EXHIBIT KAS-29T

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

In the Matter of the Investigation Into Qwest Corporation's Compliance with Section 271of the Telecommunications Act of 1996	)	**Docket No. UT-003022**

DIRECT TESTIMONY OF

KAREN A. STEWART

ON BEHALF OF

QWEST CORPORATION

RE EMERGING SERVICES

MAY 16, 2001

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I. INTRODUCTION AND PURPOSE OF TESTIMONY

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

A. My name is Karen A. Stewart. I am a Senior Staff Advocate in the Qwest Services Corporation (Qwest) Policy and Law organization. My office is located at 421 SW Oak Street, Portland, Oregon.

Q. PLEASE REVIEW YOUR EDUCATION, WORK EXPERIENCE AND PRESENT RESPONSIBILITIES.

A. I received a Bachelor of Science degree in Business Administration from Portland State University in 1980 and a Masters degree in Business Administration from the University of Oregon in July 1994. I have been employed by Qwest since 1981 (previously known as Pacific Northwest Bell and U S WEST). I have held a variety of positions at Qwest, including sales, product management, regulatory affairs, issues management, and E911 project management and technical design. I am currently a member of the Qwest Policy and Law organization responsible for representing Qwest in a number of 271 workshops related to Qwest's provisioning of unbundled network elements (UNEs).

Q. HAVE YOU PREVIOUSLY TESTIFIED?

A. Yes. Under either my current name or the name of Karen A. Baird, I have testified in the states of Colorado, Idaho, Iowa, New Mexico, Minnesota, Nebraska, North Dakota, Oregon, South Dakota, Utah and Washington.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. In this testimony, I will address the issues regarding what Qwest describes as Emerging Services: dark fiber, packet switching, line sharing, and subloop unbundling.

II. EXECUTIVE SUMMARY

Q. CAN YOU SUMMARIZE YOUR TESTIMONY?

A. Yes. Qwest's emerging service obligations are the result of the FCC's Third Interconnection Order in CC Docket No. 96-98[1] and the Line Sharing Order in CC Docket Nos. 98-147 and 96-98.[2] The Line Sharing Order, as its name implies, added a requirement for line sharing and the Third Interconnection Order added requirements for sub-loop unbundling, access to dark fiber, and limited access to unbundled packet switching.

I demonstrate that Qwest has a concrete legal obligation to provide these emerging services unbundled network elements (UNEs) through its revised Statement of Generally Available Terms and Conditions (SGAT) and various interconnection agreements consistent with all FCC requirements, to provide access to emerging services.

I have attached, as Exhibit KAS-30 (see also Exhibit JML-2 attached to the Direct Testimony of Jean M. Liston dated May 16, 2001), a redlined version of the Washington SGAT updated with revised SGAT sections for line sharing, sub-loop unbundling, dark fiber, and packet switching. This version of the SGAT has

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[1] Third Interconnection Order and Fourth Notice of Proposed Rulemaking, CC Docket No. 96-98, FCC 99-238, (November 5, 1999) ("Third Interconnection Order" or "UNE Remand Order").

[2] Third Interconnection Order, CC Docket No. 98-147, and Fourth Report and Order, CC Docket No. 96-98, FCC 99-355 (December 9, 1999) ("Line Sharing Order").

been updated to incorporate changes to the SGAT agreed to in other workshops on these same topics, as well as language proposed by Qwest to address concerns raised in those workshops.

My testimony, when combined with Regional Oversight Committee's ("ROC") Third Party Operation Support System (OSS) testing results, checklist workshops, and references to the SGAT, proves that Qwest provides access to emerging services and UNEs in conformance with the Act.

III. LINE SHARING

Q. WHAT ARE QWEST'S LINE SHARING OBLIGATIONS?

A. On December 9, 1999, the FCC released its Line Sharing Order. This order amended its unbundling rules to require ILECs to provide unbundled access to the high frequency portion of copper loops in certain situations. The unbundling of the high frequency portion of the loop enables a CLEC to offer advanced services over that portion of the loop at the same time the ILEC is using the voice frequency portion of the loop to provide analog, circuit-switched voice services. This joint use of copper loops by both CLECs and ILECs is commonly referred to as line sharing. In part, the amended FCC rule states:

> (1) The high frequency portion of the loop network element is defined as the frequency range above the voiceband on a copper loop facility that is being used to carry analog circuit-switched voiceband transmissions.
>
> (2) An incumbent LEC shall provide nondiscriminatory access in accordance with section 51.311 of these rules and section 251(c)(3) of the Act to the high frequency portion of a loop to any requesting telecommunications carrier for the provision of a telecommunications service conforming with section 51.230 of these rules.
>
> (3) An incumbent LEC shall only provide a requesting carrier with access to the high frequency portion of the loop if the incumbent LEC is providing,

and continues to provide, analog circuit-switched voiceband services on the particular loop for which the requesting carrier seeks access.[3]

The FCC determined that ILECs would require a period of time to implement the OSS and loop facility modifications needed to support line sharing. Specifically, the FCC concluded that ILECs should be able to make these modifications and begin providing line sharing within 180 days of the Line Sharing Order. The FCC urged ILECs to make access to the high frequency portion of loops available to requesting carriers as of June 6, 2000, 180 days after December 9, 1999.

Q. DOES QWEST OFFER LINE SHARING IN WASHINGTON?[4]

A. Yes. Qwest has a concrete and specific legal obligation to provide line sharing in Washington. This legal obligation comes in two forms: (1) business agreements negotiated with interested CLECs[5] and (2) Qwest's SGAT. As to the first, to promptly satisfy the requirements of the Line Sharing Order, Qwest and interested CLECs negotiated an interim business agreement (signed on April 24, 2000), to govern the deployment of line sharing in 13 of Qwest's states, including

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[3] 47 C.F.R. 51.319 (h)

[4] Since Qwest does offer line sharing in Washington, the following questions posed by this Commission in the Supplemental and Interpretive Policy Statement issued in Docket No. UT-970300 on March 15, 2000, are not applicable:

Q. If Qwest is not currently providing this checklist item, is Qwest offering the item? If so, how is it offering the item and under what terms, conditions, and rates? Describe how the checklist item is readily available and easily obtained by competitors.

Q. If Qwest is not currently offering this checklist item, is Qwest capable of commercially providing it? What is Qwest's anticipated schedule to provide the item? Has any CLEC requested the checklist item?

[5] Often CLECs specializing in data services are called Data Competitive Local Exchange Carriers (DLECs). In this affidavit, the generic term CLEC is used to include DLECs and traditional CLECs.

Washington.[6] The interim business agreement included provisioning and maintenance processes and interim rates associated with the line sharing elements. Qwest has very recently completed negotiating final line sharing business agreement language with numerous CLECs. Exhibit KAS-31 contains a copy of both the interim and final line sharing business agreements.

Q. DID QWEST ALLOW CLECS TO COLLABORATE ON THE DEPLOYMENT OF LINE SHARING IN WASHINGTON?

A. Yes. As part of the interim business agreement, Qwest allowed CLECs to prioritize the Qwest central offices that would first be deployed with line sharing bays, equipment and cabling. In this regard, the CLECs developed a list of 349 central offices across the 13 states covered by the interim business agreement in which Qwest agreed to install, on a staggered basis, the equipment and facilities needed to support line sharing. Per the interim business agreement, the initial groups of central offices were equipped for line sharing by May 15, 2000, and the last group of central offices were to be completed on July 31, 2000.

By July 31, 2000, Qwest had equipped 100% percent of the 349 prioritized central offices. At the request of the CLECs, the list of prioritized central offices is confidential, and not available to parties outside those that have signed the interim business agreement.

Additionally, Qwest stands ready to accept applications from any CLEC with line sharing in their interconnection agreement to equip central offices not on the

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[6] Prior to the interim business agreement, Qwest and a group of CLECs negotiated a stipulation to govern line sharing deployment in the only state in Qwest's region not covered by the interim business agreement, Minnesota, on an interim basis. The stipulation was approved by the Minnesota Commission on December 1, 1999, and required Qwest to make 52 central offices in Minnesota (identified and prioritized by the CLECs) capable of supporting line sharing by March 31, 2000. This was the first such agreement of its kind in the nation, and it served as the basis for the interim business agreement for the other 13 states in Qwest's region.

initial prioritization list. Applications to equip additional central offices will be processed utilizing the collocation application process.

Q. IS QWEST ABLE TO PROVIDE THIS CHECKLIST ITEM IN ALL PARTS OF ITS WASHINGTON STATE SERVICE TERRITORY? IF NOT, DESCRIBE IN WHICH PARTS OF ITS TERRITORY THE SERVICE CANNOT BE PROVIDED, AND WHY.

A. Yes, Qwest is able to offer line sharing in all parts of its Washington service territory. However, as describe more fully below, prior to the first line sharing order being processed for a central office, line sharing equipment, bays and cabling would need to be installed.

Q. DESCRIBE HOW THE QUALITY AND RELIABILITY OF CHECKLIST ITEMS PROVIDED TO COMPETITORS BY QWEST ARE COMPARABLE TO THE QUALITY AND RELIABILITY OF SUCH ITEMS QWEST PROVIDES TO ITSELF OR ITS OWN CUSTOMERS.

A. In Qwest's SGAT, it has committed that all UNEs, including line sharing, are provided in a manner comparable to the quality and reliability that Qwest provides to itself and its affiliates. Specifically, the SGAT states:

> 9.1.2 Qwest shall provide non-discriminatory access to unbundled network elements on rates, terms and conditions that are non-discriminatory, just and reasonable. The quality of an unbundled network element Qwest provides, as well as the access provided to that element, will be equal between all carriers requesting access to that element; second, where technically feasible, the access and unbundled network element provided by Qwest will be provided in "substantially the same time and manner" to that which Qwest provides to itself or to its affiliates. In those situations where Qwest does not provide access to network elements to itself, Qwest will provide access in a manner that provides CLEC with a meaningful opportunity to compete. For the period of time Qwest provides access to CLEC to an unbundled network element, CLEC shall have exclusive use of the network element, except when the provisions herein indicate that a network element will be

shared (such as shared transport). Notwithstanding the foregoing, Qwest shall provide access and UNEs at the service performance levels set forth in Section 20. Notwithstanding specific language in other sections of this Agreement, all provisions of this Agreement regarding unbundled network elements are subject to this requirement. In addition, Qwest shall comply with all state wholesale service quality requirements.

Q. WHAT QUALITY CONTROL STEPS DID QWEST TAKE TO ENSURE THE ACCURACY OF LINE SHARING EQUIPMENT INSTALLATIONS?

A. Qwest has a three-step quality control process in place to ensure splitter installation accuracy.

Step 1 – A complete verification of the Customer Application. The verification process included a review of the original application and all subsequent CLEC changes. This information was compared to the Qwest engineering job and the actual work completed in the central office. All discrepancies were tracked and resolved by November 30, 2000.

Step 2 – The bay mounted Splitter Installations were quality-checked via the Corning (formerly Siecor) Splitter Card testing process. The testing completed by the end of the year, 2000.

Step 3 – A training document based on the vendors specifications was completed on November 20, 2000. This training document was used to retrain Qwest technicians.

Q. WHAT TRAINING HAVE QWEST EMPLOYEES RECEIVED ON LINE SHARING?

A. Significant line sharing training has been provided to more than 13,000 Qwest employees this year. Training has occurred in our Interconnect Service Center, our Network organization including the Central Office and field technicians, the

repair center, and the Escalation Center. Initial training began in January and additional more specific training was completed toward year end. Exhibit KAS-32 summarizes the Qwest line sharing training activities and the number of employees that Qwest has trained.

Q. HAS QWEST RECEIVED REQUESTS FOR LINE SHARING IN WASHINGTON?

A. Yes. In those central offices in Washington already equipped for line sharing, Qwest is now accepting Shared Loop orders.[7] As of March 31, 2001, Qwest had 1,778 Shared Loops in service with 4 CLECs in Washington. Moreover, Qwest is prepared to meet the current and foreseeable demand in Washington.

Q. TO WHOM IS QWEST PRESENTLY PROVIDING, ON A COMMERCIAL BASIS, THIS CHECKLIST ITEM?

A. Attached as KAS-53C is a confidential exhibit that identifies the CLECs to whom Qwest is currently providing shared loops in Washington.

Q. WHAT IS THE RATE FOR LINE SHARING? HOW WAS THE PRICING OF EACH ITEM (AS APPLICABLE) DETERMINED? IS PRICING EQUITABLE?

A. The rates for line sharing in Washington are contained in Exhibit A to the SGAT. Footnotes associated with each rate element identify how the rate for that element was determined. Qwest's rates for line sharing are fair and equitable.

Q HOW DID QWEST NOTIFY THE COMMISSION AND CLECS OF THE AVAILABILITY OF LINE SHARING IN WASHINGTON?

A. Qwest provided the Commission with a copy of the interim business agreement during the week of April 24, 2000, and invited Commission staff to attend a

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[7] "Shared Loop" is the name of the Qwest line sharing offering.

question and answer session via a telephone conference call on April 28, 2000. The invitation to this conference is attached as Exhibit KAS-33. In addition, Qwest mailed a copy of the interim business agreement to each wireline CLEC (with which it had an interconnection agreement) in its region. This mailing included instructions on how to "opt in" to the agreement by simply counter-signing the cover letter and mailing it back to Qwest. Exhibit KAS-34 contains a copy of the notification and the CLEC mailing list.

Q HOW LONG WILL QWEST RELY ON THE INTERIM LINE SHARING AGREEMENTS?

A. Qwest is in the process of negotiating state-specific, CLEC-specific interconnection agreement amendments based on the terms and conditions contained in the negotiated final business agreement. The specific amendment language has been agreed to in principle, and Qwest is currently preparing the amendments for each CLECs' signature. Any CLEC that is a party to the interim business agreement can continue to obtain line sharing from Qwest under that agreement until the final interconnection agreement amendments have been executed.

Q. DOES THE QWEST SGAT INCLUDE LINE SHARING?

A. Yes. Qwest's Washington SGAT contains explicit line sharing (i.e. "Shared Loop") language and thereby creates a binding legal obligation for Qwest to provide line sharing in Washington.[8] Since Qwest filed its original Washington SGAT, Qwest has begun the 271 approval process for line sharing in the Advanced Services workshop in Arizona, the Emerging Services Workshops in Colorado, and the Seven States joint docket. In addition, Qwest has continued negotiating with CLECs region wide to obtain a permanent line sharing agreement. These meetings and workshops have led to additional language incorporated into current SGAT language attached to this testimony. In fact, Qwest and CLECs have reached agreement on most SGAT provisions. Qwest is committed to offering the same non state-specific negotiated changes in Washington.

The SGAT states:

> 9.4.1 Line Sharing provides CLEC with the opportunity to offer advanced data services simultaneously with an existing end user's analog voice-grade (POTS) service on a single copper loop referred to herein as the "Shared Loop" or "Line Sharing", by using the frequency range above the voice band on the copper loop. This frequency range will be referred to herein as the High Frequency Spectrum Network Element ("HUNE"). A POTS splitter separates the voice and data traffic and allows the copper loop to be used for simultaneous data transmission and POTS service. The POTS service must be provided to the end user by Qwest.

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[8] SGAT at 9.4

Q WHAT TECHNICAL STANDARDS AND/OR BUSINESS RULES IS QWEST PROVIDING TO CLECS FOR THIS CHECKLIST ITEM? EXPLAIN THE PROCESS AND SCHEDULING FOR UPDATING THESE TECHNICAL STANDARDS AND/OR BUSINESS RULES.

A. Qwest defines the specifications, interfaces and parameters associated with the Shared Loop product in Technical Reference Publications No. 77380 through 77389. In addition, the Wholesale Product Guide (PCAT) provides CLECs with product information, rate elements and availability. CLECs can access the PCAT at URL: http://www.qwest.com/wholesale/pcat/index.html.

Qwest believes that the publication and use of technical publications is an invaluable tool to provide a level of product detail that is not feasible in tariff or contract language. In response to concerns expressed by the CLEC community, Qwest announced on October 13, 2000 an augmentation to the existing Co-Provider Industry Change Management Process (CICMP) to include changes to products, business processes and technical publications. Now CLECs will receive notice of changes, and a forum for providing feedback on the changes. In addition, CLECs can use this process to request changes, and to have their requested changes to be publicly tracked and reported.

Q PLEASE DESCRIBE LINE SHARING.

A. In a line sharing (Shared Loop) arrangement one copper loop can carry both voice and data traffic simultaneously. Through the separation of the voice frequency from the data frequency, Qwest provides voice service to the end-user using the voice band frequencies, while the CLEC provides an approved data service on the frequency range above the voice band.

Q CAN LINE SHARING CAUSE DEGRADATION OF THE ANALOG VOICE SERVICES?

A. Yes. The FCC recognized the potential for data services to degrade existing analog voice services, and, therefore, required that ILECs only provide line sharing to the extent that the xDSL technologies deployed by the CLEC are presumed to be compatible with analog voice service.[9] Such presumed services currently are limited to ADSL,[10] RADSL and Multiple Virtual Line transmission systems. In the future, additional technologies may be used by CLECs to the extent those services are deemed acceptable for line sharing deployment under applicable FCC rules.[11]

Q DESCRIBE HOW QWEST HAS FULLY IMPLEMENTED THIS CHECKLIST ITEM AS REQUIRED BY SECTION 271 OF THE ACT.

A. Implementing a line sharing arrangement requires the installation of new equipment in the central office, including a "POTS splitter" that splits the voice and data traffic, sending the voice traffic to Qwest and the data traffic to the CLEC. In addition, new cross-connect systems, cabling, and terminal blocks are required in the central office to route the voice and data traffic separately.

Generally, in a standard line sharing arrangement, just as with POTS, the copper loop comes into the central office from a home or business and connects to the COSMIC or MDF. From there, however, the path the loop follows changes significantly. The loop is cross-connected and routed to an Interconnection

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9 Line Sharing Order at ¶70

10 In the Line Sharing Order, the FCC concluded that the relatively new "G.Lite" standard (a form of splitterless ADSL) maybe compatible with voice services and, hence may be acceptable for line shared deployment. Line Sharing Order at ¶70, fn. 156.

11 SGAT at 9.4.2.1.3

Distribution Frame (ICDF), which, in turn, is cross-connected and then routed to a "POTS splitter." The POTS splitter literally splits the voice and data traffic into two distinct transmission paths, thereby allowing the voice traffic to be carried to the Qwest switch and the data traffic to be carried to the CLECs' collocation space. Direct connection options are also available for CLECs who elect not to utilize an ICDF.

Q. WHAT IS THE FUNCTION OF THE POTS SPLITTER?

A. A POTS splitter is a passive device, meaning it does not require external power to perform its function. In the event of a power loss, the voice calls passing through the POTS splitter will remain functional, relying on central office back-up power systems, thus insuring critical services (such as 911 and operator services) are still available.

Q. WHERE CAN THE POTS SPLITTER BE LOCATED?

A. A key network architecture decision in implementing line sharing is where to place the POTS splitter in the central office. Generally, there are two alternatives: (1) placement of the POTS splitter in a common area, such as a relay rack near the ICDF; or (2) placement of the POTS splitter in the CLECs' collocation space. Qwest allows CLECs to choose either alternative providing them the flexibility to meet specific business needs.[12] These choices are, of course, dependent upon space availability and engineering economy. For example, central offices of less than 10,000 lines may require placement of common area POTS splitters on a MDF or an existing Qwest relay rack.

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[12] SGAT at 9.4.2.2 and 9.4.2.3

Q. CAN YOU MORE FULLY EXPLAIN THE POTS SPLITTER LOCATED IN A COMMON AREA?

A. Yes. Exhibit KAS-35 illustrates the placement of a POTS splitter in a central office common area. Using the architecture where the POTS splitter is placed in a common area, the CLEC purchases the POTS splitter, or Qwest will purchase the POTS splitter for the CLEC subject to reimbursement by the CLEC, and Qwest is responsible for installing the POTS splitter in the common area.[13] Qwest also has responsibility for the maintenance and repair of the POTS splitter. This placement in the common area allows multiple CLECs to mount individual splitter shelves in a common bay and/or relay rack.

In this arrangement, two Interconnection Tie Pairs (ITPs) and four TIE Cables are needed to connect the POTS splitters to the Qwest network.[14] One ITP carries both voice and data traffic from the COSMIC/MDF loop termination, to an appropriate ICDF. From this frame, one TIE Cable carries both voice and data traffic to the POTS splitter. The voice and data traffic are then separated at the POTS splitter, and the separated voice and data traffic are transported to the ICDF via separate TIE Cables (i.e., the second and third TIE Cables). At the ICDF, the data traffic is routed to the CLEC's collocation area via a fourth TIE Cable, and the voice traffic is transported to the switch port termination, via a second ITP. If the CLEC wants direct connections from the COSMIC to the POTS splitter, that architecture is also available.[15]

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[13] SGAT at 9.4.2.3.1

[14] TIE Cables frequently are referred to as DS0 terminations in many of Qwest's interconnection agreements, and ITPs frequently are referred to as Expanded Interconnection Channel Terminations, or EICTS, in many of those agreements.

[15] SGAT at 9.4.2.2.4

Q. PLEASE EXPLAIN THE PLACEMENT OF THE SPLITTER IN THE COLLOCATION SPACE.

A. The second alternative available to CLECs is placement of the POTS splitter in the CLECs' collocation space. Once the POTS splitter has been installed by the CLEC, two ITPs and two TIE Cables are needed to connect it to the Qwest network. One ITP carries both voice and data traffic from the COSMIC/MDF loop termination, to an appropriate ICDF. From this frame, one TIE Cable carries both voice and data traffic to the POTS splitter located in the CLEC's collocation space. The voice and data traffic is separated at the POTS splitter. The data traffic is connected to the CLEC's network within its collocation area. The voice traffic is then carried to the switch port termination, via the ICDF, using a second TIE Cable and a second ITP.

Q. ARE THERE ADVANTAGES TO THE CLEC IF THE POTS SPLITTER IS LOCATED IN THEIR COLLOCATION SPACE?

A. Yes. There are numerous practical reasons for placing the POTS splitter in the CLEC's collocation space. First, the CLEC has complete control over acquisition and installation of the POTS splitters, and has responsibility for the maintenance and repair of the splitters. Second, this placement is less complicated than placing the POTS splitter in a common area of the central office, because (as identified above) it often requires placing two fewer TIE cables in the central office. Hence, it involves fewer cross-connects, and therefore, substantially less installation time. Reference Exhibit KAS-35 for a diagram of a POTS splitter placed in a CLEC's collocation area. Again, in this situation if a CLEC wants direct connections from the COSMIC to the POTS splitter, that architecture is available.

Q. DOES QWEST HAVE A LINE SHARING PROVISIONING PROCESS?

A. Yes. Qwest has documented methods, procedures and standards for CLECs to access Shared Loops. All Shared Loop provisioning and maintenance methods and procedures have been documented. Exhibit KAS-36 diagrams the Shared Loop provisioning process and describes the provisioning task list functions.

Q. WHAT INFORMATION HAS QWEST PROVIDED CLECS REQUESTING LINE SHARING?

A. Extensive Shared Loop provisioning information is made available to CLECs on-line in Qwest's Wholesale Web site, the PCAT at URL: http://www.qwest.com/wholesale/pcat/index.html. Moreover, the initial process to access Shared Loops has been directly communicated to the CLECs who signed the interim business agreement. Exhibit KAS-37 contains a copy of the ordering guide provided to each CLEC that elected to sign the interim business agreement.

Q. WHAT ARE THE STEPS INVOLVED IN ESTABLISHING A LINE SHARING ARRANGEMENT?

A. Prior to the actual provisioning of a CLEC's first Shared Loop order in a central office, a POTS splitter must be installed. POTS splitter installation, cable augmentations, and other work within the central office needed to support line sharing may be ordered at the same time as a new collocation space utilizing a single collocation application form.

For each shared loop arrangement requested, the CLEC should first access the IMA pre-order Loop Qualification tool to determine if the loop is capable of supporting xDSL service. Then the CLEC submits a Local Service Request (LSR) similar to the process used for unbundled loops.

Once a POTS splitter has been installed in a central office, Qwest will provision the Shared Loop arrangement within the same standard interval for the unbundled loop.[16] For example, the expected installation interval for a shared Loop in Seattle, Washington is five days.

Q. WHAT INSTALLATION OPTIONS ARE AVAILABLE FOR SHARED LOOP?

A. Basic Installation "lift and lay" procedures will be used for all Shared Loop orders. Under this approach, a Qwest technician "lifts" the loop from its current termination in a Qwest Wire Center and "lays" it on a new termination connecting it to the CLEC's collocated equipment in the same central office. Exhibit KAS-38 contains a central office job aid that is laminated and strategically placed in each central office when a POTS splitter is installed. This job aid assists the central office technician in consistently following process guidelines when installing and repairing Shared Loop arrangements.

Q. HAVE SYSTEM CHANGES BEEN NECESSARY FOR QWEST TO SUPPORT LINE SHARING?

A. Yes. To support line sharing, Qwest's standard unbundled loop ordering and provisioning processes have been modified to reflect the fact that both Qwest and a CLEC are now serving one end-user. The presence of two carriers for one end-user has a substantial impact on the OSS ordering and provisioning processes. Qwest must modify the systems that support these processes to allow the CLEC to pass additional pieces of data that will be used to designate:

- the CLEC's identity;
- the request for line sharing;
- the specific loop that will be shared;

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[16] SGAT at 9.4.4.1.5

- meet points for the Shared Loop (the POTS splitter and port location); and
- the power density mask that the CLEC pre-specifies on the LSR.

In addition, the ordering and provisioning systems must recognize the line sharing information and, based on that information, direct data and actions of other downstream systems. Many of these systems must now house CLEC-specific records and end-user-specific records that must be correlated. For example, such correlation of CLEC and end-user records is necessary to carry out functions relating to billing and repair. The inventory and assignment systems must also recognize the line sharing data, be able to handle additional inventory meet points from the CLEC, and direct the inventory information to the appropriate systems.

Q. PLEASE EXPLAIN QWEST'S MAINTENANCE RESPONSIBILITIES FOR LINE SHARING.

A. Exhibit KAS-39 displays the Shared Loop maintenance process flow and describes the maintenance task list functions. In summary, Qwest is responsible for repairing both the voice services provided over the Shared Loop and the physical line between the network interface device at the end user premise and the point of demarcation in the Qwest central office. Qwest is also responsible for inside wiring at the end user premises in accordance with the terms and conditions of inside wire maintenance agreements, if any, between Qwest and its end-users.

Q. WHAT ARE THE CLEC'S RESPONSIBILITIES FOR MAINTENANCE OF LINE SHARING ARRANGEMENTS?

A. Qwest will allow the CLEC to access Shared Loops at the point where the combined voice and data loop is cross-connected to the POTS splitter. The

CLEC will be responsible for repairing data services provided on Shared Loops. Qwest and the CLEC each will be responsible for maintaining its own equipment. The entity that controls the POTS splitter will be responsible for its repair and maintenance.

Q. ARE THERE JOINT MAINTENANCE RESPONSIBILITIES OR AGREEMENTS FOR LINE SHARING?

A. Qwest and the CLEC will have the responsibility for resolution of any service trouble report(s) initiated by their respective end-users. If an end-user complains of a voice service problem that may be related to the use of a Shared Loop for data services, Qwest and the CLEC will work together with the end-user to solve the problem to the satisfaction of the end-user. Qwest will not disconnect the data service provided to an end-user over a Shared Loop without the written permission of CLEC unless the end-user's voice service is so degraded that the end-user cannot originate or receive voice telephone calls.

Q. WHAT PERFORMANCE STANDARDS MUST QWEST MEET REGARDING THE QUALITY, RELIABILITY, AND TIMELINESS OF PROVIDING LINE SHARING TO CLECS, AFFILIATES, AND ITSELF? HOW WERE THESE PERFORMANCE STANDARDS DETERMINED?

A. The parties in the ROC proceeding have agreed that Qwest should disaggregate results for line sharing on 10 existing performance measurements. These measurements concern installation/provisioning and repair/maintenance. The agree-upon measurements for shared loop are listed in the table below. The definitions can be found in Exhibit KAS-40.

Indicator Number	**Performance Indicator**
OP-3	Installation Commitments Met
OP-4	Installation Interval
OP-5	New Service Installation Without Trouble Reports for 30 Days After Installation
OP-6	Delayed Days
OP-15	Interval for Pending Orders Delayed Past Due Date
MR-3	Out of Service Cleared within 24 Hours
MR-4	Out of Service Cleared within 48 Hours
MR-6	Mean Time to Restore
MR-7	Repair Repeat Report Rate
MR-8	Trouble Rate

Additionally, where appropriate, Line Sharing results are included in the Pre-Ordering/Ordering and Billing measures. These measures produce results that aggregate UNEs or requests submitted via IMA and EDI.

Q. ARE THE PIDS SPECIFIC TO LINE SHARING GENERATING ANY DATA TO DATE?

A. Yes. The data is uniformly positive. The data can be found on the following web-site: www.qwest.com/wholesale/results. However, a few specific measures bear mentioning. OP-3, which tracks the percentage of commitments met, and OP-4, which tracks the average installation interval, shows that Qwest's line sharing results are outstanding.

Q. HAS QWEST RECEIVED ANY FORMAL OR INFORMAL WRITTEN COMPLAINTS FROM NEW ENTRANTS REGARDING PROVISION OF THIS CHECKLIST ITEM? IF SO, WHAT WAS THE NATURE OF THE COMPLAINT, WHAT IS ITS CURRENT STATUS AND, IF APPLICABLE, HOW WAS IT RESOLVED? FOR COMPLAINTS THAT WERE FOUND TO BE VALID, WHAT STEPS DID QWEST TAKE TO AVOID RECURRENCES?

A. I am not aware of any formal or informal complaints regarding line sharing in Washington.

IV. SUB-LOOP

Q. PLEASE EXPLAIN QWEST'S OBLIGATION TO PROVIDE SUB-LOOPS.

A. In the UNE Remand Order, the FCC determined that ILECs must provide unbundled access to subloops.[17] Specifically, the order stated:

> We define subloops as portions of the loop that can be accessed at terminals in the incumbent's outside plant. An accessible terminal is a point on the loop where technicians can access the wire or fiber within the cable without removing a splice case to reach the wire or fiber within. These would include a technically feasible point near the customer premises, such as the pole or pedestal, the NID or the minimum point of entry to the customer premises (MPOE). Another point of access would be the feeder distribution interface (FDI) which is where the trunk line, or "feeder," leading back to the central office, and the "distribution" plant, branching out to the subscribers, meet, and "interface". The FDI might be located in the utility room in a multi-dwelling unit, in a remote terminal, or in a controlled environment vault (CEV). . . [18]

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[17] Third Interconnection Order at ¶209

[18] Third Interconnection Order at ¶206

The requirement for ILECs to provide access to subloops was effective 120 days after the UNE Remand Order was published in the Federal Register. Therefore, Qwest was required to provide access to unbundled subloops as of May 18, 2000.

Q. DOES QWEST HAVE A LEGALLY BINDING COMMITMENT TO PROVIDE ACCESS TO SUBLOOPS IN WASHINGTON?[19]

A. Yes. Qwest's SGAT contains an explicit sub-loop offering and thereby creates a binding legal obligation for Qwest to provide CLECs access to subloops in Washington.[20] Since Qwest filed its Washington SGAT, Qwest has begun the negotiation process for the Advanced Services Workshop in Arizona, the Emerging Services Workshops in Colorado, and the joint Seven States docket, that include sub-loop unbundling. The Seven State workshop, which concluded on March 1, 2001, was the first workshop in which Qwest completed its discussion of subloop unbundling. Qwest is filing its most current SGAT language on subloop:

> Sub-loop is defined as any portion of the loop that it is technically feasible to access in Qwest's terminals in outside plant, i.e. an accessible terminal, pole, pedestal, Feeder Distribution Interface (FDI), Serving Area Interface (SAI) or Minimum Point of Entry (MPOE) including inside wire (owned by Qwest). An accessible terminal is any point on the Loop where technicians

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[19] Since Qwest does offer line sharing in Washington, the following questions posed by this Commission in the Supplemental and Interpretive Policy Statement issued in Docket No. UT-970300 on March 15, 2000, are not applicable:

Q. If Qwest is not currently providing this checklist item, is Qwest offering the item? If so, how is it offering the item and under what terms, conditions, and rates? Describe how the checklist item is readily available and easily obtained by competitors.

Q. If Qwest is not currently offering this checklist item, is Qwest capable of commercially providing it? What is Qwest's anticipated schedule to provide the item? Has any CLEC requested the checklist item?

[20] SGAT at 9.3

can access the wire or fiber within the cable without removing a splice case.[21]

Q. IS QWEST ABLE TO PROVIDE THIS CHECKLIST ITEM IN ALL PARTS OF ITS WASHINGTON STATE SERVICE TERRITORY? IF NOT, DESCRIBE IN WHICH PARTS OF ITS TERRITORY THE SERVICE CANNOT BE PROVIDED, AND WHY.

A. Yes, Qwest is able to offer subloops (assuming facilities are available) in all parts of its Washington service territory.

Q. DESCRIBE HOW THE QUALITY AND RELIABILITY OF CHECKLIST ITEMS PROVIDED TO COMPETITORS BY QWEST ARE COMPARABLE TO THE QUALITY AND RELIABILITY OF SUCH ITEMS QWEST PROVIDES TO ITSELF OR ITS OWN CUSTOMERS.

A. In Qwest's SGAT, it has committed that all UNEs, including access to subloops, are provided in a manner comparable to the quality and reliability that Qwest provides to itself and its affiliates. Specifically, the SGAT states:

> 9.1.2 Qwest shall provide non-discriminatory access to unbundled network elements on rates, terms and conditions that are non-discriminatory, just and reasonable. The quality of an unbundled network element Qwest provides, as well as the access provided to that element, will be equal between all carriers requesting access to that element; second, where technically feasible, the access and unbundled network element provided by Qwest will be provided in "substantially the same time and manner" to that which Qwest provides to itself or to its affiliates. In those situations where Qwest does not provide access to network elements to itself, Qwest will provide access in a manner that provides CLEC with a meaningful opportunity to compete. For the period of time Qwest provides access to CLEC to an unbundled network element, CLEC shall have exclusive use of the network element, except when the provisions herein indicate that a network element will be shared (such as shared transport). Notwithstanding the foregoing, Qwest

[21] SGAT at 9.3.1.1

shall provide access and UNEs at the service performance levels set forth in Section 20. Notwithstanding specific language in other sections of this Agreement, all provisions of this Agreement regarding unbundled network elements are subject to this requirement. In addition, Qwest shall comply with all state wholesale service quality requirements.

Q. WHAT TECHNICAL STANDARDS AND/OR BUSINESS RULES IS QWEST PROVIDING TO CLECS FOR THIS CHECKLIST ITEM? EXPLAIN THE PROCESS AND SCHEDULING FOR UPDATING THESE TECHNICAL STANDARDS AND/OR BUSINESS RULES.

A. Qwest further defines the specifications, interfaces and parameters associated with subloops in Technical Reference Publication No. 77405. In addition, the PCAT provides CLECs with product information, rate elements and availability. CLECs can access the PCAT at URL: http://www.qwest.com/wholesale/pcat/index.html.

Qwest believes that the publication and use of technical publications is an invaluable tool to provide a level of product detail that is not feasible in tariff or contract language. In response to concerns expressed by the CLEC community, Qwest announced on October 13, 2000 an augmentation to the existing Co-Provider Industry Change Management Process (CICMP) to include changes to products, business processes and technical publications. Now CLECs will receive notice of changes, and a forum for providing feedback on the changes. In addition, CLECs can use this process to request changes, and to have their requested changes to be publicly tracked and reported.

Q. HAS QWEST PROVISIONED SUBLOOPS IN WASHINGTON?

A. As of April 30, 2001, Qwest has not yet provisioned subloops in Washington.

Q. TO WHOM IS QWEST PRESENTLY PROVIDING, ON A COMMERCIAL BASIS, THIS CHECKLIST ITEM?

A. As stated above, Qwest has not yet received orders for subloops in Washington.

Q. WHAT ARE THE RATES FOR SUBLOOPS? HOW WAS THE PRICING OF EACH ITEM (AS APPLICABLE) DETERMINED? IS PRICING EQUITABLE?

A. The rates for subloops in Washington are contained in Exhibit A to the SGAT. Footnotes associated with each rate element identify how the rate for that element was determined. Qwest's rates for subloops are fair and equitable.

Q. PLEASE PROVIDE A DESCRIPTION OF SUB-LOOP.

A. A sub-loop is defined as any portion of the loop that it is technically feasible to access at one of Qwest's terminals in its outside plant network. When a CLEC is provided access to a portion of the loop, this process is referred to as sub-loop unbundling. An accessible terminal is any point on the unbundled loop where technicians can access the wire or fiber within the cable without removing a splice case. Exhibit KAS-41 contains diagrams that illustrate common loop architectures in the Qwest outside plant architecture.

Q. WHAT DOES QWEST CONSIDER TECHNICALLY FEASIBLE ACCESS?

A. Examples of where it is technically feasible to access Qwest's outside plant are: an accessible terminal; pole; pedestal; Feeder Distribution Interface (FDI); Serving Area Interface (SAI); or Minimum Point Of Entry (MPOE), including riser cable (if owned by Qwest).[22]

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[22] SGAT at 9.3.1.1

Q. WHEN YOU SAY COLLOCATION IS REQUIRED TO OBTAIN SUBLOOPS IN CERTAIN TERMINALS, DO YOU MEANS TRADITIONAL COLLOCATION WITH ALL ATTENDANT INTERVALS AND RATES?

A. No. The FCC specifically contemplated that collocation was necessary to support subloop. The FCC rules state: "Access to the subloop is subject to the Commission's collocation rules."[23] The FCC further explained that the terminal blocks that allow the cross connect between the ILEC and CLEC subloop elements is the collocation.[24] This is exactly what Qwest to CLECs through an offering it calls "cross-connect collocation." This unique form of collocation is governed completely by the subloop section of the SGAT. This allows Qwest to offer shorter intervals (30/45 and 90 days instead of 90/120 and 150 days) and substantially reduced rates.

Q. DESCRIBE HOW QWEST HAS FULLY IMPLEMENTED THIS CHECKLIST ITEM AS REQUIRED BY SECTION 271 OF THE ACT.

A. It depends on the type of accessible terminal that the CLEC seeks access to. Detached terminals are described below, and following I detail how Qwest has implemented access to (Multiple Tenant Environment (MTE) subloop elements. A CLEC can order access to unbundled subloops from a Detached Terminal once a CLEC has installed a FCP at the technically feasible access point. The FCP provides a demarcation point for the termination of the Qwest-provided sub-loop. The FCP is connected to binding posts, in most instances the cross connect collocation, that allows the necessary cross-connections so the sub-loop may connect with the CLEC-provided facilities. Moreover, the FCP network

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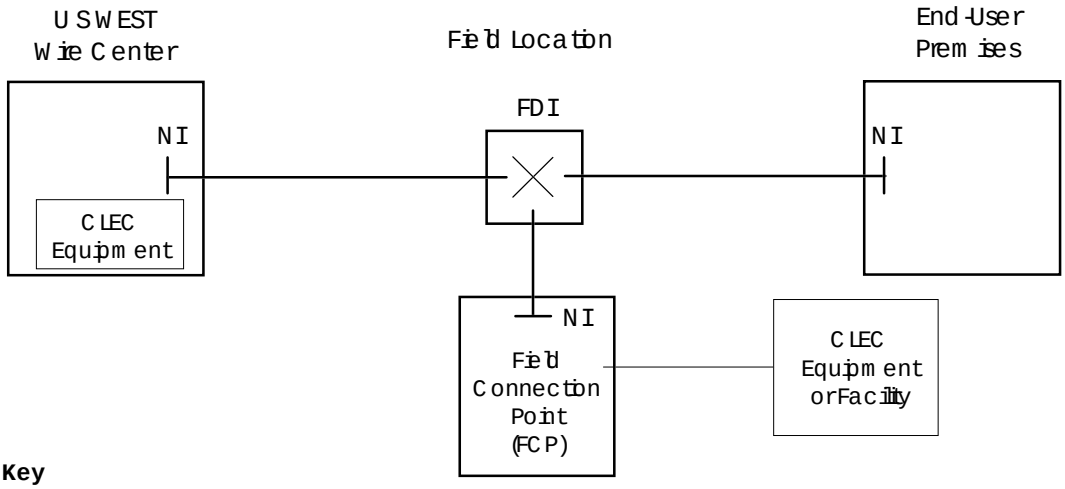
[23] Rule 319(a)(2)(D).

[24] "Access idle terminals contain cables and their respective wire pairs that terminate on screw posts. This allows technicians to affix cross-connects between **binding posts or terminals collocated** at the same point."

design allows multiple CLECs to access the same technically feasible access point. It also provides the CLEC with the circuit identification information it needs to order subloops on the LSR.

Unbundled Sub-Loop Arrangement



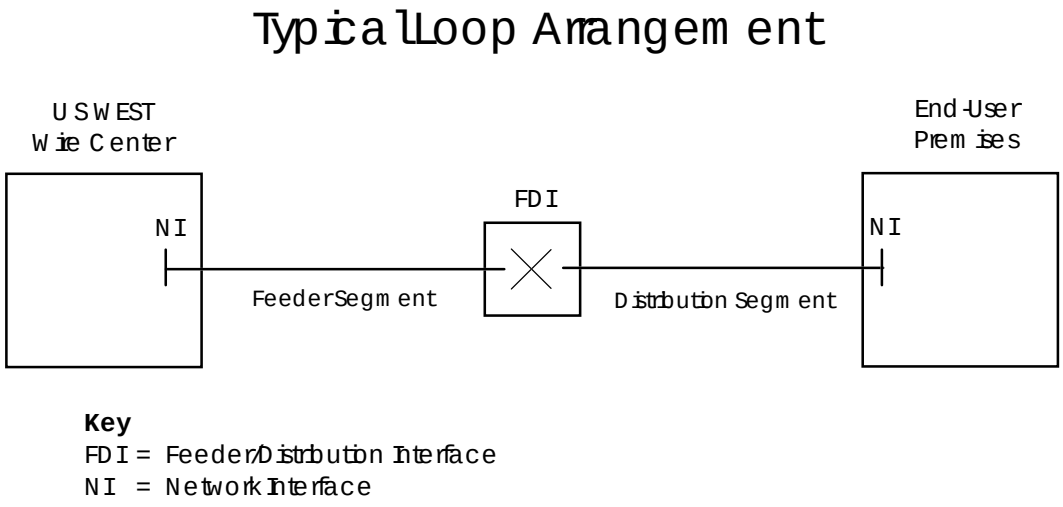
Key
CLEC = Certified Local Exchange Carrier
FDI = Feeder/Distribution Interface
NI = Network Interface

As illustrated above, the FCP is a splice point that connects Qwest's network to a CLEC's network. This is done by splicing CLEC owned cables to a Qwest cable that is, in turn, connected to terminal blocks in the technically feasible access point. The terminal blocks in the FDI or other technically feasible access point provide CLECs with access to the UFL and UDL or intrabuilding cable.

Q. PLEASE DESCRIBE THE TYPICAL SEGMENTS OF THE SUB LOOP.

A. The typical loop consists of two segments or portions, the feeder segment and distribution segment. The feeder extends from the central office network

interface (typically a MDF or COSMIC frame) to an FDI. The distribution segment of the loop extends from the FDI to the at the end-user location.



As shown, the two segments are cross-connected in the field at the FDI. Each portion of the loop, when unbundled into sub-loop elements, becomes an individual UNE. The Qwest sub-loop product offering identifies these two typical segments as the Unbundled Distribution Sub-Loop (UDL) and the DS1 Capable Unbundled Feeder Sub-Loop (UFL). Both 2-wire and 4-wire distribution loops are available. The SGAT clearly makes these types of standard subloops available to CLECs in Washington.[25]

Q. IS THERE A STANDARD PROCESS FOR PROVISION DS-1 FEEDER?

A. Yes. Exhibit KAS-42 is a flowchart that outlines the DS1 Capable Unbundled Feeder Loops provisioning process and the provisioning tasks performed by Qwest personnel.

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[25] SGAT at 9.3.2 and 9.3.3

Q. WHAT CAN QWEST DO TO FACILITATE SUB-LOOP UNBUNDLING?

A. To accommodate demand for sub-loop unbundling, Qwest has agreed to increase the size of existing FDIs to accommodate CLEC requests for additional cross connect-blocks. For example, if the necessary rights of way can be obtained, Qwest will retrofit an existing 2,700 pair FDI to an ultimate size of 5,400 pair, which will allow the CLEC to bring their cable directly to the back-side of the FDI. Then Qwest will splice the CLEC's cable into the FDI and run the cross-connects to provide the CLEC assess to sub-loop elements.

Q. WHY IS THERE A NEED FOR STANDARD PHYSICAL DEMARCATION?

A. A standard physical demarcation process provides Qwest and CLECs with a common interface location for maintenance and repair. The FCP or MTE POI are not unique architectures; a similar function is performed by the Point of Interface (POI) manhole in central office collocation arrangements. In the collocation example, CLECs bring their own facilities to the POI manhole where Qwest splices Qwest facilities directly into the CLEC facilities. Qwest then terminates their facilities to an ICDF for access to UNEs. The splice in the POI manhole also serves as a physical demarcation between Qwest facilities and CLEC facilities. This is virtually the same architecture employed by both Bell South and SBC to support sub-loop unbundling. Moreover, it allows Qwest to segregate the CLECs' facilities to minimize confusion by technicians, allows CLECs to order subloops with circuit identification information, allows for an orderly billing process and maintains network integrity.

Q. DOES THE SGAT LANGUAGE DIFFERENTIATE BETWEEN ACCESSING SUB-LOOP ELEMENTS AT AN MTE BUILDING VERSUS ACCESSIBLE TERMINALS OUTSIDE OF AN MTE BUILDING?

A. Yes. The SGAT specifically defines two different scenarios, each of which has its own method for obtaining access to sub-loops. First, access is available in what Qwest defines as "MTE terminals." MTE terminals are defined as "accessible terminals within a building in an MTE environment or accessible terminals physically attached to a building in an MTE environment." CLECs have very liberal access to MTE terminals to connect their own sub-loop elements.

Qwest also offers access at all remaining accessible terminals, which Qwest defines as "Detached Terminals." Detached Terminals can generically be considered as those terminals not attached to or within an MTE which are generally found on their own concrete slab. The most frequent example of a detached terminal would be a feeder distribution interface (FDI) where Qwest's feeder and distribution are cross-connected together.

Q. IS THERE ANY DISPUTE WITH RESPECT TO HOW QWEST OFFERS ACCESS TO SUB-LOOP ELEMENTS IN DETACHED TERMINALS OUTSIDE OF MTE LOCATIONS?

A. No. In Arizona, Colorado, and the seven state docket, the parties reached consensus with respect to how CLECs should access sub-loop elements in detached terminals.

Q. IS THERE DISAGREEMENT WITH RESPECT TO HOW CLECS SHOULD OBTAIN ACCESS TO SUB-LOOP ELEMENTS IN MTE TERMINALS?

A. Yes. During the same 271 workshops listed above, the parties did not reach consensus with respect to a number of issues affecting how CLECs should

access sub-loop elements at MTE terminals. Each of those points of dispute will be discussed in this testimony.

Q. PLEASE PROVIDE AN OVERVIEW FOR HOW QWEST OFFERS SUB-LOOP ACCESS AT MTE TERMINALS.

A. Qwest offers a streamlined process for how CLECs can obtain access to sub-loop elements in MTE Terminals. Before a CLEC can determine whether it needs to access an MTE end user customer through sub-loop unbundling, it must first determine whether Qwest or the landlord owns the intra-MTE facilities. If Qwest does not own any facilities in an MTE, then the CLEC would not need to purchase a sub-loop.

In an October 2000 decision, the FCC accounted for this situation and provided ILECs such as Qwest with ten business days to respond to a request from a landlord regarding ownership of the facilities. Qwest's SGAT is consistent with the 10-day timeframe; however, Qwest will take less than ten days where possible. To the extent that the CLEC simply wants to verify ownership and it has a copy of a contract or similarly compelling document, it need only attach such a document to its request and an intra-MTE facility ownership should be able to be determined virtually the same day. In no event, however, will Qwest take longer than ten days to assess ownership of the facilities. If the landlord owns the facilities, CLEC need do nothing more and can work directly with the landlord to reach end user customers.

If Qwest owns the intra-MTE facilities, then an additional process is required. In these circumstances, CLEC must inform Qwest of the terminations it requires to access Qwest sub-loop elements at the MTE terminal, Qwest will inventory these terminations so the CLEC can submit orders that will allow Qwest to track which Qwest sub-loop elements are connected to which CLEC sub-loop elements. This is necessary for effective Qwest repair, maintenance, and billing

procedures. Identification of network terminations is also necessary to insure that both the CLEC technicians and Qwest technicians know which underlying facilities are whose to minimize out of service problems.

Once the inventory is created, which takes a maximum of five days, CLECs can begin issuing orders for individual sub-loop elements. In most circumstances, the CLEC will run the required jumpers. Thereby allowing the CLEC to control the provisioning interval. By allowing the CLEC to perform the majority of cross-connections at an MTE, and specifically all cross-connects at MTE Terminals, the CLEC performs the work itself and potentially lowers it costs. In some limited circumstances, however, Qwest must run the jumpers and in those circumstances, the interval is five days, the same interval as an unbundled loop. Qwest would run the jumpers when a Detached Terminal is located on an MTE.

Q. PLEASE DESCRIBE THE PROCESS QWEST UTILIZES TO DETERMINE WHO OWNS THE MTE FACILITIES.

A. As stated above, in an October 2000 decision the FCC issued an order concerning CLEC access to MTEs. This order specifically required ILECs such as Qwest to determine whether it or a landlord owned facilities in an MTE within ten days. Thus, the FCC has specifically held that Qwest has ten business days to determine whether it or the landlord owns facilities in an MTE environment. There are a number of ways in which Qwest may determine ownership of facilities in an MTE. First, there may be a written contract determining ownership. Second, Qwest's LFAC database may determine ownership. Third, Qwest may have previously marked who owns the facilities at terminal locations within the MTE. Irrespective of the tasks and record searches that Qwest must perform, it will perform these tasks in no longer than ten days.

Q. PLEASE DESCRIBE HOW CLECS GET ACCESS AT AN MTE TERMINAL.

A. First the termination inventory and CLEC addressing is completed . Second, the CLECs can begin submitting orders for sub-loop elements utilizing standard local service requests (LSRs). Issuance of an LSR is critical to allow Qwest to repair its sub-loop facilities and to ensure that Qwest can issue bills and be able to process repair calls. The next step depends upon whether the MTE terminal contains a cross-connect field that will allow jumpers to be run directly between the CLEC and Qwest facilities or whether the MTE terminal is hard-wired and contains no cross-connect field.

Q. PLEASE DESCRIBE HOW CLECS WILL OBTAIN ACCESS TO AN MTE TERMINAL CONTAINING A CROSS-CONNECT FIELD.

A. CLECs are required to use an existing cross-connect field to the extent one exists. This provides for the easiest process and the best engineering practice for how to obtain sub-loop access. In this circumstance, the CLEC need only run a jumper from its sub-loop termination point (as a general rule this looks something akin to a network interface device) to Qwest's MTE terminal. CLEC can perform this task of running the jumper in virtually all circumstances. The only limitation on CLECs is a requirement to use good engineering practices and that the terminations be neatly performed.

Q. PLEASE DESCRIBE HOW CLECS CAN OBTAIN ACCESS TO HARDWIRED MTE TERMINALS.

A. Section 9.3.5.4.5.2.3 of the SGAT specifically states how CLECs can obtain access to MTE terminals that do not contain a cross-connect field. In those circumstances:

> "CLECs shall access each sub-loop in an MTE terminal using a bridging clip that overlays Qwest's termination pin for the particular end user customer on the connecting terminal block, and CLECs shall replace the Qwest line protector dedicated to that end user with a service denial protector or equivalent DC continuity interrupter."

While this sounds complicated, this process is actually incredibly simple and inexpensive. The concern Qwest has about hard-wired MTE terminals is ensuring that its facilities do not create a safety hazard or are not damaged thereby preventing use by Qwest and/or future CLECs. This method allows Qwest's facilities to remain connected to the MTE Terminal and ground protection. The CLEC installs a "bridging clip," which is simply an adapter that overlays Qwest's facilities. This allows CLEC and Qwest facilities to be connected to the MTE Terminal at the same time.

Then the CLEC removes the Qwest line protector and replaces it with a service denial protector, or equivalent DC continuity interrupter.

Without the installation of a DC continuity interrupter, difficulty might arise because Qwest facilities would remain connected to the end user's inside wire and would appear as bridged tap which could cause transmission problems for the CLEC's facilities. A DC continuity interrupter protector that grounds the facility (thereby protecting the customer and facilities against lightening strike) and eliminates the bridged tap, would then allow for clean and easy access to the intra-building sub-loop by the CLEC. Qwest's initial estimates are that the bridging clips and the protector devices are readily available in the marketplace and collectively cost less than $3.00 per unit.

Q. PLEASE DESCRIBE THE DIFFERENT TYPE OF SUB-LOOP ELEMENTS CLECS MAY OBTAIN IN AN MTE ENVIRONMENT.

A. CLECs may obtain access to any Qwest sub-loop elements necessary to reach the end user customer. Specifically, the CLEC would access "intra-building

cable" or "distribution loop" at an MTE depending upon the point at which the CLEC accesses the sub-loop. To the extent that the CLEC accesses sub-loops from within a building to access end user customers within the same building, CLECs obtain access to intra-building cable.

Q. IS A CLEC ABLE TO REQUEST SUBLOOPS OTHER THAN THOSE LISTED IN QWEST'S SGAT?

A. Yes. If a CLEC wants access to unbundled subloops other than the 2-wire or 4-wire Unbundled Distribution Sub-Loop, 2-wire or 4-wire non-loaded distribution loop, DS1 Capable Unbundled Feeder Sub-Loop, or intrabuilding cable Sub-Loop, access is available through the Special Request process.

Q. DESCRIBE THE SUB-LOOP PROVISIONING PROCESS.

A. A CLEC may submit orders for subloops after the FCP is in place in the case of Closed MTE Terminals or Detached Terminals or after the inventory is in place for Open MTE Terminals.[26] Both have a defined ordering process spelled out in the SGAT. When an FCP is required, the CLEC will complete the FCP Request Form attached as Exhibit KAS-43. To place an FCP, the CLEC will first submit a Field Connection Point Request Form to their Qwest Account Manager. Upon receipt of the Field Connection Point Request Form, Qwest initiates a Feasibility study and an FCP quote.

Q. WHAT STEPS TAKE PLACE AFTER QWEST INSTALLS THE FCP OR COMPLETES THE INVENTORY?

A. After completion, Qwest will notify the CLEC of its termination locations that can be used for ordering subloops. The CLEC populates the LSR with this

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[26] SGAT at 9.3.6.1

termination information to order subloops. In addition, the CLEC designates which sub-loop element it desires by listing the appropriate NC/NCI codes.

Q. ARE DUE DATE INTERVALS ESTABLISHED FOR INSTALLING SUB-LOOPS?

A. Yes. After the construction of the FCP, Qwest will provision Sub-Loops in the standard intervals as set forth in Exhibit C to the SGAT.

Q. WHAT ARE THE MAINTENANCE RESPONSIBILITIES FOR QWEST AND FOR THE CLECS FOR SUB-LOOP?

A. Qwest will maintain all the FCPs and unbundled sub-loop facilities; and the CLEC is responsible for maintaining all of its cable, connections, equipment and network elements connected to the Qwest network.

The repair process flow is different for the DS1 Capable Unbundled Feeder Loop and the 2-wire/4-wire Unbundled Distribution Loop. Qwest will use outside field technicians to test and repair problems in the Unbundled Distribution Sub-Loop. In the case of the DS1 Capable Unbundled Feeder Sub-Loop, Qwest central office technicians will determine the problem with the feeder sub-loop and make any necessary repairs. Exhibit KAS-44 is a flowchart that outlines the unbundled sub-loop maintenance process and the maintenance tasks performed by Qwest personnel.

Q. WHAT PERFORMANCE STANDARDS MUST QWEST MEET REGARDING THE QUALITY, RELIABILITY, AND TIMELINESS OF PROVIDING SUBLOOPS TO CLEC'S, AFFILIATES, AND ITSELF? HOW WERE THESE PERFORMANCE STANDARDS DETERMINED?

A. The parties in the ROC proceeding have agreed that Qwest should disaggregate results for subloops on 10 existing performance measurements. These measurements concern installation/provisioning and repair/maintenance. The agreed-upon measurements for subloops are listed in the table below. The definitions can be found in Exhibit KAS-40.

Indicator Number	**Performance Indicator**
OP-3	Installation Commitments Met
OP-4	Installation Interval
OP-5	New Service Installation Without Trouble Reports for 30 Days After Installation
OP-6	Delayed Days
OP-15	Interval for Pending Orders Delayed Past Due Date
MR-3	Out of Service Cleared within 24 Hours
MR-4	Out of Service Cleared within 48 Hours
MR-6	Mean Time to Restore
MR-7	Repair Repeat Report Rate
MR-8	Trouble Rate

Additionally, where appropriate, subloop results are included in the Pre-Ordering/Ordering and Billing measures. These measures produce results that aggregate UNEs or requests submitted via IMA and EDI.

Q. ARE THE PIDS SPECIFIC TO SUBLOOPS GENERATING ANY DATA TO DATE?

A. No, not in the state of Washington. When data becomes available, it can be found on the following web-site: www.qwest.com/wholesale/results.

Q. HAS QWEST RECEIVED ANY FORMAL OR INFORMAL WRITTEN COMPLAINTS FROM NEW ENTRANTS REGARDING PROVISION OF THIS CHECKLIST ITEM? IF SO, WHAT WAS THE NATURE OF THE COMPLAINT, WHAT IS ITS CURRENT STATUS AND, IF APPLICABLE, HOW WAS IT RESOLVED? FOR COMPLAINTS THAT WERE FOUND TO BE VALID, WHAT STEPS DID QWEST TAKE TO AVOID RECURRENCES?

A. Yes. In November, 2000, AT&T filed a complaint regarding access to subloops in MTEs. This complaint has been assigned Docket No. UT-003120. My understanding is that the Commission has suspended the procedural schedule temporarily, awaiting a joint status report from the parties on June 15, 2001. There is no hearing date currently established.

V. DARK FIBER

Q. WHAT ARE QWEST'S OBLIGATIONS TO PROVIDE ACCESS TO UNBUNDLED DARK FIBER?

A. The FCC's UNE Remand Order identified dark fiber as a new UNE. The FCC required the unbundling of dark fiber both in the loop plant and interoffice facilities. The order states:

> 174. Dark Fiber. We also modify the loop definition to specify that the loop facility includes dark fiber. …[We] conclude that both copper and fiber alike represent unused loop capacity. We find, therefore, that dark fiber and extra copper both fall within the loop network element's "facilities, functions, and capabilities."
>
> 325. Dark Fiber. In addition, we modify the definition of dedicated transport to include dark fiber. Dark Fiber is deployed, unlit fiber optic cable that connects two points within the incumbent LEC's network. As discussed above, dark or "unlit" fiber, unlike "lit" fiber, does not have electronics on either end of the dark fiber segment to energize it to transmit a telecommunications service . . .[27]

Q. DID THE FCC'S ORDER INCLUDE A DATE BY WHICH AN ILEC MUST PROVIDE DARK FIBER?

A. Yes. The requirement for ILECs to provide unbundled access to dark fiber was effective 120 days after the UNE Remand Order was published in the Federal Register. Therefore, Qwest was required to provide access to unbundled dark fiber as of May 18, 2000.

Q. HAD QWEST MADE DARK FIBER AVAILABLE PRIOR TO THE UNE REMAND ORDER?

A. Yes. Prior to the UNE Remand Order, Qwest had a binding obligation to provide access to dark fiber in numerous interconnection agreements. In Washington, as of the effective date of the UNE Remand order, Qwest had not received any inquires for unbundled dark fiber that resulted in any actual installations of dark fiber.

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[27] Third Interconnection Order at ¶174 and ¶325.

Q. DOES QWEST HAVE A LEGALLY BINDING COMMITMENT TO PROVIDE ACCESS TO DARK FIBER IN WASHINGTON?[28]

A. Yes. In order to comply with the dark fiber unbundling obligations of the UNE Remand Order, Qwest modified its SGAT to include a legally-binding obligation to provide access to unbundled dark fiber.[29] Qwest provides CLECs with non-discriminatory access to unbundled dark fiber interoffice transport and loop facilities. Since Qwest filed its Washington SGAT, Qwest has completed workshops on dark fiber in Arizona, Colorado and the joint Seven States. Qwest and the intervening parties were able to reach wide consensus on issues surrounding dark fiber; only a few issues remain.

Qwest is committed to offering the same non state-specific negotiated changes in Washington. Specifically, the SGAT states:

> Unbundled Dark Fiber (UDF) is a deployed, unlit pair of fiber optic cable or strands that connects two points within Qwest's network. UDF is a single transmission path between two Qwest Wire Centers or between a Qwest Wire Center and either an appropriate outside plant structure or an end user customer Premises in the same LATA and state. UDF exists in three (3) distinct forms: (a) UDF Interoffice Facility (UDF-IOF), which constitutes a deployed route between two Qwest Wire Centers; (b) UDF-Loop, which constitutes a deployed loop or section of a deployed loop between a Qwest Wire Center and an end user customer premises either a fiber distribution panel located at an appropriate outside plant structure or an end-user

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[28] Since Qwest does offer line sharing in Washington, the following questions posed by this Commission in the Supplemental and Interpretive Policy Statement issued in Docket No. UT-970300 on March 15, 2000are not applicable:

> Q. If Qwest is not currently providing this checklist item, is Qwest offering the item? If so, how is it offering the item and under what terms, conditions, and rates? Describe how the checklist item is readily available and easily obtained by competitors.
>
> Q. If Qwest is not currently offering this checklist item, is Qwest capable of commercially providing it? What is Qwest's anticipated schedule to provide the item? Has any CLEC requested the checklist item?

[29] SGAT at 9.7.1

customer Premises; and (c) Extended UDF (E-UDF) which constitutes a deployed route between a Qwest Wire Center and CLEC Wire Center. Deployed Dark Fiber Facilities shall include Dark Fiber Qwest has obtained with capitalized Indefeasible Right to Use (IRU) or capitalized leases that do not prohibit Qwest's ability to provide access to another person or entity.[30]

Q. IS QWEST ABLE TO PROVIDE THIS CHECKLIST ITEM IN ALL PARTS OF ITS WASHINGTON STATE SERVICE TERRITORY? IF NOT, DESCRIBE IN WHICH PARTS OF ITS TERRITORY THE SERVICE CANNOT BE PROVIDED, AND WHY.

A. Yes, Qwest is able to dark fiber (assuming facilities are available) in all parts of its Washington service territory.

Q. DESCRIBE HOW THE QUALITY AND RELIABILITY OF CHECKLIST ITEMS PROVIDED TO COMPETITORS BY QWEST ARE COMPARABLE TO THE QUALITY AND RELIABILITY OF SUCH ITEMS QWEST PROVIDES TO ITSELF OR ITS OWN CUSTOMERS.

A. In Qwest's SGAT, it has committed that all UNEs, including access to dark fiber, are provided in a manner comparable to the quality and reliability that Qwest provides to itself and its affiliates. Specifically, the SGAT states:

9.1.2 Qwest shall provide non-discriminatory access to unbundled network elements on rates, terms and conditions that are non-discriminatory, just and reasonable. The quality of an unbundled network element Qwest provides, as well as the access provided to that element, will be equal between all carriers requesting access to that element; second, where technically feasible, the access and unbundled network element provided by Qwest will be provided in "substantially the same time and manner" to that which Qwest provides to itself or to its affiliates. In those situations where Qwest does not provide access to network elements to itself, Qwest will provide access in a manner that provides CLEC with a meaningful opportunity to compete. For the

[30] SGAT at 9.7.1

period of time Qwest provides access to CLEC to an unbundled network element, CLEC shall have exclusive use of the network element, except when the provisions herein indicate that a network element will be shared (such as shared transport). Notwithstanding the foregoing, Qwest shall provide access and UNEs at the service performance levels set forth in Section 20. Notwithstanding specific language in other sections of this Agreement, all provisions of this Agreement regarding unbundled network elements are subject to this requirement. In addition, Qwest shall comply with all state wholesale service quality requirements.

Q. WHAT TECHNICAL STANDARDS AND/OR BUSINESS RULES IS QWEST PROVIDING TO CLECS FOR THIS CHECKLIST ITEM? EXPLAIN THE PROCESS AND SCHEDULING FOR UPDATING THESE TECHNICAL STANDARDS AND/OR BUSINESS RULES.

A. Consistent with the requirements of the UNE Remand Order, Qwest, has a legally-binding commitment to provide unbundled access to dark fiber. Qwest further defines the specifications, interfaces and parameters associated with unbundled dark fiber in Technical Reference Publication No. 77383. In addition, the Wholesale Product Guide (PCAT) provides CLECs with detailed product information, rate elements and availability. CLECs can access the PCAT at URL: http://www.qwest.com/wholesale/pcat/index.html.

Qwest believes that the publication and use of technical publications is an invaluable tool to provide a level of product detail that is not feasible in tariff or contract language. In response to concerns expressed by the CLEC community, Qwest announced on October 13, 2000 an augmentation to the existing Co-Provider Industry Change Management Process (CICMP) to include changes to products, business processes and technical publications. Now CLECs will receive notice of changes, and a forum for providing feedback on the changes. In addition, CLECs can use this process to request changes, and to have their requested changes to be publicly tracked and reported.

Q. HAS QWEST PROVISIONED DARK FIBER IN WASHINGTON?

A. As of April 30, 2001, Qwest has provisioned dark fiber in Washington for a single CLEC.

Q. TO WHOM IS QWEST PRESENTLY PROVIDING, ON A COMMERCIAL BASIS, THIS CHECKLIST ITEM?

A. Confidential Exhibit KAS-53C attached hereto identifies the CLEC to whom Qwest is currently providing dark fiber in Washington.

Q. WHAT ARE THE RATES FOR DARK FIBER? HOW WAS THE PRICING OF EACH ITEM (AS APPLICABLE) DETERMINED? IS PRICING EQUITABLE?

A. The rates for dark fiber in Washington are contained in Exhibit A to the SGAT. Footnotes associated with each rate element identify how the rate for that element was determined. Qwest's rates for dark fiber are fair and equitable.

Q. PLEASE PROVIDE A DESCRIPTION OF DARK FIBER.

A. Unbundled Dark Fiber is a deployed, unlit fiber optic cable or strands that connects two points within the Qwest network. Qwest provides unbundled dark fiber of substantially the same quality as the fiber facilities that Qwest uses to provide service to its own end user customers and within a reasonable time frame. Qwest will provide CLECs with access to existing unbundled dark fiber facilities (used in connection with its activities as an ILEC).

Q. DESCRIBE HOW QWEST HAS FULLY IMPLEMENTED THIS CHECKLIST ITEM AS REQUIRED BY SECTION 271 OF THE ACT.

A. Unbundled dark fiber has been implemented in three distinct configurations to meet all check list requirements:

Unbundled Dark Fiber-Interoffice Facility (UDF-IOF) consists of an existing route between two Qwest wire centers. Exhibit KAS-45 diagrams the unbundled dark fiber interoffice (UDF-IOF) options available to a CLEC.

Extended Unbundled Dark Fiber (E-UDF) provides the CLEC with Dark Fiber between the Qwest Serving Wire Center and the CLEC's Wire Center or an IXC's point of presence located within the same Qwest Serving Wire Center area.

Unbundled Dark Fiber-Loop (UDF-Loop) consists of an existing loop between a Qwest Wire Center and either a fiber distribution panel located at an appropriate outside plant structure, or an end-user customer premises. The UDF-Loop includes the terminations and cross connects at both ends. Exhibit KAS-46 diagrams the unbundled dark fiber loop (UDF-Loop) options available to a CLEC.

Q. HOW DOES DARK FIBER BECOME "LIT"?

A. Dark Fiber is lit by attaching electronics. Each CLEC is responsible for obtaining and connecting electronic equipment, whether light generating or light terminating equipment, to the unbundled dark fiber. The FCC in the UNE Remand Order acknowledges, dark fiber does not contain the electronics necessary to transmit a telecommunications service, (i.e. the fiber is "dark" and not "lit" with the electronic equipment that is required to use the fiber strands to transmit voice or data traffic).[31]

Should a CLEC desire access to fiber optic cable or strands that have the necessary electronics to transmit voice and data, the CLEC would not order unbundled dark fiber. Instead, the CLEC would order the appropriate high

[31] Third Interconnection Order at ¶325.

capacity OC level options that are available in the Unbundled Dedicated Interoffice Transport (UDIT) or the Unbundled Loop sections of the SGAT.[32]

Q. WILL CLECS HAVE ACCESS TO BOTH SINGLE MODE AND MULTI-MODE DARK FIBER?

A. Yes. Qwest will provide the CLEC with access to existing dark fiber in its network (used in connection with its activities as an ILEC) in either single-mode or multi-mode. A single-mode fiber will carry only a single wave length. With access to multi-mode fiber, the CLEC is able to transmit multiple signals at the same time. During the inquiry process, Qwest will inform the CLEC of the availability of single-mode and multi-mode fiber. Qwest will currently provide unbundled dark fiber to the CLEC in increments of two strands (by the pair), thus allowing the CLEC to have a transmit and receive path for their telecommunication services. However, by May 31, 2001, CLECs will have the added flexibility of purchasing UDF in single strand increments.

Q. PLEASE DESCRIBE THE STEPS NECESSARY TO DETERMINE IF DARK FIBER IS AVAILABLE.

A. Prior to placing an order for unbundled dark fiber, it is first necessary to determine if dark fiber is available between the requested two locations. In general, fiber facilities are in the Qwest interoffice network. However, Qwest has also deployed dark fiber in its loop plant. These deployments have predominately been in high-density metropolitan areas that have a concentration of large business customers. Large business customers often have extensive communications needs that require the high-speed capacity of a fiber loop.

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[32] SGAT at 9.6.1 and 9.2.2.6

Q. IS DARK FIBER ALWAYS TURNED OVER TO A CLEC IF IT IS AVAILABLE?

A. In very limited circumstances, dark fiber may exist along the requested route, and yet not be made unavailable for a specific CLEC request. Per the SGAT these circumstances include:

> Qwest shall not have an obligation to unbundle Dark Fiber in the following circumstances:
>
> (a) Qwest will not unbundle Dark Fiber that Qwest utilizes for maintenance or reserves for maintenance spare for Qwest's own use. Qwest shall not reserve more than five percent (5%) of the fibers in a sheath, or two (2) strands, whichever is greater, for maintenance or maintenance spare for Qwest's own use.
>
> (b) Reserved for Future Use.
>
> (c~~b~~) Qwest will not be required to unbundle Dark Fiber if Qwest demonstrates to the Commission by a preponderance of the evidence that such unbundling would create a likely and foreseeable threat to its ability to meet its carrier of last resort obligations as established by any regulatory authority. Qwest shall initiate such proceeding within seven (7) calendar days of denying CLEC's request (by written notice) to unbundle dark fiber where such fiber is available. In this proceeding, Qwest shall not object to using the most expeditious procedure available under state law, rule or regulation. Qwest shall be relieved of its unbundling obligations, related to the specific Dark Fiber at issue, during the pendency of the proceeding before the Commission. If Qwest fails to initiate such proceeding within such seven (7) day period, CLEC's request to unbundle Dark Fiber shall be reinstated and the ordering and provisioning processes of Section 9.7.3 shall continue.

The FCC anticipated this requirement for ILECs, such as Qwest, to need reserves of dark fiber to meet their legal obligations in a state:

> . . .In addition, however, if incumbent LECs are able to demonstrate to a state commission that unbundling dark fiber threatens their ability to provide service as a "carrier of last resort," states have the flexibility to

establish reasonable limitations and technical parameters for dark fiber unbundling . . .[33]

Q. ARE THERE DIFFERENCES IN THE AVAILABILITY PROCESS BASED ON THE CLEC REQUEST?

A. Yes. Initially, the CLEC determines if the need for dark fiber is between two Qwest wire centers (IOF), or between a Qwest wire center and a customer premise or outside plant structure (loop). Once it has been determined that dark fiber is available, the CLEC may immediately order the fiber if the request is between two Qwest wire centers (IOF) or between a Qwest wire center and a customer premise. If the request is between a Qwest wire center and an outside plant structure (loop), the CLEC will first submit a field verification and quote request. Once complete and accepted, the CLEC may order unbundled dark fiber.

Q. WHO IS RESPONSIBLE FOR SUCH THINGS AS PERMITS FOR GAINING ACCESS TO OUTSIDE PLANT STRUCTURES; QWEST OR THE CLEC?

A. The CLEC is responsible for all permits, licenses, bonds, or other necessary legal authority and permission, as may be required by Section 10.8 of the SGAT, in order to gain access to unbundled dark fiber at an outside plant structure.

Exhibit KAS-46 is a series of network diagrams that illustrate dark fiber interoffice facilities and an outside structure arrangement for unbundled dark fiber.

Q. HOW DOES QWEST PROVIDE INFORMATION TO CLECS PLANNING TO REQUEST ACCESS TO UNBUNDLED DARK FIBER?

A. Both the SGAT and PCAT identify the steps a CLEC must take to request access to unbundled dark fiber.

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[33] Third Interconnection Order at ¶ 352

Q. PLEASE EXPLAIN THE STEPS CLECS MUST TAKE TO REQUEST DARK FIBER FROM QWEST.

A. The first step of the ordering process is the inquiry process. A CLEC must submit an unbundled dark fiber Availability Inquiry and Request form through their Qwest Account Manager. Exhibit KAS-47 contains a copy of the Customer Inquiry and Verification Request form. This inquiry is used to determine the availability of unbundled dark fiber between the two requested locations, specifically, an UDF-IOF or UDF-Loop. The CLEC must specify the two Qwest central offices or the end-user premise location and the number of fibers requested. Qwest will inform the CLEC of the availability of dark fiber that will meet CLEC's request, if any, within 10 business days. Exhibit KAS-48 is the process flow for the CLEC dark fiber inquiry.

The second step of the ordering process is the Field Verification & Quote Preparation (FVQP) Process. The FVQP is only required when the request is for access to an unbundled dark fiber pair via a mid-point structure arrangement. A quote and implementation timeline will be developed and communicated to the CLEC. The established interval for a Mid-Point Structure Inquiry is 20 business days. Exhibit KAS-49 contains a flow chart that shows the field verification and quote process flow between departments.

The third step in the ordering process is the provisioning phase. When step one or steps one and two above have been completed, the CLEC may choose to order unbundled dark fiber.

Q. WHAT ARE THE TIME FRAMES INVOLVED IN THESE STEPS?

A. Qwest will provision dark fiber in its interoffice or in its loop facilities within 20 business days for a wire center to wire center or a wire center to customer premises request. The provisioning interval for access at an outside plant

structure is 20 business days once the remote collocation request has been processed to define the necessary termination information required to process the unbundled dark fiber request. These intervals are quite consistent with other BOCs.

Q. HOW WILL QWEST PROVISION DARK FIBER IN WASHINGTON?

A. Qwest will provision dark fiber in Washington utilizing defined procedural flows. Exhibit KAS-50 contains a flowchart showing the tasks performed by Qwest personnel in order to process dark fiber requests.

Q. WHAT MAINTENANCE ISSUES EXIST?

A. Unbundled dark fiber creates a unique maintenance challenge for Qwest and requesting CLECs. Consistently, in its high capacity interoffice network, Qwest has network monitoring equipment to alarm and pin point network failures. Such monitoring is normally performed using the electronic equipment connected to the fiber, which in this case is owned and controlled by the CLEC. Therefore, it is critical that Qwest and the CLEC perform cooperative testing and trouble isolation after the CLEC has isolated the trouble to the Qwest portion of the unbundled dark fiber to identify where trouble points may exist. However, in the case of a major cable failure (or cut) that affects the entire cable, Qwest would normally detect problems on their fibers. Qwest has a notification process in place to alert the CLEC when such major network outages occur.

Q. WHAT PERFORMANCE STANDARDS MUST QWEST MEET REGARDING THE QUALITY, RELIABILITY, AND TIMELINESS OF PROVIDING DARK FIBER TO CLECS, AFFILIATES, AND ITSELF? HOW WERE THESE PERFORMANCE STANDARDS DETERMINED?

A. The parties in the ROC proceeding have agreed that Qwest should disaggregate results for dark fiber on 8 existing performance measurements. These measurements concern installation/provisioning and repair/maintenance. The agree-upon measurements for dark fiber are listed in the table below. The definitions can be found in Exhibit KAS-40.

Indicator Number	**Performance Indicator**
OP-3	Installation Commitments Met
OP-4	Installation Interval
OP-5	New Service Installation Without Trouble Reports for 30 Days After Installation
OP-6	Delayed Days
OP-15	Interval for Pending Orders Delayed Past Due Date
MR-6	Mean Time to Restore
MR-7	Repair Repeat Report Rate
MR-8	Trouble Rate

Additionally, where appropriate, dark fiber results are included in the Pre-Ordering/Ordering and Billing measures. These measures produce results that aggregate UNEs or requests submitted via IMA and EDI.

Q. ARE THE PIDS SPECIFIC TO DARK FIBER GENERATING ANY DATA TO DATE?

A. Yes, there are limited results for dark fiber in the state of Washington. The results can be found on the following web-site: www.qwest.com/wholesale/results.

Q. HAS QWEST RECEIVED ANY FORMAL OR INFORMAL WRITTEN COMPLAINTS FROM NEW ENTRANTS REGARDING PROVISION OF THIS CHECKLIST ITEM? IF SO, WHAT WAS THE NATURE OF THE COMPLAINT, WHAT IS ITS CURRENT STATUS AND, IF APPLICABLE, HOW WAS IT RESOLVED? FOR COMPLAINTS THAT WERE FOUND TO BE VALID, WHAT STEPS DID QWEST TAKE TO AVOID RECURRENCES?

A. No, I am not aware of any complaints regarding dark fiber in the state of Washington.

VI. PACKET SWITCHING

Q. WHAT ARE QWEST'S OBLIGATIONS TO PROVIDE UNBUNDLED PACKET SWITCHING?

A. The FCC does not require ILECs, such as Qwest, to unbundle packet switching, except in extremely limited circumstances.[34] Qwest's obligation to unbundle packet switching is directly related to whether or not Qwest has placed DSLAMs in a remote terminal. Specifically the FCC stated:

[34] Third Interconnection Order at ¶306

> . . . the incumbent LECs must provide requesting carriers with access to unbundled packet switching in situations in which the incumbent has placed its DSLAM in a remote terminal.[35]

The FCC rules for packet switching must be read in context with this quote from paragraph 313 of the UNE Remand. Section 51.319 of the FCC's rules states:

> (B) An incumbent LEC shall be required to provide nondiscriminatory access to unbundled packet switching capability only **where each of the following conditions are satisfied** (emphasis added):
>
> (i) The incumbent LEC has deployed digital loop carrier systems, including but not limited to, integrated digital loop carrier or universal digital loop carrier systems; or has deployed any other system in which fiber optic facilities replace copper facilities in the distribution section *(e.*g., end office to remote terminal, pedestal or environmentally controlled vault);
>
> (ii) There are no spare copper loops capable of supporting the xDSL services the requesting carrier seeks to offer;
>
> (iii) The incumbent LEC has not permitted a requesting carrier to deploy a Digital Subscriber Line Access Multiplexer at the remote terminal, pedestal or environmentally controlled vault or other interconnection point, nor has the requesting carrier obtained a virtual collocation arrangement at these subloop interconnection points as defined by § 51.319(b); and
>
> (iv) The incumbent LEC has deployed packet switching capability for its own use.

Clearly rule (iv) is related to the situation identified in paragraph 313 where an ILEC has placed DSLAMs in its remote terminals. On a practical basis, if the first three conditions are met, and Qwest did not have a DSLAM located in a remote terminal, unbundled packet switching located in the central office would be of little value. The CLEC (or Qwest for that matter) would not be able to

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[35] UNE Remand at ¶313

connect the end user to that central office placed (or even central office accessed) DSLAM on a clean copper pair.

Qwest currently has such a limited number of remotely deployed DSLAMs, serving such a limited number of customers, that it believes the four conditions identified by the FCC will rarely exist in Qwest's current network configuration.

Q. DOES QWEST ANTICIPATE CHANGES TO ITS NETWORK INVOLVING ADDITIONAL DEPLOYMENT OF REMOTE DSLAMS?

A. Yes. Qwest has announced plans to remotely deploy DSLAMs on a broader scale. When Qwest deploys remotely located DSLAMs in its network for use by retail customers, Qwest will concurrently develop and deploy a network architecture that will provide space for CLECs to also remotely locate their DSLAMs in remote field locations such as at Feeder Distribution Interfaces (FDIs).

Q. WHAT IS UNBUNDLED PACKET SWITCHING (UPS)?

A. Unbundled packet switching (UPS) provides the functionality of delivering packet data units via a virtual channel between a Co-provider demarcation point and the Remote DSLAM. Unbundled Packet Switching includes use of transport facilities, DSLAM functionality, and ATM electronics necessary to generate a virtual channel. It may also include use of a distribution loop.

Q. DESCRIBE HOW QWEST HAS FULLY IMPLEMENTED THIS CHECKLIST ITEM AS REQUIRED BY SECTION 271 OF THE ACT.

A. Although packet switching is one UNE, it is akin to shared transport in that it is necessarily a combination of several different pieces of the network. Two pieces

of the network, heretofore that have never been unbundled or part of a UNE combination are:

1. Unbundled Packet ATM Switch Interface Port
   - DS1 or DS3 interface that serves as the physical entry points into the ATM Cell Relay Service Network
   - This UNE must be in place prior to Co-Provider ordering an Unbundled Packet Switching Customer Channel
2. Unbundled Packet Switch Customer Channel

   This element consists of:
   - DSLAM functionality
   - Virtual channel that will serve as the originating and terminating points for Virtual connections
   - Cross Connection (COCC) to the Distribution Loop

See Exhibit KAS-51 for additional information.

Q. DOES QWEST HAVE A LEGALLY BINDING COMMITMENT TO PROVIDE ACCESS TO PACKET SWITCHING IN WASHINGTON?[36]

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[36] Since Qwest does offer line sharing in Washington, the following questions posed by this Commission in the Supplemental and Interpretive Policy Statement issued in Docket No. UT-970300 on March 15, 2000are not applicable:

Q. If Qwest is not currently providing this checklist item, is Qwest offering the item? If so, how is it offering the item and under what terms, conditions, and rates? Describe how the checklist item is readily available and easily obtained by competitors.

Q. If Qwest is not currently offering this checklist item, is Qwest capable of commercially providing it? What is Qwest's anticipated schedule to provide the item? Has any CLEC requested the checklist item?

A. Yes. Qwest is contractually committed to provide unbundled packet switching when each of the FCC's four criteria are met. Included in Exhibit KAS-30 is SGAT language introducing Qwest's unbundled packet product offering.[37] This language was discussed at length during workshops in Colorado, Arizona and the Seven States. Only a few impasse issues remain.

Q. IS QWEST ABLE TO PROVIDE THIS CHECKLIST ITEM IN ALL PARTS OF ITS WASHINGTON STATE SERVICE TERRITORY? IF NOT, DESCRIBE IN WHICH PARTS OF ITS TERRITORY THE SERVICE CANNOT BE PROVIDED, AND WHY.

A. No. Qwest can only provide access to packet switching in the parts of its Washington service territory were it has remotely deployed DSLAMs. Qwest has a limited number of remotely deployed DSLAMs in Washington State. Upon request, Qwest will make the location of the DSLAMs available to the CLECs.

Q. DESCRIBE HOW THE QUALITY AND RELIABILITY OF CHECKLIST ITEMS PROVIDED TO COMPETITORS BY QWEST ARE COMPARABLE TO THE QUALITY AND RELIABILITY OF SUCH ITEMS QWEST PROVIDES TO ITSELF OR ITS OWN CUSTOMERS.

A. In Qwest's SGAT, it has committed that all UNEs, including access to packet switching, are provided in a manner comparable to the quality and reliability that Qwest provides to itself and its affiliates. Specifically, the SGAT states:

> 9.1.2 Qwest shall provide non-discriminatory access to unbundled network elements on rates, terms and conditions that are non-discriminatory, just and reasonable. The quality of an unbundled network element Qwest provides, as well as the access provided to that element, will be equal between all carriers requesting access to that element; second, where technically feasible, the access and unbundled network element provided by Qwest will be provided in "substantially the

[37] SGAT at 9.20

same time and manner" to that which Qwest provides to itself or to its affiliates. In those situations where Qwest does not provide access to network elements to itself, Qwest will provide access in a manner that provides CLEC with a meaningful opportunity to compete. For the period of time Qwest provides access to CLEC to an unbundled network element, CLEC shall have exclusive use of the network element, except when the provisions herein indicate that a network element will be shared (such as shared transport). Notwithstanding the foregoing, Qwest shall provide access and UNEs at the service performance levels set forth in Section 20. Notwithstanding specific language in other sections of this Agreement, all provisions of this Agreement regarding unbundled network elements are subject to this requirement. In addition, Qwest shall comply with all state wholesale service quality requirements.

Q. WHAT TECHNICAL STANDARDS AND/OR BUSINESS RULES IS QWEST PROVIDING TO CLECS FOR THIS CHECKLIST ITEM? EXPLAIN THE PROCESS AND SCHEDULING FOR UPDATING THESE TECHNICAL STANDARDS AND/OR BUSINESS RULES.

A. Consistent with the requirements of the UNE Remand Order, Qwest has a legally-binding commitment to provide unbundled access to unbundled packet switching. Qwest defines the specifications, interfaces and parameters associated with unbundled packet switching in Technical Reference Publication No. 77408. The Wholesale Product Guide (PCAT) also provides CLECs with detailed product information, rate elements and availability. CLECs can access the PCAT at URL: http://www.qwest.com/wholesale/pcat/index.html.

Qwest believes that the publication and use of technical publications is an invaluable tool to provide a level of product detail that is not feasible in tariff or contract language. In response to concerns expressed by the CLEC community, Qwest announced on October 13, 2000 an augmentation to the existing Co-Provider Industry Change Management Process (CICMP) to include changes to products, business processes and technical publications. Now CLECs will receive notice of changes, and a forum for providing feedback on the changes.

In addition, CLECs can use this process to request changes, and to have their requested changes to be publicly tracked and reported.

Q. HAS QWEST PROVISIONED UNBUNLDED PACKET SWITCHING IN WASHINGTON?

A. As of April 30, 2001, Qwest has not received any requests for unbundled packet switching in Washington.

Q. TO WHOM IS QWEST PRESENTLY PROVIDING, ON A COMMERCIAL BASIS, THIS CHECKLIST ITEM?

A. As stated above, Qwest has not yet received orders for unbundled packet switching in Washington.

Q. WHAT ARE THE RATES FOR UNBUNDLED PACKET SWITCHING? HOW WAS THE PRICING OF EACH ITEM (AS APPLICABLE) DETERMINED? IS PRICING EQUITABLE?

A. The rates for unbundled packet switching in Washington are contained in Exhibit A to the SGAT. Footnotes associated with each rate element identify how the rate for that element was determined. Qwest's rates for unbundled packet switching are fair and equitable.

Q. HOW DOES A CLEC ORDER UNBUNDLED PACKET SWITCHING?

A. Exhibit KAS-52 describes the process flow to order unbundled packet switching. The CLEC must first have had Qwest deny their request for remote collocation in a location where a Qwest DSLAM has been deployed. When that has been confirmed, the CLEC with their Account Team, must first order the UPS Interface Port. When the UPS interface port is in place, the CLEC orders the UPS Customer Channel and, if desired, the Unbundled distribution loop.

Q. WHAT PERFORMANCE STANDARDS MUST QWEST MEET REGARDING THE QUALITY, RELIABILITY, AND TIMELINESS OF PROVIDING PACKET SWITCHING TO CLEC'S, AFFILIATES, AND ITSELF? HOW WERE THESE PERFORMANCE STANDARDS DETERMINED?

A. The ROC TAG has determined there will be no additional measurements for packet switching. However, nothing has been done to exclude the packet switching LSRs from the general Performance Indicator Definitions (PIDs). For example, PO-4-LSRs Rejected would include information on sub-loop LSRs rejected for any reason.

Additionally, where appropriate, packet switching results are included in the Pre-Ordering/Ordering and Billing measures. These measures produce results that aggregate UNEs or requests submitted via IMA and EDI.

Q. HAS QWEST RECEIVED ANY FORMAL OR INFORMAL WRITTEN COMPLAINTS FROM NEW ENTRANTS REGARDING PROVISION OF THIS CHECKLIST ITEM? IF SO, WHAT WAS THE NATURE OF THE COMPLAINT, WHAT IS ITS CURRENT STATUS AND, IF APPLICABLE, HOW WAS IT RESOLVED? FOR COMPLAINTS THAT WERE FOUND TO BE VALID, WHAT STEPS DID QWEST TAKE TO AVOID RECURRENCES?

Q. No, I am not aware of any complaints regarding packet switching in the state of Washington.

VII. CONCLUSION OF TESTIMONY

Q. PLEASE PROVIDE A CONCLUSION TO YOUR TESTIMONY.

A. Qwest has satisfied the requirements of the Act for access to the emerging services as identified in the UNE Remand Order and FCC Line Sharing Order.

Qwest has a legal obligation to provide these items through both existing interconnection agreements and the Washington SGAT. Qwest also has processes in place to order, provision, and repair these UNEs for CLECs on a nondiscriminatory basis.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, this concludes my direct testimony.