ExhibitPL-1T

BEFORE THE WASHINGTON STATE
UTILTIES AND TRANSPORTATION COMMISSION

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

DIRECT TESTIMONY

OF PHILIP LINSE

QWEST CORPORATION

NOVEMBER 20, 2006

I. IDENTIFICATION OF WITNESS

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND POSITION WITH QWEST CORPORATION.

A. My name is Philip Linse. My business address is 700 West Mineral Avenue, Littleton Colorado. I am employed as Director – Technical Regulatory in the Network Policy Organization. I am testifying on behalf of Qwest Corporation ("Qwest").

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

A. I received a Bachelors degree from the University of Northern Iowa in 1994. I began my career in the telephone communications industry in 1995 when I joined the engineering department of CDI Telecommunications in Missoula, Montana. In 1998, I accepted a position with Pacific Bell as a Technology Planner with responsibility for analyzing network capacity. In 2000, I accepted a position with U S WEST as a Manager, Tactical Planning. 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 of unbundled Switching, Signaling System 7 ("SS7") and other switching-related products. My responsibilities also included the development of network strategies based on the evaluation of new technologies. I was one of the network organization's subject matter experts. In 2003, I was promoted to my current position as Director of Technical Regulatory in the Network organization. Since my promotion in 2003, the Technical Regulatory group has been realigned and is now part of the Policy organization. In addition to my oversight responsibilities of Qwest's network

regulatory interconnection and switching requirements for sections 251 and 252 of the Telecommunications Act of 1996, I also develop and direct the implementation of network policies. In addition to these internal functions, I also represent Qwest in industry technical standards setting groups such as the FCC's Network Reliability and Interoperability Council ("NRIC") and the Network Interconnection Interoperability Forum ("NIIF").

II. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to detail Qwest's positions, from a technical perspective, as they relate to local traffic that originates and terminates within a Local Calling Area ("LCA") and interexchange traffic that originates and terminates in different exchanges and LCAs. My testimony describes the regulatory basis and rationale for how the network routes local and interexchange traffic. I will also address the inappropriate use of VNXX routing in connection with the industry's number assignment rules as well as Qwest's position that carriers should not be permitted to use a network architecture that misrepresents interexchange traffic as if it were not interexchange. In other words, it is Qwest's position that VNXX is an inappropriate use of Qwest's network resources as well as a violation of industry practice and industry standards. My testimony will show from a technical perspective that the Qwest position on this issue is reasonable and consistent with industry standards and local calling in Washington.

III. LOCAL CALL ROUTING

Q. WHAT ARE LOCAL CALLS?

A. Local calls are defined by the geographic boundaries of an LCA. Calls that take place between end users located within an LCA are local calls.

Q. WHAT GEOGRAPHIC AREAS TYPICALLY MAKE UP A LOCAL CALLING AREA?

A. AN LCA can be made up of one or more exchanges that are served by one or more central offices. This can include exchanges that are served by central offices of other carriers such as independent companies. Exchange areas typically include the base rate area which is the highest density of population of an exchange and may also include areas beyond the base rate area.[1] In the past, exchanges typically allowed local calling only within the exchange itself. As the populations of contiguous exchanges have grown, people that lived and were served in the different exchanges began to establish a community of interest between the exchanges. As a result, LCA boundaries that were also the exchange boundary were expanded so that the community of interest could be served with local calling. The Commission may order expansion of LCA boundaries only though a request for extended area service ("EAS"). Such a request may be approved by the state commission only for compelling reasons, as described in the Commission's rule.[2]

Q. HOW DO QWEST SWITCHES KNOW THAT A CALL IS LOCAL?

A. The telecommunication switches that Qwest operates are computers that are programmed to route telephone calls. The switch is programmed so that local calls are routed according to the approved LCAs as described above. Making a switch

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[1] Qwest Exchange and Network Services Tariff, 5.1 Exchange Areas

[2] WAC 480-120-265

understand what is local versus what is non-local is accomplished by assigning telephone number resources to each switch within each LCA. In other words, numbers are assigned based on what has been defined as the geographic LCA; the LCA is not defined based on the number. The North American Numbering Plan Administrator ("NANPA") administers the assignment of numbering resources to carriers for use in the carrier's switches. The telephone number resources that are contained in each switch are then assigned to Exchange Access Lines[3] that are provided to end users located in the geographically defined LCA. The seven or ten digit telephone number is the telecommunications version of an address. The first three digits of a ten digit number represent the Area Code or Numbering Plan Area ("NPA"). The second three digits represent the central office code or NXX. The last four digits are the line number or the number that is assigned to the Exchange Access Line. Each switch within each LCA is then programmed to "know" that the first six digits (NPA-NXX) of each ten digit telephone number assigned to other switches in the LCA are "Local." This programming is used to determine if a call will be routed to other switches in the LCA.

Q. HOW DO QWEST SWITCHES ROUTE LOCAL CALLS?

A. Local routing typically takes place between two end users within the LCA and with at least one switch. When a customer makes a local call as described above, the switch is programmed to route the call based on the first six digits of seven or ten digit telephone number that is dialed. The switch will first determine if the dialed telephone number is associated with an Exchange Access Line served by that switch. If it is, then the switch will route the call to the Exchange Access Line of

[3] Qwest Exchange and Network Services Tariff, 2.1 Definition of Terms

the called party. If the number is associated with another switch within the LCA, then the switch will route the call over a trunk that connects the two switches. The switch that serves the Exchange Access Line of the called party will then route the call to the Exchange Access Line of the called party. If the switch determines that the dialed telephone number is not associated with a switch in the LCA, based on the programming described above, then the switch will route the call to what is known as a vacant code recording. This recording will instruct the caller to first dial a one before making the call and to hang up and attempt the call again. Each method of local routing is based on the geographic boundaries within which the call takes place.

IV. INTEREXCHANGE CALL ROUTING

Q. WHAT ARE INTEREXCHANGE CALLS?

A. Interexchange calls are non-local calls that take place between end users located in different LCAs. These non-local calls are known by the industry as interexchange or long distance calls.

Q. WHAT GEOGRAPHIC AREAS ARE TYPICALLY INVOLVED IN AN INTEREXCHANGE CALL?

A. The traffic that is made up of interexchange calls includes intraLATA interexchange traffic and interLATA interexchange traffic. IntraLATA interexchange traffic includes calls that take place between end users located in different LCAs but within the same LATA. InterLATA interexchange traffic includes calls that take place between end users located in different LCAs and in different LATAs. There are three LATAs in Washington, two of which extend into

other states. Thus, there are four types of interexchange traffic that exists associated with Washington end users. They are: Intrastate IntraLATA, Interstate IntraLATA, Intrastate InterLATA, and Interstate InterLATA.

Q. HOW DO QWEST SWITCHES ROUTE INTEREXCHANGE CALLS?

A Interexchange routing typically takes place between two end users located in different LCAs and involve at least two switches. When a customer makes an interexchange call as describe above, the switch is programmed to typically route the call based on the digit 1+ the first three to six digits of ten digit telephone number that is dialed. Each switch is programmed with all of the interexchange NPAs and central office codes (NPA-NXXs) based on the geographic boundary of the LCAs and the LATA. This programming is then used by the switch to route traffic as either IntraLATA interexchange traffic or InterLATA interexchange traffic. If the 1+ ten digit telephone number is local, the Qwest switch would permit the call to be completed as a local call based on the local first six digits of the dialed telephone number. This is called permissive dialing where the switch essentially ignores that the caller dialed a "1" before the local ten digit telephone number.

If the switch determines that the 1+ ten digit telephone number is in fact an interexchange call, the switch would then determine if the call was IntraLATA or InterLATA based on the programming described above. If the call is InterLATA then the switch will route the call to the calling end user's Presubscribed Interexchange Carrier ("PIC") using the Interexchange carrier's ("IXCs") Carrier Identification Code or ("CIC"). If the call is IntraLATA then the switch will route the call to the calling end user's second Presubscribed IXC ("2PIC) using the IXC's

Carrier Identification Code or ("CIC"). The PIC and 2PIC arrangement that allows the end user to presubscribe to two IXCs, allows end users to presubscribe to a different IXC for InterLATA calls and IntraLATA calls. Each method of interexchange routing is accomplished based on the geographic boundaries within which the call takes place.

Q. WHY IS THERE SIGNIFICANCE BETWEEN ROUTING SOME CALLS LOCAL AND SOME CALLS INTEREXCHANGE?

A. In short, the significance is compensation. Compensation is provided differently to carriers for local calls than for interexchange calls. As explained in Mr. Brotherson's testimony, local calls are typically paid for by the customer through a flat monthly rate and interexchange calls are typically paid for by the customer based on minutes of use. Dr. Fitzsimmons explains in his testimony the economics of cost causation.

V. VIRTUAL NXX SERVICE VERSUS FOREIGN EXCHANGE SERVICE

Q. WHAT IS VIRTUAL NXX OR VNXX?

A. Virtual NXX or "VNXX" is an arrangement where Competitive Local Exchange Carriers ("CLECs") assign telephone numbers to its customers that are not physically located in the LCA associated with the NXX of the telephone number. This allows calls that take place between LCAs to appear as local. The assignment of the NXX to a customer in a different LCA than the LCA of the telephone number provides the CLEC customer with a virtual presence in an LCA other than the LCA that the customer is actually located, thus the term "Virtual NXX." The result is calls that originate from a Qwest customer in an LCA are transported by Qwest to

the CLEC associated with number assigned to the CLEC customer located in another LCA. These are interexchange calls that become disguised as local calls because the CLEC understands that it can avoid charges associated with interexchange traffic by assigning telephone numbers that the CLEC knows are programmed into the originating switch as local numbers.

In effect, VNXX provides similar functionality of 800-type service, such that the calling customer is not subject to toll charges. However, unlike VNXX, 800-type services require that the called customer pay for the interexchange service. This does not occur with VNXX service since the service appears to be local.

Q. WHAT IS FOREIGN EXCHANGE OR FX?

A. Foreign exchange or "FX" is a service that is provided by Qwest which allows a customer to obtain local service within a Qwest exchange and the private line transport necessary to connect the customer location to an exchange other than the one that the customer is located. FX service allows for customers to obtain local service within a local calling area so that the FX customer may place local calls to other local customers located within the LCA of the foreign exchange and so that local customers located within the LCA of the foreign exchange can also call the customer of the FX service.

Q. WHAT ARE THE GENERAL DIFFERENCES BETWEEN QWEST'S FX SERVICE IN WASHINGTON AND VNXX SERVICE?

A. There are several differences between FX service and VNXX service. These differences include how the services are offered, how the services are provisioned, how traffic is routed, and what types of customers subscribe to the service.

Q. HOW ARE QWEST'S FX SERVICE IN WASHINGTON AND VNXX SERVICE OFFERED DIFFERENTLY?

A. FX service is provisioned within the LATA that the customer is served. VNXX however, is not limited to provisioning within the LATA. CLEC VNXX customers may be located anywhere in the United States or even the world. Thus, a CLEC that relies solely on VNXX to provide service may not have any customers that are located in Washington.

Q. HOW ARE QWEST'S FX SERVICE IN WASHINGTON AND VNXX SERVICE PROVISIONED DIFFERENTLY?

A. As I explained above FX service is provisioned from within the LCA and the foreign exchange. VNXX however, is not provisioned from either the exchange or the LCA from which the service is purportedly provided. Unlike CLECs that actually provide local service in LCAs from which they obtain numbering resources, CLECs that provide VNXX service are neither providing switching service nor loops to customers located within the LCA.

Q. IS THE ROUTING OF VNXX TRAFFIC EQUIVALENT TO THAT OF FX TRAFFIC?

A. No. Non-VNXX calls, such as those placed to a subscriber of FX service, are associated with services that are physically provisioned to the customer from within the LCA where the traffic originates. Thus, the routing and transport of the traffic will take place from the foreign exchange. For example, an FX call that originates with an end user in the Olympia LCA but is destined for an end user located in the Seattle LCA is placed by dialing a number associated with local service physically

provisioned in the Olympia LCA. The call is routed to an FX service in Olympia, where it is then transported to Seattle over the interexchange private line transport. As explained above, the end user subscribing to FX service in this example must establish and pay for local service in Olympia and pay rates that are intended to cover the additional costs associated with transport of the call from Olympia to Seattle. In contrast, CLECs that use VNXX simply assign local numbers from one LCA to customers that are located in a different LCA. In doing so, VNXX service inappropriately relies on Qwest to originate and transport the interexchange traffic between LCAs.

Q. WHAT ARE THE DIFFERENCES IN THE TYPES OF CUSTOMERS THAT SUBSCRIBE TO QWEST'S WASHINGTON FX SERVICE AND VNXX SERVICE?

A. FX services historically have been subscribe to by local business owners that wish to maintain their local calling when their business contact location has moved or where businesses may wish to provide local calling to customer service centers for products or services that are sold from the businesses operations within the LCA. This can be illustrated with business chains that may have many stores located throughout Washington. Such business chains may wish to centralize their customer service and provide local calling to its customer service platform. VNXX however, has been historically and predominantly used to provide one-way calling from Qwest's end users that are located within the LCA to CLEC ISP customers that are located in a different LCA and may even be located in some other state. Although FX is used by ISPs, unlike FX service, carriers that offer VNXX services can offer interexchange service and avoid interexchange private line transport from

the actual LCA because of the way the numbers are inappropriately assigned to provide VNXX service.

VI. VNXX VIOLATES THE INDUSTRY'S NUMBERING RULES

Q. DOES VNXX VIOLATE INDUSTRY GUIDELINES WHEN CARRIERS ASSIGN TELEPHONE NUMBERS IN THE WAY YOU HAVE DESCRIBED?

A. Yes. There are industry rules that dictate the different types of telephone numbers and how such numbers are to be assigned.

Q. HOW WERE THE RULES FOR ASSIGNING TELEPHONE NUMBERS ESTABLISHED?

A. In 1995, prior to the passage of the 1996 Act, the FCC created the North American Numbering Council ("NANC"), which makes recommendations to the FCC on numbering issues and oversees the North American Numbering Plan ("NANP"). At the same time, the FCC also created the North American Numbering Plan Administrator ("NANPA"), an impartial entity that is responsible for assigning and administering telecommunications numbering resources in an efficient and non-discriminatory manner. Thus NANPA is responsible for allocating NPA and NXX codes. Under FCC rules, NANPA is directed to administer telephone numbering resources in an efficient and non-discriminatory manner, *and* in accordance with the guidelines developed by INC (the North American Industry Numbering Committee).[4]

[4] See 47 C.F.R. § 52.13(b) and (d).

Q. ARE THE "GUIDELINES" DEVELOPED BY INC INTENDED TO BE MERE GUIDELINES THAT CAN BE DISREGARDED?

A. No. INC guidelines are really more than mere guidelines because the adherence to them is an FCC mandate.[5] The Alliance for Telecommunications Industry Solutions (ATIS) has published a set of INC guidelines entitled "Central Office Code (NXX) Assignment Guidelines" (COCAG). The VNXX method of assigning telephone numbers (i.e., its use of VNXX) is in violation of these industry guidelines, which designate NPA/NXX codes as geographically-specific.

Q. WHAT PROVISIONS OF THE COCAG DEFINE NPA NXX CODES AS GEOGRAPHICALLY SPECIFIC?

A. Section 2.14 of the COCAG states that:

> "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*." (Emphasis added.)

VNXX is not identified as an exception, and is certainly not an "exception" as it is provisioned by carriers without local service in the rate center to which the codes/blocks are assigned.

Q. ARE THERE OTHER PROVISIONS IN THE COCAG THAT SPECIFY A GEOGRAPHIC CORRELATION WITH TELEPHONE NUMBERS?

A. Yes. Section 4.2.6 of the COCAG provides that "[t]he numbers assigned to the facilities identified must serve subscribers in the *geographic area corresponding*

[5] 47 C.F.R. § 52.13(d)

with the rate center requested." (Emphasis added.)

Q. DOES THE COCAG DEFINE A RATE AREA?

A. Yes. The COCAG defines a rate area as denoting "the smallest geographic area used to distinguish rate boundaries."

Q. WHAT IS A RATE CENTER?

A. A rate center is the point within a rate area that is defined by geographic specific coordinates from which mileage measurements are determined for the application of interexchange mileage rates. The rate center is also the basis of number assignment both from the acquisition of numbering resources and the provisioning of service to customers. Thus, it is a unique geographic area to which the numbers are assigned that is significant for determining the jurisdiction of a call and not the numbers themselves.

Q. DOES THE COCAG RELY ON THIS CONCEPT FOR THE BASIS OF GEOGRAPHIC DEFINED NUMBERING RESOURCES?

A. Yes. In the 51 pages of the COCAG, rate centers and rate areas are referenced over 25 times in addition to other references to the geographic nature of telephone numbers that occurs more than ten times. The geographic nature of telephone numbers is an inherent principle on which the COCAG is based.

Q. DOES THE COCAG DISTINGUISH BETWEEN GEOGRAPHIC NUMBERS AND NON-GEOGRAPHIC NUMBERS?

A. Yes. The COCAG also states that "Geographic NPAs" are the "NPAs which

correspond to discrete geographic areas within the NANP," while "Non-geographic NPAs" are "NPAs that do not correspond to discrete geographic areas, but which are instead assigned for services with attributes, functionalities, or requirements that transcend specific geographic boundaries, the common examples [of which] are NPAs in the N00 format, e.g., 800."

Q. DO CARRIERS THAT USE VNXX ARRANGEMENTS APPROPRIATELY ASSIGN NUMBERS TO ITS CUSTOMERS OF VNXX SERVICE ACCORDING TO INC GUIDELINES?

A. No. The telephone numbers that these carriers use are geographic NPA numbers – in other words, they are numbers that should, according to guidelines, correspond to discrete geographic areas. But with the inappropriate assignment of these numbers, the numbers no longer reflect a specific geographic location. Callers who dial a VNXX "local" number would not reach anyone in the LCA – rather, they would be transported over Qwest's network infrastructure to the VNXX carrier's switch, and then on to an ISP that may be located in a different LCA in the state, or in another state entirely. This use of numbers violates industry guidelines.

Q. DOES VNXX SERVICE COMPORT WITH THE INDUSTRY NUMBERING GUIDELINES?

A. Not at all. As explained above, the industry numbering guidelines recognize that there are numbers that are geographic in nature, and others that are non-geographic in nature. The determination whether a NPA/NXX is geographic or non-geographic is based on the NPA digits that precede the NXX digits. Geographic numbers are the telephone numbers that most people associate with their wireline service. Non-

geographic numbers are telephone numbers that have NPA digits such as 800 or 900. However, these carriers have chosen to use geographic numbers to facilitate a non-geographically provisioned service.

If the VNXX method of assigning telephone codes/blocks to switches were taken to its logical conclusion, all switches should recognize all telephone numbers as local. However, the switch technology that is employed by Qwest is designed based on the history of the telecommunications, industry standards and the method of regulation which are fundamentally based on the geographic location of end users.

VII. CONCLUSION

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.