

1 **A. “LINE CARD COLLOCATION” AND ASSOCIATED SUB-LOOP ELEMENTS**
2 **CANNOT BE REQUIRED UNDER THE ACT.**

3 **Q. WHAT ARE THE BASES FOR VERIZON VA’S BELIEF THAT “LINE**
4 **CARD COLLOCATION” CANNOT BE REQUIRED UNDER THE ACT**
5 **AND EXISTING COMMISSION REGULATIONS?**

6 **A. The Act gives the Commission authority to order collocation only of “equipment”**
7 **that is necessary for interconnection or access to UNEs. It does not require an**
8 **ILEC to include CLEC-supplied components in the ILEC’s own equipment. Line**
9 **cards have no stand-alone function — they are useless without the associated**
10 **hardware and software into which they are integrated. Therefore, line cards**
11 **cannot be considered “equipment.”**

12 **Q. HAVE THE UNES THAT WOULD BE ACCESSED BY A CLEC-**
13 **PROVIDED LINE CARD BEEN DEFINED?**

14 **A. No. To date, nothing that terminates at a line card slot has been identified by the**
15 **Commission as a UNE. Specifically, nothing that terminates at a line card slot**
16 **can qualify as a Subloop UNE, because the DLC backplane is not an accessible**
17 **terminal for obtaining access to the Subloop UNE.**

18
19 **The Commission’s rules require unbundled access to those sub-loop elements that**
20 **terminate at “accessible terminals.” The Commission has defined an accessible**
21 **terminal as a location where a technician can gain access to the wires without**
22 **opening a splice case. In compliance with this requirement, Feeder, Distribution**

1 (FDI), and House and Riser sub-loop elements have been defined that terminate at
2 the known accessible terminals of the Main Frame, FDI, or House Block.

3
4 For the reasons outlined in § VI above, the line card slot fails to meet the
5 definition of an “accessible terminal.” Moreover, a technician cannot access the
6 wires in a line card slot under the normal definition of access. On the feeder side
7 of the slot, there are no wires to be accessed. Instead, the connection from a line
8 card slot and the high speed side of the equipment are internally wired.

9 Consequently, no sub-loop elements that would terminate on the line card slot
10 have been required. Indeed, the fact that the Commission has a separate NPRM
11 addressing whether what AT&T and WorldCom label “line card collocation” can
12 be required suggests that it did not consider a line card slot to meet the definition
13 of an “accessible terminal”; otherwise, the Commission could have stated as much
14 in the *Line Sharing Reconsideration Order*. Also, ¶ 395 of the *Remand Order*
15 states: “Accessible terminals contain cables and their respective wire pairs that
16 terminate on screw posts.” A line card slot does not contain “screw posts.”
17 Nor can any of these elements pass the test for requiring unbundled access. The
18 Act requires a CLEC to demonstrate that failure to, “provide access to such
19 network elements would impair the ability of the telecommunications carrier
20 seeking access to provide the services it seeks to offer.” This showing has not and
21 cannot be made for several reasons. First, for many of the market segments to be
22 served, there are alternative providers of advanced services, including CATV
23 companies. Accordingly, a sweeping determination that a CLEC-provided line

1 card solution must be available everywhere is not supported by the facts. Second,
2 Verizon VA currently provides sub-loop access and RT collocation that can be
3 used by the CLECs to achieve the access to the HFPL. There has not been—and
4 cannot be—a finding that sub-loop access is not a viable alternative for the
5 CLECs. Third, the required “services it seeks to offer” have not been identified.
6 Moreover, even if these services were identified, before they could be classified
7 as UNEs, the Commission would first have to determine that the absence of
8 CLEC-provided line cards and the associated sub-loop elements somehow impairs
9 the ability of the CLECs to provide these services.

10
11 **B. CLEC-PROVIDED LINE CARDS ARE ECONOMICALLY INEFFICIENT AND**
12 **WASTEFUL.**

13 **Q. EVEN IF VERIZON WERE REQUIRED TO PERMIT CLEC-PROVIDED**
14 **LINE CARDS, WOULD THAT CAUSE PRACTICAL PROBLEMS?**

15 A. Yes. First, CLEC-provided line cards would only work if they were an option of
16 a service such as SBC’s Project Pronto.²⁰ Without the deployment of this (or a
17 similar) service, the enabling hardware, network transport, OSS, Methods and
18 Procedures, etc. that would host the CLEC provided line card would not be
19 available from the ILEC. Furnishing of the line card without the deployment of

²⁰ SBC’s Project Pronto service capability to RTs entails the creation of a DSL capable transmission channel between the end user premises and the end user’s serving wire center using suitably equipped NGDLC RTs. The suitably equipped NGDLC RT uses line cards that together with the rest of the RT and the supporting ILEC infrastructure are capable of supporting both voice and DSL based data services. Verizon does not have a similar service because it (1) does not have the technology necessary for such a service deployed in its network, (2) lacks regulatory authority to provide advanced services or to own the equipment necessary to do so, and (3) has not determined that the voluntary offering of such a service can reasonably be expected to pay for itself and make a profit.

1 this infrastructure would not achieve the desired service capability. Verizon VA,
2 however, does not offer a service such as Project Pronto, and the deployment of
3 the supporting infrastructure cannot be mandated under the terms of the Act.²¹
4 Accordingly, it is Verizon VA's view that the most likely driver for the
5 deployment of this platform would be a voluntary service offering similar to
6 Project Pronto. Of course, the CLECs always have the alternative of deploying
7 this architecture on their own through interconnection of their own DSLAM at the
8 FDI or other sub-loop accessible terminal.

9 **Q. WHAT OTHER COSTS WOULD BE INTRODUCED THROUGH A CLEC**
10 **FURNISHED LINE CARD OPTION?**

11 A. Significant OSS modifications would be required to identify and administer
12 ownership of equipment at the line card level. With CLEC-provided line cards,
13 the channel bank would be owned by Verizon VA, line cards one and two might
14 be physically owned by CLEC A, line cards three and four might be virtually
15 owned by CLEC B, line cards five through eight might be owned by Verizon VA,
16 etc. Verizon VA's current systems are incapable of tracking, inventorying, and
17 administering ownership of equipment at the circuit pack level.

18 **Q. IF A CLEC WERE ALLOWED TO PROVIDE LINE CARDS, WHICH**
19 **LINE CARDS COULD A CLEC INSTALL IN THE RT?**

20 A. If this option were allowed (which it should not be), Verizon VA would publish a
21 list of tested and accepted line cards that the CLECs would be allowed to furnish.

²¹ See *Iowa Utilities Board v. FCC*, 120 F.3d 753, 812-13 (8th Cir. 1997) (holding that § 251 of the Act only requires ILECs to provide access to its "existing network—not to a yet unbuilt superior

1 This step is necessary for the following reasons. First, Verizon VA's contracts
2 with its vendors provide that Verizon VA's equipment warranties will be voided
3 if foreign or unlicensed equipment is installed. Accordingly, a starting point is
4 that only plug-ins manufactured by Verizon VA's vendors or licensees would be
5 eligible for installation for the CLEC. Second, to assure the integrity of its
6 network, Verizon VA would have to test the line card (as it tests all line cards)
7 before it could be deployed in the working network, particularly since these cards
8 would be inserted in the middle of POTS service, not just data. Third, Verizon
9 VA would require contracts and tariff provisions to compensate Verizon VA for
10 the network resources that would be consumed by the CLECs line cards (*see*
11 discussion below regarding UBR and CBR QoSs). And finally, Verizon VA's
12 OSS would have to be updated to recognize, administer, and maintain the CLEC-
13 provided line card. Once these steps were complete, the line card could be added
14 to the list of approved line cards that could be furnished by the CLEC.

15 **Q. ASSUMING THE CLEC HAD AN APPROVED LINE CARD THAT IT**
16 **WISHED TO INSTALL IN THIS SCENARIO, WHAT WOULD HAPPEN**
17 **NEXT?**

18 **A. xDSL capable line cards serve two, four, or six subscribers lines. To set aside this**
19 **capacity for the use of the CLEC, an important initial requirement of the CLEC**
20 **furnished line card option would be that the CLEC would have to submit an order**
21 **to have Verizon VA set aside the use of the line card "slot" for the CLEC's future**
22 **provision of the line card and service.**

one.") (emphasis in original).

1 **Q. WHY IS THE RESERVATION OF THE “SLOT” AN IMPORTANT STEP?**

2 A. This step assures that the lines to be served by the CLEC-provided line card are
3 set aside for that CLEC’s use. Without this step, the CLEC might reach the stage
4 where it is ready to deploy its line cards only to discover there are no slots
5 available that are not already serving at least one working line. This step also
6 assures that other CLEC or Verizon VA services are not inadvertently assigned
7 into the CLEC-provided line card.

8 **Q. ONCE THE CLEC RESERVED THE LINE CARD “SLOT”, WHAT**
9 **WOULD IT BE REQUIRED TO DO NEXT?**

10 A. Most likely, the CLEC would have two alternatives for installing the CLEC-
11 furnished line card in the reserved line card slot. Under a virtual collocation-like
12 option, Verizon VA personnel would install the plug-in pursuant to a CLEC
13 service request. Under a physical collocation-like option, CLEC personnel would
14 install the plug-in under escort by Verizon VA.

15 **Q. ONCE THE LINE CARD IS INSTALLED, WHAT STEPS WOULD**
16 **OCCUR NEXT?**

17 A. At this point, the CLEC would submit a service order just like the order that
18 would be have been submitted for the service where Verizon VA furnishes the
19 line card. The only difference is that this service order would provide for the use
20 of the CLEC “slot” and CLEC-provided line card.

1 **Q. IF VERIZON VA PROVIDED A SERVICE SIMILAR TO PROJECT**
2 **PRONTO, COULD IT SUPPORT “LINE SHARING” WITH THE CLEC-**
3 **PROVIDED LINE CARD OPTION?**

4 A. No. Verizon VA could not support a line sharing option with the CLEC-provided
5 line card. With line sharing, Verizon VA would continue to provide the voice
6 service, but the voice path would have to go through a CLEC-provided resource
7 (*i.e.*, the line card). There is no basis in the Act to require Verizon VA to use
8 CLEC facilities in the provision of a Verizon VA service. Moreover, Verizon VA
9 could not guarantee attainment of its service quality objectives in such an
10 environment.

11 **Q. HOW DOES THE CLEC-PROVIDED LINE CARD INTRODUCE**
12 **INVENTORY MANAGEMENT INEFFICIENCIES?**

13 A. As stated above, line card slots provide capacity in increments of two, four or six
14 lines. In residential areas, demand normally appears a line at a time. To set aside
15 of slot capacity to the CLECs in increments of two or four in order to satisfy end
16 user demand that appears a line at a time introduces additional “breakage,” which
17 is one of the frequently discussed cost components in Verizon VA’s cost filings.
18 Another inefficiency created by the CLEC-provided line card option is a need for
19 multiple parties to maintain separate inventories of provisioning and maintenance
20 spare line cards.

21 **Q. COULD THESE ADDITIONAL COSTS AND INEFFICIENCIES**
22 **SOMEHOW BE OFFSET BY NEW FEATURE FUNCTIONALITY THAT**
23 **MIGHT BE DRIVEN BY THE CLEC-PROVIDED LINE CARD OPTION?**

1 A. No. First, the shelf, software and back plane (*i.e.*, data bus) specifications of the
2 NGDLC systems are proprietary to Verizon VA's vendors. Furthermore, Verizon
3 VA's vendor agreements and warranties prohibit the use of foreign equipment in
4 its vendor-provided channel banks. As a result, only line cards manufactured or
5 licensed by Verizon VA's vendors would be eligible for installation under a
6 CLEC-provided line card option. These same line cards would be and are
7 available for purchase directly by Verizon VA. Vendors do significant market
8 research of their own before they invest in developing new feature functionality.
9 If they find a feature functionality that has market appeal, they would normally
10 seek to make it available to the largest possible universe to maximize their own
11 sales. Therefore, whether Verizon VA owns the cards or a CLEC owns the cards,
12 the same features would be made available to the marketplace by the vendors.
13 Once again, the CLEC-provided line card option does not enhance service
14 capabilities, but does increase administrative complexity.

15 **Q. IF THE CLEC WERE SOMEHOW ABLE TO SECURE AND INSTALL A**
16 **COMPATIBLE LINE CARD WITH NEW SERVICE FUNCTIONALITY**
17 **THAT FOR SOME REASON WAS NOT AVAILABLE DIRECTLY TO**
18 **VERIZON VA, WOULD IT BE LIKELY THAT THE NEW SERVICE**
19 **CAPABILITIES OF THIS LINE CARD WOULD FUNCTION**
20 **PROPERLY?**

21 A. No. As explained above, the line card is just one component of the NGDLC
22 channel bank and RT assembly, which in turn are components of an even larger
23 network. All of the pieces must work together in order to support any new line

1 card feature. It is very likely that the hypothetical new service capability would
2 require support from new software (*i.e.*, a new software release) or new common
3 cards at the RT. In addition, new line cards would almost certainly require OSS
4 enhancements to enable its use with Verizon VA's systems.

5 **Q. IF CLECS WERE ABLE TO DEVELOP A NEW LINE CARD OR LINE**
6 **CARD FEATURE WITH VERIZON VA'S NGDLC PLATFORM VENDOR**
7 **OR APPROVED LICENSEE, WOULD THIS CARD BE COMPATIBLE**
8 **WITH VERIZON VA'S OPERATIONS SUPPORT SYSTEMS?**

9 A. No. Even if CLECs were to independently develop new cards or features with
10 Verizon VA's vendors, Verizon VA would still need to perform regression testing
11 with its currently approved software release(s) and integration testing with all
12 impacted OSSs. Regression testing, which evaluates compatibility with existing
13 hardware and software, assures that new hardware, software and product features
14 do not harm existing system functionality. OSS integration testing is required to
15 identify and verify any new OSS enhancements required to assimilate new
16 product features and capabilities into existing OSS platforms. This is the standard
17 practice in Verizon for all new hardware and software introductions. Therefore,
18 since this work must be performed regardless, there is essentially nothing to be
19 gained from independent development of cards and features outside of the
20 standard product development and testing practices within Verizon VA.

21 **Q. IF THE CLEC WERE SOMEHOW ABLE TO SECURE A COMPATIBLE**
22 **LINE CARD WITH NEW SERVICE FUNCTIONALITY THAT FOR**
23 **SOME REASON WAS NOT AVAILABLE DIRECTLY TO VERIZON BUT**

1 **WAS COMPATIBLE WITH VERIZON VA'S EXISTING HARDWARE,**
2 **NETWORK AND OSS, WOULD IT BE APPROPRIATE FOR THE CLEC**
3 **TO UNILATERALLY DEPLOY SUCH A LINE CARD?**

4 A. No. Even if a CLEC line card that was unavailable to Verizon VA were
5 compatible with Verizon VA's existing hardware, network and OSS, different line
6 card features consume different levels of shared Verizon VA's network resources
7 (in this case, bandwidth). An example of these differences is provided below in
8 the comments on WorldCom's proposal for Quality of Service based
9 Permanent Virtual Channels and Paths. Verizon VA is entitled to analyze the
10 network resource requirements of any new potential line card feature and put in
11 place appropriate rates for cost recovery.

12 **Q. THE SOLE ALLEGED BENEFIT OF THE CLEC-PROVIDED LINE**
13 **CARD APPEARS TO BE THAT IT WILL SOMEHOW DRIVE VENDORS**
14 **TO MANUFACTURE (AND VERIZON VA TO DEPLOY) NEW**
15 **FEATURE CAPABILITIES. WILL THE AVAILABILITY OF THE**
16 **CLEC-PROVIDED LINE CARD HAVE THIS EFFECT?**

17 A. No. The line card is a single, albeit important, component of a much larger
18 network. Any new service capability requires close coordination between the
19 vendor, Verizon VA network planning and operations and the customer. The
20 CLEC provided line card, for the reasons discussed above, will not result in that
21 necessary coordination.

1 **Q. CAN YOU IDENTIFY AN ALTERNATE AND SUPERIOR MEANS OF**
2 **INCORPORATING THE CLEC FEATURE REQUIREMENTS INTO A**
3 **POTENTIAL PROJECT PRONTO-LIKE WHOLESALE OFFERING?**

4 **A. Yes, as with any service offering, Verizon is pleased to collect information from**
5 **its customers regarding new feature requirements that could cost effectively be**
6 **added to Verizon’s services. Verizon CLEC customers could approach Verizon**
7 **and vendors jointly with suggested product enhancements and Verizon could**
8 **work with those customers and Verizon’s vendors to determine if the new feature**
9 **capability could cost effectively be introduced. Verizon notes that as part of**
10 **SBC’s Project Pronto offering, SBC introduced a new process called the “Special**
11 **Request Process.” Under this arrangement, a CLEC may request a meeting**
12 **(coordinated by the SBC Account Management team) with the appropriate SBC**
13 **resources to discuss a unique CLEC serving arrangement. This process is**
14 **intended for individual customers who are requesting an evaluation, price quote,**
15 **and development timeframe for a new service feature or capability. This is**
16 **similar to the “bona fide request” (BFR) process Verizon uses to assess requests**
17 **for new UNE functionalities.**

18 **X. COMMENTS REGARDING AT&T AND WORLDCOM’S**
19 **PROPOSED CONTRACT LANGUAGE**

20 **(Issues III-10, IV-28, and V-6)**

21 **A. WORLDCOM’S PROPOSED CONTRACT LANGUAGE**

22 **(Issues III-10 and IV-28)**

23 **Q. DO YOU AGREE WITH WORLDCOM’S PROPOSED LANGUAGE FOR**
24 **“LINE SHARING OVER FIBER FED LOOPS?”**

1 A. No. As stated previously, Verizon VA’s proposed agreements provide two
2 alternatives for providing access to the HFPL for fiber fed loops: line and station
3 transfers and DSLAM interconnection at the sub-loop. Verizon VA’s network is
4 currently incapable of supporting Integrated DSLAM functionality at the RT and
5 DSL transport over fiber feeder (*i.e.*, “DSL over fiber” or “Line Sharing over
6 Fiber Fed Loops”). Accordingly, this requested feature capability (presumably
7 something comparable to the SBC Project Pronto Service) is not ripe for inclusion
8 in the present contracts. As stated above, because many of the issues associated
9 with this request are being addressed in Commission proceedings where all
10 interested parties may participate in greater detail, a state arbitration amongst a
11 very limited number of the interested parties represents an inferior venue for
12 addressing these questions.

13 **Q. WHAT OTHER CONCERNS DOES VERIZON VA HAVE REGARDING**
14 **THE PROPOSED WORLDCOM LANGUAGE?**

15 A. WorldCom’s proposed language not only assumes: (1) the availability of Pronto-
16 like service network and capability; and (2) the designation of this capability as a
17 UNE; but (3) goes further to disaggregate the posited UNE into sub-network
18 components labeled “interconnection components.” As stated previously, the
19 Commission’s regulations identify four conditions that all must be satisfied for
20 establishing packet switching as a UNE and two of these conditions have not been
21 met. While its language is not clear, it appears that WorldCom is claiming UNE
22 status for the “interconnection components” that might comprise the disputed
23 packet switching UNE. Just as the necessary and impair showing has not been

1 made for the packet switching UNE, a necessary and impair analysis is required
2 and missing for each of the proposed “interconnection components.”

3 **Q. DO THE PROPOSED “INTERCONNECTION COMPONENTS”**
4 **DISCUSSED IN WORLDCOM’S PROPOSED § 4.9.4.2 COMPLY WITH**
5 **EXISTING REGULATIONS REGARDING SUB-LOOP ELEMENTS?**

6 A. No. Commission regulations provide that sub-loop elements must begin and
7 terminate at an “accessible terminal” where an “accessible terminal is a point on
8 the loop where technicians can access the wire or fiber within the cable without
9 removing a splice case to reach the wire or fiber within.”²² Under this definition
10 of accessible terminal, pole mounted terminals, pedestals, the Feeder Distribution
11 Interface (FDI) and the Main Frame are all identified as “accessible terminals.”
12 In contrast, most of the proposed WorldCom “interconnection components” must
13 begin or end at the line card slot in a channel bank at the remote terminal (*see for*
14 *example* HBPSL, LFPSL, LCRT, CC1, CC2,CC3 FPVC, FPVP, FTDM in
15 §§ 4.9.4.2,1 though 4.9.4.2.10). However, a line card slot is not an accessible
16 terminal.

17 **Q. WHY DOES WORLDCOM’S PROPOSED LANGUAGE PROVIDE FOR**
18 **THE “INTERCONNECTION COMPONENTS” THAT BEGIN OR END**
19 **AT THE LINE CARD SLOT?**

20 A. These components are to enable WorldCom’s unlitigated concept of “line card
21 collocation.” One of the requirements of the Act is that collocation is exclusively
22 for the purpose of achieving access to Unbundled Network Elements. It appears

1 that that MCI intends these “interconnection components” to represent UNEs that
2 would be accessed by a “collocated” line card. As noted above, there is no basis
3 for this position.

4 **Q. ARE THERE TECHNICAL FEASIBILITY ISSUES ASSOCIATED WITH**
5 **WORLDCOM’S LIST OF “INTERCONNECTION COMPONENTS?”**

6 A. Yes, the flagship component appears to be the “DSLAM line card/electronics in
7 the Remote Terminal (LCRT)” (*see* § 4.9.4.2.3) which § 4.9.4.2.16 claims must
8 be individually orderable. Verizon VA notes that (as discussed previously) the
9 line card slot is not supported by “accessible terminals” and accordingly any
10 LCRT that was installed would be hard wired to the other feeder and distribution
11 “interconnection components” on WorldCom’s list. Accordingly the LCRT
12 cannot be individually ordered. Verizon VA has doubts that a necessary and
13 impair analysis is possible for a would-be UNE that can not be separately ordered.

14 **Q. DOES WORLDCOM’S LIST OF “INTERCONNECTION**
15 **COMPONENTS” RAISE ANY COST RECOVERY ISSUES THAT**
16 **SHOULD BE NOTED AT THIS STAGE OF THE PROCEEDING?**

17 A. Yes, while failing to identify required UNEs, WorldCom’s list of “interconnection
18 components” represents a reasonable starting point for identification of the
19 network resources that would be consumed by a service such as Project Pronto.
20 Verizon VA is concerned however that different Quality of Service (QoSs)²³
21 bands are lumped together under the single headings of Permanent Virtual

²² *UNE Remand Order* at ¶ 206.

1 Connection (PVC) and Permanent Virtual Path (PVP) at §§ 4.9.4.2.15.2 and 3.
2 Verizon VA believes each QoS should be supported by a separate “necessary and
3 impair” analysis because of the unique service and cost recovery issues introduced
4 by each QoS.

5 **Q. CAN YOU PROVIDE AN EXAMPLE OF THE FEATURE**
6 **FUNCTIONALITY AND COST RECOVERY ISSUES INTRODUCED BY**
7 **QoSS?**

8 **A. Verizon is investigating an Unspecified Bit Rate (UBR) QoS for a potential**
9 **Project-Pronto-like offering. UBR represents a “best effort” packet service**
10 **meaning that the end user will be provided the fastest possible service subject to**
11 **the network resources available at the time the traffic is offered to the network. In**
12 **the case of UBR, bandwidth is not reserved for each end user. For example, an**
13 **end user that subscribes to a hypothetical 1.0 MBPS maximum UBR service will**
14 **likely achieve 1.0 MBPS service during off-peak periods. However, during peak**
15 **periods, because of network resource limitations, the end user may achieve**
16 **something less than 1.0 MBPS of bandwidth. In contrast, under a Constant Bit**
17 **Rate (CBR) QoS, bandwidth is reserved for each end user subscribing to CBR**
18 **service. This is due to the fact that CBR QoS is granted priority over other ATM**
19 **classes of service. For example, a CLEC that purchased a potential 5MBPS CBR**
20 **channel to support a video service to an end user location should receive that**
21 **bandwidth 24 hours/day, 365 days/year.**

22

²³

As used in this testimony, Quality of Service describes the performance characteristics of a circuit.

1 The implications of the differences between these QoSs for cost recovery
2 purposes can be illustrated by assuming the existence of an 100MB connection
3 between the RT and the central office that costs Verizon \$100/month in carrying
4 charges. Under the 1 MB UBR service described above, it might be possible to
5 sell that service to 200 subscribers recognizing that, statistically, at most 150
6 subscribers might be active during the peak. Therefore, during the peak period, it
7 is possible that the end user that are attempting to use the service during may
8 experience some level of throughput less than 1MBPS. This approach is known
9 as "over subscription." (During off peak periods, because statistically no more
10 than 100 subscribers would be active at any given time, all users would
11 experience 1MBPS service.) Under this assumed scenario, Verizon VA might
12 charge each end user $\$100/200 = \$.50$ for the 1 MBPS UBR PVC data connection
13 between the RT and the OCD port. In contrast, under the 5MBPS CBR service,
14 bandwidth is reserved and "over subscription" is not used. Under this scenario, at
15 most 20 CBR customers could share the 100MB connection and the rate to each
16 subscriber for the 5MBPS CBR PVC would be $\$100/20 = \$5/\text{month}$.

17 **Q. DO THE NUMBERS IN THIS PREVIOUS EXAMPLE REPRESENT THE**
18 **RESULTS OF ANY VERIZON VA COST STUDIES?**

19 **A.** No. The numbers are offered merely to represent the concept, feature
20 functionality, cost recovery, and public interest issues associated with QoSs.

21 **B. AT&T'S PROPOSED CONTRACT LANGUAGE**

22 **(Issues III-10 and V-6)**

including bit rate and priority of high speed data transmission.

1 **Q. PLEASE COMMENT ON AT&T'S PROPOSED CONTRACT**
2 **LANGUAGE FOR ACCESS TO LOOPS WHERE NGDLC HAS BEEN**
3 **DEPLOYED.**

4 **A. AT&T's proposed loop language in this area is not so much a description of**
5 **orderable, provisionable and billable capabilities to be furnished by Verizon VA,**
6 **but instead represents an unspecific, expansive paraphrase (allegedly of the law)**
7 **intended to create future rights for AT&T where none were enacted or intended.**
8 **Accordingly, AT&T's proposed definition of the loop includes DSLAM and OCD**
9 **capability that AT&T would be entitled to use under its proposed language.**
10 **Including these capabilities in the proposed interconnection agreement is**
11 **premature and must be rejected because (as discussed above): access to the high**
12 **frequency portion of the loop using DSLAM capability at the RT and OCDs in the**
13 **central office is being addressed in an active nation and industry wide**
14 **Commission investigation; Verizon VA has not deployed the necessary network**
15 **infrastructure for supporting AT&T's request; Verizon VA has not committed to**
16 **deploy the necessary network infrastructure for supporting AT&T's request;**
17 **Verizon VA has not committed to a service that would drive the deployment of**
18 **the necessary network infrastructure for supporting AT&T's request.**

19 **Q. GIVEN THE LACK OF EXISTING NETWORK INFRASTRUCTURE**
20 **AND THE OPEN COMMISSION INVESTIGATION ON THIS VERY**
21 **ISSUE, WHAT IS VERIZON VA'S UNDERSTANDING REGARDING**
22 **THE BASIS FOR AT&T'S CLAIM FOR THIS CAPABILITY?**

1 A. AT&T's position is that the DLSAM, OCD and the associated data transport
2 capability are allegedly features and functions of the loop that the Commission
3 allegedly determined to be part of the required loop UNE under the original *UNE*
4 *Remand Order*.

5 **Q. DO EXISTING RULES REQUIRE ILECS TO PROVIDE UNBUNDLED**
6 **LOOPS THAT INCLUDE DSLAMS AT THE REMOTE TERMINAL?**

7 A. No. Section 51.319(a)(1) defines the "local loop network element" as "a
8 transmission facility between a distribution frame (or its equivalent) in an
9 incumbent LEC central office and the loop demarcation point at an end-user
10 customer premises." This same section explicitly excludes DSLAM hardware
11 from the features, functions, and capabilities included in the definition of the
12 "local loop." This rule is sufficient to dispose of AT&T's claims.

13
14 The rules not only explicitly exclude DSLAMs from the definition of the "local
15 loop," but they also equally clearly include DSLAMs in the definition of a
16 different network element, "packet switching."²⁴ As the Commission held, "we
17 find that the DSLAM is a component of the packet switch network element."²⁵
18

²⁴ 47 C.F.R. § 51.319(c)(4)(i). See also *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, 15 FCC Rcd 3696, 3707 (1999) ("*UNE Remand Order*") ("Packet switching is defined as the function of routing individual data message units based on address or other routing information contained in the data units, including the necessary electronics (e.g., DSLAMs)").

²⁵ *UNE Remand Order* ¶ 175. Similarly, "We find that a component of the packet switching functionality, and included in our definition of packet switching is the Digital Subscriber Line Access Multiplexer (DSLAM)." ¶ 303.

1 When writing these definitions, the Commission specifically considered and
2 rejected requests that it not include DSLAMs as part of the packet switching UNE
3 — “We decline to adopt proposed definitions of packet switching that exclude
4 DSLAMs from the packet switching functionality.”²⁶

5
6 There can be do doubt that DSLAMs provide packet switching functionality. As
7 the Commission found, “packetizing is an integral function of the DSLAM.”²⁷

8 **Q. IS THERE ANY BASIS IN THE COMMISSION’S RULES FOR AT&T’S**
9 **ATTEMPTS TO INCLUDE OCDS IN THE DEFINITION OF A LOOP?**

10 A. No. The OCD is an ATM switching device that performs routing and aggregation
11 of packet data. The Commission has found that the OCD “should be classified as
12 Advanced Services Equipment” as a packet switch.²⁸ In fact, in the same order,
13 the Commission rejected “AT&T’s argument that the OCD should not be
14 classified as Advanced Services Equipment.”²⁹

15
16 AT&T seeks to analogize OCD to the COTs that are used for circuit switched
17 traffic, but this attempt fails because OCDs and COTs have different features and
18 functions and are not comparable. The COT is the device in the central office that
19 terminates the feeder transport from the remote terminal and either converts
20 narrowband traffic back to analog or directs integrated voice traffic to the digital

²⁶ *UNE Remand Order* ¶ 304.

²⁷ *UNE Remand Order* ¶ 304.

²⁸ *Ameritech Corp.*, 15 FCC Rcd 17521 ¶ 18 (2000) (“*Project Pronto Order*”).

1 switch.³⁰ Thus, the COT takes traffic already allocated to specific “dedicated”
2 time slots and simply directs it to the appropriate voice switch line unit or digital
3 device in the central office. The COT does not aggregate or switch traffic
4 between switch interface groups.

5
6 Unlike a COT, an OCD is a packet switch. The OCD must read ATM header
7 information, route individual packets to the appropriate outgoing port and
8 aggregate them into a high-speed ATM carrier interface. In addition, the OCD
9 must be capable of routing ATM traffic based on different ATM classes of
10 services. Consequently, the OCD must have the sophistication to police incoming
11 traffic and verify that it meets the traffic contract requirements on a virtual circuit-
12 by-virtual circuit basis. It clearly performs a different function than a COT, and
13 specifically performs packet switching functions.

14 **Q. DO CURRENT COMMISSION REGULATIONS SPECIFY WHEN**
15 **DSLAM/PACKET SWITCHING FUNCTIONALITY MUST BE**
16 **PROVIDED AS A UNE?**

17 **A.** Yes, as discussed above, four conditions must be satisfied for packet switching to
18 be considered a UNE, and they have not been satisfied. Accordingly, the
19 Commission requirements for packet switching/DSLAM functionality to be
20 deemed a UNE are not met.

²⁹ *Project Pronto Order ¶ 19.*

³⁰ The COT may also direct non-switched traffic (commonly called special services) to interoffice transport or other digital network elements in the central office.

1 **Q. IN THE JOINT DISPUTED POINTS LIST (ISSUE V6), AT&T CLAIMS**
2 **THAT THE PROPOSED VERIZON INTERCONNECTION AGREEMENT**
3 **ONLY PROVIDES FOR ACCESS TO THE HFPL AT THE CENTRAL**
4 **OFFICE. IS THIS ACCURATE?**

5 **A. No. As stated immediately above, Verizon VA's proposed language allows**
6 **interconnection of a CLEC provided DSLAM at sub-loop interconnection points.**

7 **Q. DOES THIS CONCLUDE THE PANEL'S TESTIMONY?**

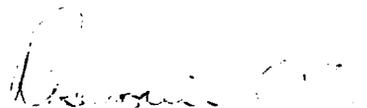
8 **A. Yes, it does.**

9

Declaration of Rosemarie Clayton

I declare under penalty of perjury that I have reviewed the foregoing panel testimony and that those sections as to which I testified are true and correct.

Executed this 27 day of July, 2001.

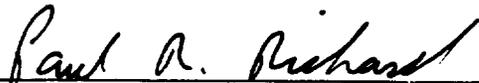


Rosemarie Clayton

Declaration of Paul Richard

I declare under penalty of perjury that I have reviewed the foregoing panel testimony and that those sections as to which I testified are true and correct.

Executed this 27th day of July, 2001.



Paul Richard

