because the latest generations of equipment provide advanced, more efficient capabilities but can be very expensive, Level 3 deploys the equipment on a national and regional basis, rather than seeking to duplicate the 100 year old network architecture of the ILECs. This is the most sound approach both from an economic and a technical perspective.

Q. CAN YOU EXPLAIN HOW LEVEL 3 PROVIDES WHOLESALE ISP AND VOIP SERVICES IN WASHINGTON?

A. Yes. While the term "modem bank" has become familiar to those who have been involved with the locally dialed ISP business or the litigation that has surrounded the business over the years, Level 3 does not deploy "modem banks" to accept calls to ISPs for dial up service. As far as I know, no one, not even Qwest, deploys "modem banks" anymore. Technological advances have made traditional "modem banks" obsolete. Instead, Level 3 uses Media Gateways to manage modem and VoIP traffic simultaneously. These gateways also connect Level 3's SS7 signaling systems to provide greater functionality more efficiently. This allows Level 3 to operate its network more efficiently by increasing the density and number of ports that these devices support.

Moving outward from Level 3's network toward circuit switched incumbent networks, we establish interconnection by building fiber and collocating directly within ILEC central offices, through arrangements with other CLECs from whom we may purchase connectivity, through private lines purchased from ILECs and through cost-

based transport where Level 3 is required under state law to pay backhaul of ILEC-originated traffic to points of interconnection.

Q. WHAT IS THE APPROPRIATE INTERCARRIER COMPENSATION FOR ISP-BOUND TRAFFIC?

A. In the FCC's *ISP Remand Order*, the FCC pre-empted the states on intercarrier compensation for ISP-bound traffic. Footnote 149 of the *ISP Remand Order* states:

> This interim regime affects only the intercarrier *compensation* (*i.e.*, the rates) applicable to the delivery of ISP-bound traffic. It does not alter carriers' other obligations under our Part 51 rules, 47 C.R.R. Part 51, or existing interconnection agreements, such as obligations to transport traffic to points of interconnection. (emphasis in original)

I understand that under current law, Qwest is obligated to deliver the ISP-bound traffic to a single point of interconnection ("POI") in each LATA. I also understand that pursuant to the *Core Forbearance Order,* Qwest is obligated to compensate Level 3 for transporting and terminating ISP-bound traffic beyond the POI at $0.0007. Qwest's costs to transport ISP-bound traffic to the POI are not affected in the least by where the servers are located or by where the call travels on the internet. Level 3 bears all transport and termination costs on its side of the POI, no matter where the servers are located and no matter where the call travels on the internet. Qwest's position that the Qwest customer originating the call and the customer's ISP server must be in the same local calling area is a fiction created to financially benefit Qwest.

VI. FX VS. "VNXX"

Q. WHAT IS FOREIGN EXCHANGE (FX) SERVICE?

A. FX is a service that has been offered by phone companies for many years. The service allows an end user to be assigned a phone number from a switch that serves a different local calling area than the one in which they are located. This allows customers in the

calling area from which the FX number is assigned to call the FX customer without incurring toll charges. On the other hand, if the FX customer's next-door neighbor called, it ***would*** be a toll call. In traditional FX service, the customer pays the providing carrier for an arrangement (a special trunk or other facility) that connects them to the switch covering the distant area, a.k.a. "foreign exchange". The customer is assigned a phone number out of a switch in the distant area so that end users in that foreign local calling area can call them by dialing a local phone number. In other words, Qwest's FX service has historically removed any link between the geographic location of the end user dialing the local telephone number and the geographic location of the customer of the telephone number dialed.

Q. HOW ARE FX CALLS ROUTED?

A. FX calls are routed between the local switches as normal local calls, or as toll calls, depending on whether the NPA-NXX of the FX number being called is included in the calling switch's table of "locally dialable" NPA-NXXs. Neither the originating nor terminating switch has any way to know where the end user with the FX line is actually located, nor does it matter for proper switching and delivery of the traffic. The switch that hosts the FX customer has a circuit coming in that it associates with phone service, providing dial tone and other local services. The switch has no way to know whether the customer loop is 500 yards, 2 miles, or 200 miles long.

Q. HOW ARE FX CALLS BILLED?

A. When a customer of one phone company places a call to a customer of another phone company and the originating and terminating phone numbers are assigned to rate centers which are rated as "local" to each other by the originating carrier, the call is rated as a local call and there is no toll charge. It does not matter if the calling or called party is

500 yards, 2 miles, or 200 miles from the end office out of which the number is assigned. The FX line is paid for separately by the FX customer to the carrier providing the FX service. No toll charges are applied to calls to the FX number from numbers assigned within the same local calling area as the FX number. Interestingly, when the FX customer with a phone number assigned to a foreign exchange receives a call from someone who is physically within the same exchange - like a next door neighbor - toll charges are applied. Intercarrier compensation is based on the originating and terminating phone numbers.

Q. HOW DOES QWEST PROPOSE TO TREAT ITS TRADITIONAL FOREIGN EXCHANGE ("FX") SERVICE FOR PURPOSES OF NUMBER ASSIGNMENT?

A. FX is a service that has been offered by Qwest for many years. Qwest proposes that Qwest be permitted to continue to assign telephone numbers to customers physically located outside of the local calling area to which the number is assigned.[13] In sharp contrast, Qwest proposes that the Commission prohibit CLECs from making such number assignments for their customers.[14] Qwest bases this discriminatory position on its self-serving definition of what constitutes a customer "presence" in a local calling area. For instance, Qwest proposes that the physical facility in a local calling area, such as a router or the "A" location of an ISDN PRI circuit, assigned to its FX customer qualifies as a "physical presence" that allows local numbers to be assigned to its FX customer.[15]

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13 Exhibit LBB-IT, Direct Testimony of Larry B. Brotherson, at 5:21-24, 25:8-13, 37:12-40:18 (Nov. 20, 2006).

14 Exhibit LBB-IT, at 40:14-18 ("Qwest believes strongly that VNXX traffic should be prohibited.").

15 Exhibit MDG-4, Qwest Response to Level 3 DRs 01-018I, 01-020I, and 01-023I in UT-053039.

Q. ARE YOU FAMILIAR WITH ANY SUCH REQUIREMENTS IN THE COCAG?

A. No. Guidelines issued by the North American Numbering Plan Administrator identify foreign exchange services as being eligible for number assignment but do not specify that an end user must have a physical presence in the local calling area before an FX or VNXX number may be assigned to the customer. Rather, Section 2.14 of the Numbering Guidelines identifies foreign exchange services as being eligible for number assignment without imposing any physical presence requirements:

> It is assumed from a wireline perspective that CO Codes/blocks allocated to a Wireline Service Provider are to be utilized to provide service to a customer's premise physically located in the same rate center that the CO Codes/blocks are assigned. **Exceptions exist, for example tariffed services such as foreign exchange service.** [16] (emphasis added)

Q. DO YOU SEE ANY PROBLEMS WITH QWEST'S PROPOSED PHYSICAL PRESENCE REQUIREMENT?

A. Yes. Mr. Blackmon addresses this issue also, but let me add two points. First, Qwest does not dictate number assignment guidelines and cannot manufacture requirements that are not addressed in the guidelines. Second, Qwest's proposed physical presence requirement assumes a historical, hub-and-spoke network architecture. As such, Qwest's proposed requirement is inherently discriminatory.

Q. PLEASE EXPLAIN.

A. In order for a customer to have one end of a physical facility dedicated to serve that customer in the local calling area where the number is assigned, the LEC serving the customer must have a switch in that local calling area. ILECs typically (although not always) have a local switching office in each rate center, so that FX or FX-like service

16 Alliance for Telecommunications Industry Solutions; Sponsor of Industry Numbering Committee; Central Code (NXX) Assignment Guidelines; Released May 28, 2004; hereinafter referred to as "Numbering Guidelines".

might permit a dedicated inter-office circuit to carry calls from the "foreign" switching office to the customer's actual location. CLECs, by contrast, typically (although not always) deploy fewer switches serving larger geographic markets, so that FX or FX-like service can be provided without additional circuit equipment, and without the need (or ability) for a connection between two separate switches in different exchanges. Qwest is trying to use these differences in network architecture to provide itself a competitive advantage, namely, using the mere fact that an ILEC has a second switch and a dedicated circuit in the foreign exchange to give the FX customer a "physical presence" in the foreign exchange that a CLEC cannot replicate without fundamental redesign of its network architecture.

Q. WOULD IT BE REASONABLE TO REQUIRE LEVEL 3 TO COLLOCATE SWITCHING IN EVERY LOCAL CALLING AREA?

A. No, it would not. One of the principal tenets of the Telecommunications Act is that the CLECs should not be required to build out their networks and mirror the networks of the ILECs. Level 3 should not be required to install additional equipment so that it can meet a higher standard of physical presence that Qwest has fabricated.

Q. PLEASE EXPLAIN QWEST'S POSITION ON COMPENSATION FOR ISP-BOUND TRAFFIC.

A. Qwest argues that ISP-bound calls are not eligible for compensation under the FCC's regime unless the ISP's server is physically located in the local calling area to which the

number is assigned.[17] On this point, Qwest's position is non-discriminatory, as Qwest proposes to impose this requirement both on itself and CLECs.[18]

Q. DOES LEVEL 3 AGREE WITH THIS NOVEL QWEST ARGUMENT THAT THE LOCATION OF THE ISP'S SERVER SHOULD DETERMINE THE RATING OF A CALL?

A. No. There are a number of technical problems with the idea that Qwest is promoting, not the least of which is that Qwest switches and Qwest billing systems have no idea where the actual physical location of the servers might be. The PSTN is only capable of using the calling party's number and the called party's number to determine how to rate a call. Circuit switches have no way of knowing the specific geographic location of the calling party or the ISP server.

Q. BROTHERSON DESCRIBES VNXX AS "AN EFFORT BY ONE GROUP IN THE INDUSTRY TO SEEK TO BE TREATED IN A COMPETITIVELY ADVANTAGEOUS MANNER TO THE REST OF THE INDUSTRY"[19] DO YOU CONCUR WITH QWEST'S DESCRIPTION OF WHAT VNXX IS?

A. No. In fact, it is Qwest that seeks an unfair advantage by arguing that VNXX should be banned while Qwest's functionally equivalent FX, Qwest Wholesale Dial and other services are permitted.[20] Qwest's Wholesale Dial product is marketed to ISPs to provide a "cost-effective dial-up network infrastructure solution" in competition with CLEC

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17 Exhibit MDG-4, Qwest Response to Level 3 DR, Docket No. UT-053039, Request No. 01-018I ("Under the ISP-Remand Order, intercarrier compensation is due only on IPS-bound traffic that originates in the same local calling area as the ISP server."). Qwest provided this response in the present docket, No. UT-063038, in response to Broadwing Data Request No. 01-002 requesting Qwest's responses to Level 3 in the same docket.

18 Exhibit MDG-4, Qwest Response to Level 3 DR, Docket No. UT-05039, Request No. 01-023I ("This 'physical presence' allows local numbers to be assigned within each local calling area. However, in order for intercarrier compensation to be due on ISP-bound calls, the calls must still originate and terminate to an ISP server within the same local calling area, and there is not an ISP server in each local calling area [for Wholesale Dial services].").

19 Exhibit LBB-IT, Direct Testimony of Larry B. Brotherson, at 19:5-6 (Nov. 20, 2006).

20 Exhibit LBB-IT, Direct Testimony of Larry B. Brotherson, at 5:21-24, 25:8-13, 37:12-40:18.

VNXX type services.[21] Qwest considers VNXX traffic to be an improper scheme to convert toll calls to local calls.[22] But this service has been around for decades and it provides an important service to consumers and especially to the ISP industry. Qwest is offering services that provide the very same functionality, so it must recognize the demand and benefits of such an offering. In response to discovery requests, Qwest indicated that it does offer FX and wholesale dial up service in Washington.[23] Furthermore, Qwest, in its discovery responses, indicates that it does not place an "ISP server" in each local calling area where it offers its wholesale dial up ISP service.[24]

Q. QWEST ALLEGES THAT VNXX SERVICES ARE "SIMILAR" TO "800-TYPE SERVICE[S].25" IS THIS AN ACCURATE CHARACTERIZATION?

A. No, it isn't. From the consumer's perspective VNXX, FX and 800 services offer similar results – dial-up access to the Internet without the imposition of additional per minute of use charges. But the similarity ends there. Mr. Brotherson is wrong to suggest that Level 3 is providing toll or 8XX functionality. Toll calls and 8XX calls use the familiar 1+ dialing pattern and consumers expect the calls to be routed to an IXC of their choosing for completion. They also know, because of the 1+ dialing, that they will pay toll charges for the call. VNXX calls are locally dialed calls, without the use of the 1+ dialing pattern

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21 Qwest Wholesale Dial is described in more detail on its website at http:www.quest.com/wholesale/pcat/natdial.html and in Qwest's response to Broadwing Data Request No. 01-014. .

22 Qwest's Complaint, at ¶ 16; Exhibit LBB-IT, at 24:18-25:6 ("VNXX avoids carrier access charges and end user toll charges.").

23 Exhibit MDG-4, Qwest Response to Broadwing Request No. 01-014.

24 Exhibit MDG-4, Qwest Response to Level 3 DRs 01-020I, 01-023I in Docket No. UT-053039 obtained in response to Broadwing DR No. 01-02. ("However, because there is no server in the local calling area, intercarrier compensation is not due on those calls.").

25 Exhibit PL-1T, Direct Testimony of Phillip Linse, at 8:6-9 (Nov. 20, 2006).

and without the services of an IXC. Locally-dialed ISP-bound calls make no use of the interexchange carrier access network.

Q. MR. BROTHERSON NOTES THAT THE "QWEST FX CUSTOMER PAYS FOR TRANSPORT TO ITS ANSWERING LOCATION AT RETAIL PRIVATE LINE RATES."[26] PLEASE COMMENT ON THIS STATEMENT.

A. First let me state that the pricing of a retail VNXX or FX product has nothing to do with the number assignment guidelines or the form of intercarrier compensation that applies for the exchange of traffic between two LECs providing service to a VNXX or FX customer. From the perspective of the Qwest customer, the "VNXX" call is no different from any other locally dialed call and no per minute of use charges are imposed upon the Qwest end user, unlike a 1+ call to an IXC or 8XX service. From the perspective of Qwest, the VNXX call imposes no additional costs. From Level 3's perspective, the call is picked up at the POI and delivered over Level 3's network to its customers. Level 3 imposes no additional charge to Level 3's customers for these calls. Mr. Brotherson refers to the costs Qwest imposes on its FX customers for the private line that connects the FX customer to the distant exchange. Again, Qwest is trying to distinguish VNXX from its traditional FX service by reference to historical network architecture. Given Qwest's hub-and-spoke network architecture, it might make sense to price the retail FX service in two components, one for local dial tone and a second for the private line. Given Level 3's advanced architecture, however, such pricing does not make sense from a network perspective. And, I repeat, the manner in which retail services are priced has nothing to do with number assignment or intercarrier compensation.

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26 Exhibit LBB-IT, Direct Testimony of Larry B. Brotherson, at 38:7-10; see, Exhibit PL-1T, Direct Testimony of Phillip Linse, at 10:3-6 (Nov. 20, 2006).

Q. WHAT DO YOU MEAN WHEN YOU SAY THAT, FROM QWEST'S PERSPECTIVE, A VNXX CALL IMPOSES NO ADDITIONAL COSTS?

A. There is no additional cost for VNXX calls over and above the cost for a traditional local call. Qwest's obligations and costs are the same in delivering a call originated by one of its customers, regardless of whether the call terminates at a so-called "virtual" or "physical" NXX behind the CLEC switch. Qwest systems and network route these calls in exactly the same way they route other local calls. In response to a request to admit that its costs to transport traffic to a POI do not vary based on the location of the CLEC customer behind the POI, Qwest stated that its "costs vary from [the CLEC's] POI to Qwest's end user customer" but do not "vary from the [CLEC] point of interface to [the CLEC's] end user customer."[27] In other words, Qwest concedes that when a particular Qwest customer calls a Level 3 customer, Qwest's costs do not vary based on the physical location of the Level 3 customer.

It is clear that Level 3 is providing a service to Qwest in terminating the traffic originated by Qwest customers. If Level 3 or some other provider did not terminate those calls, Qwest would need to deploy facilities and capacity sufficient to terminate those calls. As such, Qwest should be economically indifferent as to whether it pays Level 3 for terminating those calls, or, alternatively, transports and terminates the traffic itself.

Q. WHAT IS LEVEL 3'S RESPONSIBILITY WITH RESPECT TO THIS TRAFFIC?

A. Level 3 is completely responsible for the termination of the call regardless of the location of the Level 3 subscriber. All Qwest is required to do is to deliver the call to the POI.

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27 Exhibit MDG-4, Qwest Response to Broadwing DR 01-007.

Q. PLEASE SUMMARIZE YOUR POSITION ON QWEST'S PROPOSAL TO TREAT VNXX TRAFFIC AS INTEREXCHANGE TRAFFIC SUBJECT TO ACCESS CHARGES.

A. Qwest asserts that the *ISP Remand Order* limits its obligation to pay reciprocal compensation for ISP-bound traffic to "local" traffic. Qwest interprets "local" to mean where the customer initiating the Internet call and the ISP's server receiving the call are physically located in the same local calling area. In other words, Qwest asks the Commission to abandon its previous decision, and to re-adopt the view rejected by the FCC in the *ISP Remand Order* and this Commission – that Section 251(b)(5) applies only to "local" telecommunications traffic. The *ISP Remand Order* applies to all ISP-bound traffic, regardless of the geographic location of the ISP server to which the call is directed.[28]

Q. IN YOUR VIEW, DOES QWEST'S METHODOLOGY FOR IDENTIFYING VNXX TRAFFIC PRODUCE ACCURATE RESULTS?

A. No. In fact, Qwest freely admits that its methodology for identifying VNXX traffic is susceptible to "false positives" (*i.e.* traffic that does not constitute VNXX traffic is identified as such.[29] This is no surprise when Qwest's methodology is subjected to even modest scrutiny. For example, Qwest states that it "uses the switch location of the CLEC as a proxy for the terminating location of a call that is destined for a CLEC customer."[30] Under the Qwest methodology, "[i]f the CLEC and Qwest switches are not within the same EAS area or LCA," Qwest flags the traffic as potential VNXX traffic.[31] This

28 *See, e.g.*, ISP Remand Order, at ¶ 1.

29 Exhibit MDG-4, Qwest Response to Broadwing DR No. 02-024.

30 Exhibit LBB-1T, at 46:1-4.

31 Exhibit LBB-1T, at 46:1-5; Exhibit MDG-4, Qwest Response to Broadwing DR Nos. 02-024, 02-025.

contradicts Qwest's statement that the location of the switch has nothing to do with the end points of the call.[32]

CLECs have deployed new technologies that enable switches to switch traffic over a wide geographical area as oppose to the switch-laden, legacy, not hub-and-spoke architectures deployed by ILECs. Accordingly, the CLEC switch will most often not be in the same local calling area as the Qwest switch because CLECs have rationally utilized the best technology available to reduce network capital costs. Under this prong of Qwest's methodology most of a CLEC's locally dialed traffic will be tagged as VNXX by Qwest regardless of its actual jurisdictional nature.

In the second step of its methodology, Qwest identifies trunk groups where the "Qwest local/EAS minutes of use are out-of-balance, i.e., the traffic is disproportionately terminated to the CLEC."[33] This proxy merely indicates that the CLEC has a favorable balance of traffic such that Qwest may be required to make intercarrier compensation payments to the CLEC. However, the proxy proves nothing as to the jurisdiction of the traffic. Using these two proxies, Qwest erroneously identifies excessive amounts of CLEC traffic as VNXX traffic in order to withhold compensation due on such traffic.[34]

VII. QWEST'S PROPOSAL IS FUNDAMENTALLY DISCRIMINATORY BECAUSE IT OFFERS THE VERY SAME SERVICES THAT IT IS COMPLAINING ABOUT IN THIS CASE

Q. PLEASE EXPLAIN THE MARKET FOR VNXX SERVICE.

A. Where ISPs, such as Earthlink or AOL, want to offer dial-up Internet access, they contact an ILEC or CLEC to purchase local service. In Level 3's situation, the ISP subscribes to

32 Exhibit MDG-4, Qwest Response to Broadwing DR No. 02-025.

33 Exhibit LBB-1T, at 46:6-21.

34 Exhibit LBB-1T, at 46:6-21; Exhibit MDG-4, Qwest Response to Broadwing DR Nos. 02-024, 02-025.

Level 3's DID service and is assigned local numbers from the Level 3 switch in the exchanges where dial-up service is being offered and where Level 3 offers service. The ISPs advise their customers of the numbers that the ISPs have been assigned, who then program the numbers into their computers for accessing the Internet. The customers' computers then dial these local numbers; the calls are routed from the ILEC to Level 3 in exactly the same manner as other local calls; and Level 3 delivers the calls to the ISP being called.

Q. PLEASE EXPLAIN WHY WHOLESALE ISP SERVICES ARE USED.

A. End users who still require local dial up access to the Internet – whether for reasons of availability or price - require access to such local numbers at the local level because paying toll charges to reach the Internet would be prohibitively expensive. Neither Level 3 nor its ISP customers assess toll charges on dialup ISP end-users and this has become the practice in the marketplace almost exclusively. Most ISPs charge very low flat rates for accessing the Internet worldwide on a locally dialed basis or some may even offer locally dialed connectivity to their ISP service for free So, unlike traditional long distance voice services, where customers may be charged anywhere from 5 to 10 cents per minute to make long distance calls, Qwest's local exchange customers, other than perhaps purchasing additional local exchange lines for Internet access, make no changes to their local telephone service to call the Internet.

Q. DOES LEVEL 3 PROVIDE SUCH A SERVICE TO ISPS? AND, IF SO, WHAT IS IT CALLED?

A. Yes. Level 3's wholesale ISP service arrangement is a competitive alternative to Qwest's FX and Wholesale Dial services, and is referred to by Qwest as "virtual NXX," or "VNXX" service. It is just another name for the functionality that has been provided for decades by Qwest under the name "foreign exchange," or "FX" service.

Q. WHAT SERVICE DOES LEVEL 3 OFFER ITS ISP CUSTOMERS?

A. When an ISP purchases Level 3's (3)Connect® Managed Modem Product they are buying a bundled product that provides multiple components. Those components are:

- Direct Inward Dialing (DID) Service in the Local Calling Area
- Transport from the Local Calling Area to the Level 3 network
- Conversion of the TDM based modem connection to IP
- Authentication Services
- Operations Support
- Access to the Internet

Q. YOU MENTIONED THAT LEVEL 3 COMPETES WITH QWEST FOR PROVISION OF WHOLESALE DIALUP, WHOLESALE VOIP AND OTHER SERVICES. HOW DO YOU KNOW THIS?

A. Qwest is well known to anyone in the industry as one of the few national networks competing in these markets. The chart below illustrates this.

Level 3	Qwest
(3) Connect Modem: Level 3 is the market leader in managed modem service. Our network processes more than 30 billion minutes per month – more than any other U.S. provider. As the leader in managed modem services, Level 3 enables you to provide dial-up connections to 90 percent of the United States without the costs and difficulties associated with building and maintaining your own nationwide infrastructure. (http://www.level3.com/559.html)	**Qwest Wholesale Dial**: "Dial-up network infrastructure (network-based modems support, V.90 V.92 and V.44 with dial coverage from over 2,500 points-of-presence (PoPs), and covering over 84% of the U.S. population with a local call." (*See* http://www.qwest.com/wholesale/pcat/natdial.html) Your ***end users' PCs dial local access numbers*** provided by Qwest to connect to local exchange carriers (LECs). Calls are authenticated via a Qwest-provided remote authentication dial-in service (RADIUS) proxy server communicating with your RADIUS authentication server. After an end user is authenticated and the end-user software negotiates the IP connection, the Qwest Network Access Server (NAS) ***routes end-user packets to the Internet,*** based on the destination IP address. (*Available at* http://www.qwest.com/wholesale/pcat/natdial.html)

Q. DO THE QWEST NETWORK AND THE LEVEL 3 NETWORK PROVIDE THE SAME FUNCTIONALITY TO ISP CUSTOMERS THROUGH THESE PRODUCTS?

A. Yes. Both the Level 3 network and the Qwest network provide dial-up service to its ISP customers by substantially the same network functionality. **Exhibit MDG-3** shows the close similarities between Qwest's and Level 3's provision of competing wholesale VoIP and wholesale dialup ISP services.

Q. HOW DOES QWEST PROVIDE ISP SERVICE IN WASHINGTON?

A. Qwest's affiliate QCC provides ISP service both at the retail and wholesale level. QCC accesses many remote offices via ISDN PRI trunks. It is my understanding that Qwest's position is that these ISDN PRI trunks provide the "local" presence for QCC and its ISP customers.

Q. IS LEVEL 3 ASKING FOR THE SAME FUNCTIONAL CONNECTIVITY THAT QWEST PROVIDES TO QCC?

A. No. QCC is a retail customer of Qwest's that provides both retail and wholesale ISP services to its customers. Level 3 is a co-carrier that competes with Qwest, and is not interested in purchasing Qwest's retail products. The wholesale services that QCC provides are very similar to those offered by Level 3. QCC uses PRI trunks instead of the DEOT/DTT trunks that Level 3 uses. The only difference is that the PRI trunks are retail service that is slightly more expensive than the DEOT/DTT trunks. In addition, there is no reciprocal compensation on the PRI trunks. This is because QCC is operating as a customer of Qwest's and not a co-carrier as Level 3. Level 3 is a CLEC and should not be penalized by Qwest for operating as a CLEC. Qwest seems to believe that Level 3 should act as Qwest's customer and purchase its retail services in order to provide local service to its ISP customers.

Q. TECHNICALLY, WHAT ARE THE PRI TRUNKS AND DEOT/DTT TRUNKS PROVIDING TO QCC AND LEVEL 3 RESPECTIVELY?

A. Both PRI and DEOT/DTT trunks provide basic connectivity or capacity from one office to another office. Both types of trunks are sized to meet the traffic requirements that the company estimates are necessary for good service. Both PRI and DEOT/DTT trunks provide switching by the end office so that ISP subscribers can call a local number and get connected to the Internet through the ISP. Both PRI and DEOT/DTT trunks provide a local presence in the local calling area. Technically, they are almost identical. PRI trunks use a subset of SS7 signaling while DEOT/DTT interconnection trunks use the full SS7 protocol since the traffic is between carrier switches. Both PRI and DEOT/DTT trunks require essentially the same resources in the local switch. They both use trunk cards on the local switch. DEOT/DTT interconnection trunks require trunk termination facilities on the Level 3 switch as well. Qwest creation and utilization of the PRI trucking product with in its network makes sense when connecting to QCC customers as this is a retail service and QCC is not acting as a competitive carrier. It is appropriate for Level 3 to use DEOT/DTT interconnection trunks for the identical type of traffic since Level 3 is a competitive, co-carrier.

Q. BASED UPON YOUR UNDERSTANDING OF THE QWEST NETWORK, DO QWEST AND LEVEL 3 UTILIZE FUNCTIONALLY THE SAME NETWORK ARCHITECTURE TO TRANSPORT AND TERMINATE ISP BOUND TRAFFIC?

A. Yes. From a technical perspective, Level 3's use of a POI and/or direct end office transport to assume responsibility for the transport and termination of ISP-bound traffic is not materially different than Qwest's and its subsidiaries' use of PRIs for the same function. There is no functional difference between Qwest and Level 3's architecture for

the provision of these competing services. Table 1, below, summarizes these network similarities and differences.

TABLE 1

Component	Function	Level 3	Qwest
DID Number Blocks	Provides group of numbers to a customer to use.	**SAME:** Secures own Numbers from NANPA	**SAME:** Secures own Numbers from NANPA
Multiplexer	Allows multiple circuits to be aggregated on a larger circuit for more efficient transport	**SAME:** Owns and Leases	**SAME:** Owns and Leases
Private Line Transport	Provides connectivity for services from one area to another	**SAME:** Owns and Leases	**SAME:** Owns and Leases
Signaling	Allows for call management	**SAME:** SS7 signaling	**SAME:** PRI D Channel signaling is a subset of SS7 signaling.

Q. DOES EITHER LEVEL 3 OR QCC PROVIDE "DIAL TONE" SERVICE TO ISP CUSTOMERS?

A. No. The service that both Level 3 and QCC are providing to ISP customers is not a "dial tone" type service as no dial tone is necessary to receive the signals that the ISP's customer's computer generates to connect to the ISP's server and eventually to the Internet. Qwest has said that the Qwest End Office Switch provides dial tone for the QCC ISP customers, but this is irrelevant. ISPs do not originate calls, they only receive calls from dial-up Internet users. The Level 3 switch is providing the same service to the Level 3 ISP customers as Qwest provides its customers--the ability to receive calls. Since the Qwest switch is providing basic service to the QCC customers, it is appropriate that the trunking to the switch is different and slightly more expensive than the co-carrier

trunking in place between Qwest and Level 3. Qwest is not providing basic service to the Level 3 ISP customers. Level 3 is providing that service. Level 3 is a co-carrier, while QCC is Qwest's customer.

Q. PLEASE SUMMARIZE YOUR POSITION THAT QWEST'S PROPOSALS IN THIS DOCKET ARE DISCRIMINATORY.

A. The FX and VNXX services provided by ILECs and CLECs are identical from the customer's point of view. Since the ILEC and CLEC networks are not designed or deployed the same way,[35] their respective services are provisioned differently.[36] These services have always provided a customer with a telephone number for a rate center outside the rate center in which the customer's premises are physically located. Level 3's service is the functional equivalent of this traditional ILEC service in that it gives a customer located in one exchange a telephone number with an NPA/NXX associated with another exchange.

It would be discriminatory to prohibit a service based solely upon the identity of the carrier that provides the service or the technology a carrier uses to provide that service to its customers. New entrants building networks design those networks differently from the legacy network built by ILECs with ratepayer support over the past

35 ILECs typically (although not always) have a local switching office in each rate center, so that FX or FX-like service might permit a dedicated inter-office circuit to carry calls from the "foreign" switching office to the customer's actual location. CLECs, by contrast, typically (although not always) deploy fewer switches serving larger geographic markets, so that FX or FX-like service can be provided without additional circuit equipment, and without the need (or ability) for a connection between two separate switches in different exchanges. It is important to note that the mere fact that an ILEC might have a second switch and a dedicated circuit in the foreign exchange does not give the FX customer herself any "physical presence" in the foreign exchange.

36 One clear directive in the Act and the FCC's implementing regulations is the recognition that competition will spur technological innovation and change. For example, one rule expressly notes that a CLEC's single switch might be capable of serving a geographic area comparable to that served by an ILEC's tandem, and its subtended end offices. *See* 47 C.F.R. § 51.711. It would be anomalous indeed if the Commission's decision in this proceeding turned on whether CLECs provisioned and deployed their facilities in precisely the same way that ILECs historically deployed their FX services. That result would reward the status quo and discourage innovation—hardly a goal contemplated by Congress or the FCC.

hundred years, but that does not necessarily change the basic functionality delivered to customers. Any policy that prohibits an FX-like service based merely upon the way in which the carrier's technology and/or network supports that service would punish new entrants, and incumbents for that matter, for innovation.

In the case of Virtual NXX services used to support ISPs, the demand for Internet access will exist even if Level 3 and other CLECs are not in the market. Consumers would simply be limited to fewer choices – perhaps only one choice – for this dial up capability. As such, the calls will be made and originated by the ILEC regardless of who terminates those calls. The cost of those calls is already being recovered through the ILEC's local rate structure. Given that tautology, claims that a CLEC's FX-like service will impose additional costs are not supportable. It is not in the public interest to protect ILECs from competition, nor is it in the public interest to constrain competition based upon arbitrary technological differences or on the physical location of the customers utilizing offered services. It is clear that CLECs such as Level 3 are providing a competitive service. Prohibiting the CLECs from assigning numbers to customers purchasing these competitive services will give Qwest an unfair competitive advantage in the market for FX-like services.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

EXHIBITS

CONFIDENTIAL Exhibit __ (MDG-1)	Map of Level 3 network in the State of Washington.
Exhibit __ (MDG-2)	Schematic of Level 3's Network Interconnection with Qwest in Washington.
Exhibit __ (MDG-3)	Schematic diagram showing that Level 3's Managed Modem service and Qwest's Wholesale Dial service are functional equivalents.
Exhibit __ (MDG-4)	Qwest Responses to Data Requests