INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is John. P. Lube and my business address is Three Bell Plaza, Dallas, Texas 75202.

Q. ARE YOU THE SAME JOHN P. LUBE THAT SUBMITTED TESTIMONY PREVIOUSLY IN THIS PROCEEDING?

A. Yes.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. I will be rebutting various positions and statements made by AT&T's witness Steven Turner, Covad/Rhythm's witnesses Terry Murray and Joseph Riolo, and Rhythm's witness Kelly Caldwell. My testimony will cover technical issues related to the Project Pronto architecture and Ameritech Illinois' wholesale Broadband Service offering.

I. DESCRIPTION AND PURPOSE OF PROJECT PRONTO

Q. MR. TURNER (PAGE 27) ALLEGES THAT "AMERITECH ILLINOIS' PROJECT PRONTO INITIATIVE IS DESIGNED TO MAINTAIN ITS FIRST-MOVER ADVANTAGE AND TO FURTHER AMERITECH ILLINOIS' WELL-DOCUMENTED EFFORTS TO SMOTHER COMPETITION." DO YOU AGREE WITH HIS CHARACTERIZATION OF PROJECT PRONTO?

A. No.

Q. PLEASE DESCRIBE PROJECT PRONTO.

A. As explained in my Direct testimony, Project Pronto is a new, broadband-capable network architecture that is simply an overlay to Ameritech Illinois' existing loop network. Significantly,

Project Pronto does not replace Ameritech Illinois' existing loop network. Attachment JPL-1 is a diagram that provides a comparison of Project Pronto with the existing loop network.

Q. WHAT IS THE PURPOSE OF PROJECT PRONTO?

A. Ameritech Illinois developed Project Pronto to extend Digital Subscriber Line ("DSL") capabilities to more of the public than could otherwise enjoy these capabilities with currently deployed technology. As such, Project Pronto is a technological response to both the advanced services goals of the 1996 Act and the limitations of the existing loop network for offering such advanced services. More specifically, Project Pronto's goal is to extend the DSL capabilities of its loop plant to residential customers. Whereas business customers have had access to the technology for high-capacity digital services for many years, residential customers have historically had less opportunity to obtain these capabilities (albeit with less need for these capabilities in the past).

Q. IS THE PROJECT PRONTO TECHNOLOGY AVAILABLE TO JUST AMERITECH ILLINOIS' ADVANCED SERVICES AFFILIATE?

A. Not at all. Contrary to the rhetoric of Mr. Turner, Ameritech Illinois' Broadband Service, provided over the Project Pronto architecture, is accessible to all interested CLECs, including Ameritech Illinois' advanced services affiliate, in the same way. The testimony of Ms. Chapman further explains that the terms, conditions, and prices for the Broadband Service are offered to all CLECs on a non-discriminatory basis.

Q. AMERITECH ILLINOIS HAS ALSO CHOSEN A TECHNOLOGY FOR ITS PROJECT PRONTO ARCHITECTURE THAT CURRENTLY SUPPORTS ONLY ASYMMETRIC DISGITAL SUBSCRIBER LINE ("ADSL") SERVICE. WHY IS THIS?

A. As explained above, Ameritech Illinois has deployed the Project Pronto architecture and is offering the wholesale Broadband Service to all CLECs with the goal of providing DSL services to more of the public, especially residential customers. Today, this mass market generally wants broadband capabilities for high-speed Internet access. The bandwidth needed for this Internet access in generally asymmetric. In addition, these end users often do not want a separate loop for data. Therefore, ADSL is the form of DSL that provides the best match for these criteria. Furthermore, ADSL technology is currently more available in Next Generation Digital Loop Carrier ("NGDLC") equipment than the other forms of DSL. This allows CLECs the ability to offer DSL services to these end-users more rapidly.

II. LINE SHARING AND THE PROJECT PRONTO ARCHITECTURE

Q. MS. MURRAY'S TESTIMONY (PAGE 27) QUESTIONS AMERITECH ILLINOIS' POSITION THAT "LINE SHARING OVER FIBER-FED LOOPS IS SOMEHOW TECHNICALLY IMPOSSIBLE." WHAT PRECISELY IS AMERITECH ILLINOIS' POSITION REGARDING LINE SHARING OVER FIBER-FED LOOPS?

A. Ameritech Illinois certainly understands and agrees that it is technically feasible to place (i.e., multiplex) both voice signals and data signals onto the same optical signal for transport over a single fiber. However, contrary to Ms. Murray's testimony, it is technically impossible to

combine voice and data signals onto the same fibers using the NGDLC system deployed with Project Pronto.

Q. WHY IS IT NOT POSSIBLE FOR A CLEC TO LINE SHARE OVER THE PROJECT PRONTO FIBER-FED NGDLC?

A. The fiber-fed Alcatel NGDLC technology used in the Project Pronto architecture utilizes separate fiber paths for data and voice. In addition, the data signals are combined onto the data fibers using ATM multiplexing, whereas the voice signals are combined onto the voice fibers using time division multiplexing ("TDM"). This literally means only voice services such as POTS travel on the fibers dedicated to voice transport and only data services such as DSL travel on the fibers dedicated to data transport. Therefore, there is no line sharing (or even fiber sharing) that can take place in the Project Pronto NGDLC system.

Q. DID THE FCC REQUIRE LINE SHARING OVER FIBER-FED DLC IN ITS LINE SHARING ORDER?

A. No. In fact, the FCC stated in its Line Sharing Order that "line sharing through the simultaneous use of discrete electromagnetic frequencies on a single wire pair to provide separate communication services, is the only form of line sharing considered in this Order, and is only possible on metallic loops. Thus, fiber-based transmission systems are not considered in this order, ..."[1]

[1] In the Matters of Deployment of Wireline Services Offering Advanced Telecommunications, Capability and Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, Third Report and Order in CC Docket 98-147 and Fourth Report and Order in CC Docket 96-98 (rel. Dec. 9, 1999) ("Line Sharing Order"), footnote 27.

Q. DO ANY OF THE CLECS WITNESSES AGREE THAT LINE SHARING OCCURS ONLY ON COPPER FACILITIES?

A. Yes. Mr. Riolo correctly defines the term line sharing in his Direct testimony stating that,

> [a]s used in this proceeding, "line sharing" is the use of a single loop to provide both POTS and certain high-bandwidth xDSL digital transmission capabilities between a customer's premises and the central office. Such sharing is possible because voice traffic occupies a narrow bandwidth in the lower end of the spectrum available of a loop, traditionally accepted in the industry as between 300 and 3400 Hz. For those types of xDSL services that permit line sharing, xDSL traffic occupies the higher end of the spectrum available on a loop, (i.e., above 4000 Hz). Therefore, both low bandwidth POTS and higher bandwidth xDSL can coexist on a single physical loop.

Clearly, Mr. Riolo is referring to the same simultaneous use (i.e., sharing) of the same metallic loop by two discrete electromagnetic signals referenced by the FCC in its Line Sharing Order.

Q. EVEN THOUGH LINE SHARING CANNOT OCCUR ON THE FIBER-FED NGDLC, DOES AMERITECH ILLINOIS' BROADBAND SERVICE ALLOW CLECs TO LINE SHARE?

A. Line sharing cannot be provided through the end-to-end Broadband Service because there is no line sharing over the fiber-fed NGDLC portion of the Broadband Service. However, as explained in my Direct testimony, the Broadband Service does allow the CLECs to achieve the same result as line sharing.

Q. CAN YOU BRIEFLY REVIEW HOW THE BROADBAND SERVICE ACHIEVES THE SAME RESULT AS LINE SHARING?

A. Yes. Within the end-to-end Broadband Service, the POTS and DSL service travel from the end user's premises to the NGDLC remote terminal ("RT") on the same copper pair, and then travel from the NGDLC RT to the central office on separate fiber paths. The DSL service can

be delivered to the CLEC and the voice service can be delivered to Ameritech Illinois, thereby achieving the same result as the line sharing defined by the FCC's Line Sharing Order.

Q. DOES THE PROJECT PRONTO ARCHITECTURE DISADVANTAGE ANY CLEC IN ANY WAY IN CONNECTION WITH LINE SHARING?

A. No. As I explained in my Direct testimony, because Project Pronto is an overlay network, it will not affect the ability of CLECs to utilize Ameritech Illinois' existing copper network for the line sharing required by the FCC's Line Sharing Order.[2] In addition, Ameritech Illinois' Broadband Service simply gives the CLECs another method of providing DSL services to Ameritech Illinois' POTS customers.

Q. DOES THE PROJECT PRONTO ARCHITECTURE AND THE BROADBAND SERVICE LIMIT THE ABILITY OF THE CLECS TO LINE SHARE AS DEFINED BY THE FCC?

A. No. The line sharing defined by the FCC involves Ameritech Illinois' copper loops and sub-loops. Project Pronto is an overlay network architecture that does not displace Ameritech Illinois' existing copper loops and sub-loops. In other words, Ameritech Illinois has no current plans nor plans under development to retire copper loop plant as a result of the Project Pronto deployment. This is confirmed by SBC's voluntary commitments, which were adopted by and appended to the FCC's Project Pronto Order granting SBC's request for its ILECs to be allowed to own certain pieces of Project Pronto equipment.[3]

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[2] Line Sharing Order, paragraphs 17, 25, 26 and 70; and footnote 27..

[3] Second Memorandum Opinion and Order, CC Docket 98-141, ASD File No. 99-49, FCC 00-336 (released September 8, 2000) ("Project Pronto Order"), Appendix A. The FCC made SBC's voluntary commitments into conditions of granting the waiver and are set forth in Appendix A to the FCC's order.

Q. DO THESE VOLUNTARY COMMITMENTS PRECLUDE AMERITECH ILLINOIS FROM EVER RETIRING ANY COPPER LOOP PLANT?

A. No. Under the FCC-adopted commitments and the Project Pronto Order, Ameritech Illinois will continue to follow its established copper retirement policy. For example, if a section of copper cable becomes damaged or defective, Ameritech Illinois will evaluate the costs to repair the copper cable, replace it with new copper cable, or retire the copper cable and replace it with new fiber facilities. Other situations falling under this copper retirement policy include (1) cables that cannot continue to provide adequate levels of service, (2) cables that have become uneconomical to maintain, (3) cables that are affected by public requirements (e.g., relocations, zoning restrictions), (4) exhaust of conduit duct space, and (5) acts of God or other catastrophic cable failures. Decisions to remove copper cable in situations such as these are not affected by the deployment of the Project Pronto network overlay. Such decisions also will not be affected by the current users of these copper facilities, whether Ameritech Illinois' retail customers, affiliated telecommunications carriers, or unaffiliated telecommunications carriers.

Q. WHAT LIMITS ON THE RETIREMENT OF COPPER LOOP PLANT DO THESE COMMITMENTS PLACE ON AMERITECH ILLINOIS?

A. Even under the retirement policy described above, these commitments require Ameritech Illinois to not retire, through September, 2001, any central office-terminated copper loops overlaid by the Project Pronto architecture, except as required by acts of God. Also, under the commitments, the use of this retirement policy through September 2003 can result in the

retirement of no more than 5% of the SBC ILECs' total CO-terminated copper loops in service as of September 1, 2000.

Q. CAN YOU SUMMARIZE THE FCC-ADOPTED COMMITMENTS WITH RESPECT TO AMERITECH ILLINOIS' EXISTING COPPER LOOP PLANT?

A. Yes. Except as described immediately above, Ameritech Illinois' existing copper loops and copper sub-loops will still be available as unbundled network elements ("UNEs") to the CLECs, whether or not the overlay Project Pronto architecture has been deployed in a particular service area. Therefore, these copper loops and copper sub-loops will still be available to the CLECs for DSL services, including line-shared DSL services. Furthermore, in its Project Pronto Order, the FCC found these commitments to be appropriate and sufficient assurances that the existing copper loop network would remain available to CLECs.[4]

Q. YOU HAVE EXPLAINED THAT PROJECT PRONTO DEPLOYMENT WILL NOT RESULT IN THE REMOVAL OF AMERITECH ILLINOIS' COPPER LOOP PLANT. HOW DOES THE BROADBAND SERVICE, WHICH UTILIZES THIS ARCHITECTURE, NOT LIMIT THE CLECS' USE OF THIS COPPER LOOP PLANT?

A. Even though the end-to-end Broadband Service that Ameritech Illinois offers utilizes a copper sub-loop from the serving area interface ("SAI") to the end user's premises, none of these copper sub-loops are pre-dedicated to the Project Pronto architecture or the Broadband Service. A copper sub-loop to an end user will be a part of the end-to-end Broadband Service only when a CLEC freely chooses to utilize the Broadband Service to provide DSL service to that end user. Otherwise, all of these copper distribution pairs between the SAI and the end

[4] Id. , paras. 39, 40, 53, 54.

users' premises are available to be used by the CLEC. For example, a CLEC can use a copper distribution pair as part of a complete unbundled loop from the central office to an end user. Similarly, the CLEC can use this distribution pair as just a copper sub-loop from the SAI to the end user, in conjunction with its remotely located DSL Access Multiplexer ("DSLAM").

Q. MS. CALDWELL (PAGE 4) ASSERTS, "AMERITECH ILLINOIS MUST ALLOW CLECS TO CARRY LINE SHARED XDSL SERVICES FROM THE CUSTOMER PREMISES TO THE CENTRAL OFFICE REGARDLESS OF WHETHER THE LOOP IS PROVISIONED ON ALL-COPPER LOOPS FROM THE CENTRAL OFFICE TO THE CUSTOMER PREMISES, OR ON HYBRID LOOPS OF COPPER AND FIBER ROUTED THROUGH AMERITECH ILLINOIS' REMOTE TERMINALS ("RTS"), SUCH AS ARE BEING DEPLOYED UNDER AMERITECH ILLINOIS' PROJECT PRONTO." WILL AMERITECH ILLINOIS ALLOW CLECS TO DO SO?

A. Not if Ms. Caldwell's assertion is read literally, because it posits a physical impossibility. However, as I have already noted, CLECs not only can line share over Ameritech Illinois' existing copper loop plant, but also can achieve the same result as line sharing by utilizing Ameritech Illinois' Project Pronto Broadband Service.

Q. MR. RIOLO (PAGE 57) ALLEGES THAT AMERITECH ILLINOIS MADE PUBLIC ANNOUNCEMENTS INDICATING THAT THEY PLAN TO UPGRADE, SUPPLEMENT, OR REPLACE THE MAJORITY OF ITS DLC OVER THE NEXT THREE YEARS. WILL AMERITECH ILLINOIS BE UPGRADING, SUPPLEMENTING, OR REPLACING THIS EQUIPMENT WITH PROJECT PRONTO?

A. As part of Project Pronto, the SBC ILECs will be <u>upgrading</u> non-DSL-capable versions of the Alcatel DLC equipment located in some states, including Illinois. Also, Project Pronto will most definitely <u>supplement</u> existing non-<u>DSL</u>-capable DLCs, because Project Pronto is an overlay,

DSL-capable network. However, contrary to Mr. Riolo's assertion, Ameritech Illinois has no plans to replace non DSL-capable DLCs as a result of Project Pronto.

III. TECHNICAL INFEASIBILITY OF UNBUNDLING PROJECT PRONTO AND THE BROADBAND SERVICE

Q. SHOULD AMERITECH ILLINOIS BE REQUIRED TO UNBUNDLE PROJECT PRONTO, THE BROADBAND SERVICE, OR COMPONENTS OF THE BROADBAND SERVICE, AS SUGGESTED BY MR. RIOLO?

A. No. It is not technically feasible to unbundle this network architecture because of the manner in which the components of the architecture interconnect and interwork with one another. A single end user's DSL service will not occupy a consistent end-to-end path through this architecture, or have a consistent interface at each end of the path. As a consequence, the physical parts of this architecture used by the CLEC, through the Broadband Service offering, to provide DSL service to an end user will not bear a one-to-one correspondence to one another throughout the DSL service's path. Because of this, Ameritech Illinois has offered the CLECs an end-to-end wholesale Broadband Service, from the end user's premises to Ameritech Illinois' central office, for incorporation into the CLECs' own DSL services for their individual end users.

Q. PLEASE DESCRIBE THE PATH THROUGH THE BROADBAND SERVICE TAKEN BY A SPECIFIC END USER'S DSL SERVICE.

A. For a CLEC to provide DSL service to a single end user with the Broadband Service, the following path through the various network components would be utilized:

- a copper pair from the end user's premises to the NGDLC RT;

- a port on a multi-port line card in the NGDLC RT equipment;
- a virtual circuit established within the NGDLC RT;
- a virtual circuit established in the OC-3c signal riding over the data transport fibers between the NGDLC RT and the Optical Concentrating Device ("OCD"); and
- a virtual circuit established through the OCD to a port on a multi-port OCD card.

Q. WHAT DOES THE LIST ABOVE DEMONSTRATE?

A. The list above demonstrates that a single end user's DSL service will be partially a physical path and partially a virtual path through these various network components. Therefore, the end user's DSL service can be physically accessed in some parts of the end-to-end path, but cannot be physically accessed in other parts. In particular, the end user's DSL service cannot be accessed as a specific, unique unbundled network element at the central office connection to the CLEC (i.e., the OCD port).

Q. HOW DOES THE END-TO-END BROADBAND SERVICE PROVIDED OVER THE PROJECT PRONTO COMPARE TO UNBUNDLED NETWORK ELEMENTS IN AMERITECH ILLINOIS' NETWORK?

A. Consider UNEs such as unbundled dedicated transport ("UDT") and unbundled high-capacity loops. Each of these UNEs represents and provides the CLEC with a specific and constant amount of total bandwidth within the ILEC's underlying facility (e.g., a SONET transport facility). In addition, each of these UNEs is accessible at both end-points of the UNE with the

same interface specifications (i.e., bandwidth, signal characteristics, and physical connection). Ameritech Illinois' end-to-end Broadband Service does neither of these things.

Q. CAN YOU PROVIDE AN EXAMPLE?

A. Yes. A DS-3 UDT occupies a fixed piece of bandwidth (approximately 45 mbps) within a higher-bandwidth, underlying transport facility. In some instances, this UNE may traverse more than one such facility connected in tandem between the two end-points of the UNE. The bandwidth of this UDT is constant throughout the entire length of the UNE. In addition, the UDT's bandwidth occupies an unchanging position within the digital multiplexing hierarchy of the underlying transport facility. This UDT is also accessible at each end with the same DS-3 bandwidth, same electrical signal characteristics, and same physical coaxial connection.

Q. HOW DO THE VIRTUAL CIRCUITS ESTABLISHED WITHIN THE END-TO-END BROADBAND SERVICE DIFFER FROM THE UDT DESCRIBED ABOVE?

A. Unlike the UDT described in the paragraph above, the virtual circuits established for DSL services through the Project Pronto NGDLC RT, OC-3c data transport fibers, and OCD do not occupy a specific and fixed piece of bandwidth, and cannot be physically accessed with the same interface specifications at each end. These virtual circuits share the same Project Pronto equipment and transport facility only in a statistical manner, not as specific, fixed amounts of bandwidth for each virtual circuit. Therefore, various CLECs' end user circuits literally share the very same bandwidth in this architecture, and even then, only virtually, not physically.

In addition, these virtual circuits do not have the same interface characteristics at each end. At one end, the virtual circuit can only be physically accessed as a two-wire metallic DSL-formatted interface that connects to the copper pair extending to one end user's premises. At the other end, the virtual circuit exists only within the ATM-formatted high-bandwidth signal delivered to a port on the OCD, which contains not one but many virtual circuits for different end users' DSL services. Therefore, these dissimilar interfaces at the ends of the Project Pronto architecture and the related Broadband Service do not allow this configuration to be unbundled as discrete network elements.

Q. IF PROJECT PRONTO AND THE BROADBAND SERVICE ARE NOT UNBUNDLED, WILL THE CLECS BE IMPAIRED IN THE PROVISIONING OF DSL SERVICES?

A. No. The Project Pronto architecture and the Broadband Service offering do not have to be unbundled for CLECS to be able to provide DSL services to their end users. Project Pronto and the Broadband Service provide CLECs with new methods to offer DSL services, in addition to the methods already available to the CLECs today.

Q. IF PROJECT PRONTO IS NOT UNBUNDLED, WHAT OPTIONS DO CLECS HAVE FOR OFFERING DSL SERVICES?

A. The options available to CLECs for providing DSL services include the following:

- The CLECs may utilize Ameritech Illinois' Broadband Service offering. In doing so, CLECs will be able to utilize to the DSLAM functionality of the Project Pronto NGDLC equipment to provide DSL services without having to collocate their own stand-alone DSLAMs at RT sites.

- CLECs may also continue to utilize all-copper loops to provide DSL services. Because Project Pronto is an overlay network design, Ameritech Illinois' existing copper facilities will still be available to CLECs. Also, because the Broadband Service allows an end user's POTS and ADSL service to be provided over the Project Pronto network architecture, use of the Broadband Service in this manner will free additional existing copper facilities that were previously used only for POTS.
- CLECs may choose to collocate their own stand-alone DSLAM equipment in Ameritech Illinois' RT sites, where space is available and other technical requirements (e.g., heat dissipation, power, etc.) are met.
- CLECs may build their own facilities to provide DSL services to end users.

Q. THE FCC ADDRESSED THE UNBUNDLING OF PACKET SWITCHING EQUIPMENT IN ITS UNE REMAND ORDER.[5] DOES THE PROJECT PRONTO ARCHITECTURE CONSIST OF PACKET SWITCHING EQUIPMENT?

A. Yes. In it's Project Pronto Order, the FCC found that the Project Pronto NGDLC RT is functionality equivalent to a DSLAM,[6] and that the Project Pronto OCD is ATM switching equipment.[7] The FCC found in its UNE Remand Order that this type of equipment is packet switching equipment.[8]

[5] FCC 99-238, Third Report and Order and Fourth Further Notice of Proposed Rulemaking in CC Docket No. 96-98 ("In the Matter of Implementation of the Local Competition Provisions of the Telecommunications Act of 1996"), released November 5, 1999 ("UNE Remand Order"), V.D.2.
[6] Project Pronto Order, par. 14.
[7] Id., par. 18.
[8] UNE Remand Order, par. 177, 302, and 303.

Q. DID THE FCC REQUIRE THE UNBUNDLING OF PACKET SWITCHING?

A. The FCC decided against a general requirement to unbundle packet switching, stating in its UNE Remand Order that "given the nascent nature of the advanced services marketplace, we will not order unbundling of the packet switching functionality as a general matter."[9] The FCC went on to say "the record in this proceeding, and our findings in the *706 Report*, establish that advanced services providers are actively deploying facilities to offer advanced services such as xDSL across the country. … [C]arriers have been able to secure the necessary inputs to provide advanced services to end users in accordance with their business plans. This evidence indicates that carriers are deploying advanced services to the business market initially as well as the residential and small business markets."[10]

Q. UNDER WHAT CIRCUMSTANCES DID THE FCC REQUIRE THE UNBUNDLING OF PACKET SWITCHING?

A. The FCC's UNE Remand Order defines the limited circumstances under which packet switching must be unbundled.[11] Specifically, the FCC's rules provide that,

> (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:
>
> > (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

[9] Id., para. 306.
[10] Id., para. 307.
[11] Id., para. 313.

> (*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.[12]

Q. DO THESE CONDITIONS APPLY TO AMERITECH ILLINOIS' PROJECT PRONTO DEPLOYMENT?

A. No, the four conditions described in the FCC's rules will normally not exist in Ameritech Illinois' network, including any Project Pronto facilities that it deploys, for several reasons. First, copper loops will often be available to the CLECs. As I stated above, the deployment of Project Pronto does not displace any existing copper loops, and, in fact, will usually free up working copper loops for future CLEC use. Second, Ameritech Illinois' voluntary commitments, adopted in the FCC's Project Pronto Order,[13] enhance the CLECs' opportunity to collocate their own DSLAMs at or near the Ameritech Illinois' RT sites. Specifically, Ameritech Illinois will, upon a CLEC's request, either increase the size of future RT structures or provide the CLEC with an adjacent cabinet structure. Third, Ameritech Illinois is not deploying this packet switching equipment for its own end users. Instead, the Project Pronto

[12] 47 C.F.R. 51.319(c)(3)(B) (emphasis added).

NGDLC RT and OCD are being deployed by Ameritech Illinois for CLECs' use in provisioning their own retail DSL services to end users.

Q. ARE THERE OTHER REASONS WHY THE PROJECT PRONTO ARCHITECTURE AND THE BROADBAND SERVICE SHOULD NOT BE UNBUNDLED?

A. Yes. The Affidavit of Carol Chapman addresses other reasons why Ameritech Illinois should not be required to unbundle the Project Pronto architecture in Illinois.

IV. OWNERSHIP OF THE NGDLC RT LINE CARD

Q. MR. RIOLO (PAGE 58) STATES IN HIS DIRECT TESTIMONY THAT THE CLECS SHOULD HAVE THE OPTION OF OWNING THE PROJECT PRONTO NGDLC RT LINE CARD. DO YOU AGREE?

A. No. Allowing the CLECs to own or control these line cards is both inappropriate and impractical for several reasons. First, Mr. Riolo's suggestion that CLECs own these line cards becomes a de facto form of collocation. As I address below, a line card is not a type of equipment that can or should be collocated under the governing rules. Other reasons supporting Ameritech Illinois' ownership of the line cards include RT utilization; critical operational issues such as provisioning, maintenance, and repair; and administrative issues such as record keeping for ad valorem tax remittance.

Q. WHY IS THE COLLOCATION OF THESE LINE CARDS INAPPROPRIATE?

[13] Project Pronto Order, paras. 34, 35, 61, App. A, para. 5.

A. The FCC's rules require the collocation of only complete items of equipment. A line card is not a piece of equipment appropriate for collocation because it is only a piece-part or sub-component of a complete item of equipment.

Q. HOW DOES THE FCC DEFINE SPACE FOR PHYSICAL COLLOCATION?

A. The FCC specifically stated in its Local Competition Order that ILECs must "offer physical collocation, with the interconnecting party paying the LEC for central office floor space."[14] In other words, the FCC defined physical collocation space only as floor space, not as the shelf space required for a single piece-part of a complete equipment unit. Further, the FCC established in its Advanced Services Order the minimum amount of collocation space to be provided by the ILECs to the CLECs in cageless collocation, stating that CLECs "can purchase space in increments small enough to collocate a single rack (i.e., bay) of equipment."[15]

Q. WHAT MINIMUM COLLOCATION SPACE WILL AMERITECH ILLINOIS PROVIDE CLECS?

A. Consistent with this Commission's decisions, Ameritech Illinois provides collocation space in increments of a single rack in a CO, and as small as a two-inch rack space in an RT site, where physical space and other factors (e.g., heat dissipation and power consumption) allow. However, the collocation of just a sub-component within a shelf of Ameritech Illinois'

[14] In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, CC Docket No. 96-98, First Report and Order, FCC 96-325 (released August 8, 1996) ("Local Competition Order"), para. 559 (emphasis added).

[15] In the Matter of Deployment of Wireline Services Offering Advanced Telecommunications Capability, CC Docket No. 98-147, First Report and Order and Further Notice of Proposed Rulemaking, FCC 99-48 (released March 31, 1999) ("Advanced Services Order"), para. 43.

equipment mounted in a rack is not consistent with either this Commission's collocation decisions or the FCC's definition of collocation space.

Q. WHAT DOES THE FCC DESCRIBE AS EQUIPMENT WHICH MAY BE COLLOCATED?

A. Regarding the types of equipment that may be collocated, in its Advanced Services Order, the FCC described the equipment eligible for collocation as including DSLAMS, routers, ATM multiplexers, and remote switching modules.[16] In addition, section 51.323(b) of the FCC's rules, which address collocation, describe the equipment that can be used for interconnection and access to unbundled network elements as follows:

> (1) Transmission equipment including, but not limited to, optical terminating equipment and multiplexers, and
>
> (2) Equipment being collocated to terminate basic transmission facilities pursuant to §§ 66.1401 and 64.1402 of this chapter as of August 1, 1996.
>
> (3) Digital subscriber line access multiplexers, routers, asynchronous transfer mode multiplexers, and remote switching modules.[17]

In every case, the FCC cites complete items of network equipment, not piece-parts or sub-components that make up these complete items of network equipment. This demonstrates that the FCC does not consider such piece-parts or sub-components to be equipment eligible for collocation.

[16] Id., para. 28.
[17] 47 C.F.R.§ 51.323(b).

Q. HAS SECTION 51.323(b) OF THE FCC'S RULES RECENTLY BEEN VACATED BY THE COURTS?

A. Yes. The 1996 Act requires an ILEC to provide "collocation of equipment necessary for interconnection or access to unbundled network elements."[18] The D.C. Circuit Court of Appeals recently decided that "necessary" is a more stringent standard than just "used and useful,"[19] as had been required by the FCC's collocation rules. Instead, the "necessary" standard more nearly describes a condition that, without collocating such equipment, a CLEC would simply not be able to interconnect or access UNEs.

Q. WHAT IS THE SIGNIFICANCE OF THESE RULES HAVING BEEN VACATED?

A. As can be seen in these rules, the FCC identified only complete items of equipment. This FCC rule was vacated for requiring collocation of any equipment that was "used and useful" for interconnection or access to UNEs, rather than being "necessary" for those tasks. This indicates that, even under its too-expansive reading of the 1996 Act, the FCC never viewed sub-components or piece-parts of complete items of equipment as meeting the collocation standard.

Q. DID THE FCC ADDRESS THE CHARACTERISTICS OF COLLOCATED EQUIPMENT IN ANY OTHER PROCEEDING?

A. Yes. The FCC has consistently excluded sub-components of equipment from its definition of collocation equipment. As far back as 1992, the FCC stated in its Expanded Interconnection Order that, under physical collocation, "the interconnecting party pays for LEC central office

[18] 251(c)(6), emphasis added.

[19] GTE Service Corp. v. FCC, 205 F.3d 416, 422-23 (D.C. Cir. 2000).

space in which to locate the equipment necessary to terminate its transmission links."[20] Again, the NGDLC line card does not meet the FCC's definition of collocation equipment because it has no ability to terminate, by itself, any such transmission links.

Q. PLEASE COMPARE A LINE CARD TO A COMPLETE NGDLC RT.

A. A line card is a "circuit pack" or "plug-in unit" that is only a piece-part or sub-component of the complete NGDLC RT equipment unit. In contrast, the complete NGDLC RT physically consists of these line cards; additional cards that provide common functions for multiple line cards; hardwired equipment such as the shelves, connectors, and wiring that house and interconnect all of the line cards and common cards; and the system software that makes all of the NGDLC RT sub-components operate as a complete equipment unit.

Q. PLEASE EXPLAIN THE LINE CARD IN MORE DETAIL.

A. The type of Project Pronto RT line card currently available from the manufacturer of this platform is the ADSL Digital Line Unit ("ADLU") card. This has been confirmed by the manufacturer itself, as reflected in the letter attached as Schedule JPL-2 to my rebuttal Testimony. The ADLU card is inserted into a shelf within a complete NGDLC RT equipment unit. This ADLU card contains some of the electronic circuitry that enables the NGDLC RT to perform the various signal-conversion and multiplexing functions for an end user's ADSL signal. The ADLU card cannot perform any of these functions by itself, as it is only a piece-part or sub-component of the overall NGDLC RT equipment unit. To use an analogy, the ADLU card

[20] In the Matter of Expanded Interconnection with Local Telephone Company Facilities; Amendment of the Part 69 Allocation of General Support Facility Costs, CC Docket No. 91-141, Report and Order and Notice of Proposed

is similar to the gear within a wrist-watch. The gear is not the device that provides the time to the wearer of the watch, but instead, is only a piece-part of the watch, and merely works in combination with the rest of the parts of the watch to keep time.

Q. HOW DOES THE FCC'S RECENT PROJECT PRONTO ORDER CHARACTERIZE THE ADLU CARD?

A. The FCC's Project Pronto Order agrees with the characterization of an ADLU card as just a piece-part, stating that the

> "plug-in ADLU Card is only one component of an NGDLC system. An NGDLC system typically contains several 'channel bank assemblies,' which are multiplexers used to provide service to end users. In each channel bank assembly, a carrier 'plugs in' cards that are used to provide specific telecommunications services. … The ADLU Card is a plug-in card used to provide ADSL service from an NGDLC system. The ADLU Card works in conjunction with other plug-in cards and software to provide such service. In addition to the channel bank assemblies and the associated plug-in cards, DLC systems (including NGDLC systems) also contain a common control assembly that contains multiplexing, power, and other capabilities."[21]

Q. DID THE FCC'S PROJECT PRONTO ORDER FIND THAT THE ADLU CARD IS FUNCTIONALLY EQUIVALENT TO A DSLAM, WHICH IS AN ITEM OF EQUIPMENT THAT MEETS THE COLLOCATION STANDARDS SET BY THE FCC?

A. Although the FCC's Project Pronto Order stated that the ADLU card is the functional equivalent of a DSLAM,[22] the ADLU card is still not a complete item of equipment allowed for collocation. On the other hand, a CLEC can collocate full items of equipment such as its own stand-alone DSLAM or its own complete NGDLC RT at an Ameritech Illinois RT site, where

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Rulemaking, FCC 92-440 (released October 19, 1992) ("Expanded Interconnection Order"), para. 39.

[21] Project Pronto Order, footnote. 11.

space and environment factors (heat dissipation and power) allow. The CLEC's ability to collocate such complete items of equipment at a Project Pronto RT site will be enhanced through Ameritech Illinois' voluntary commitments attached to and adopted by the FCC's Project Pronto Order.[23]

Q. IS THE ADLU CARD NECESSARY FOR THE CLECS TO INTERCONNECT WITH AMERITECH ILLINOIS' NETWORK OR ACCESS UNES?

A. No. As a preliminary matter, the ADLU card is unable to access any of Ameritech Illinois' UNEs at an RT site, or provide interconnection between Ameritech Illinois' network and a CLEC's network for the mutual exchange of traffic.

Q. WHICH UNES CAN BE ACCESSED BY COLLOCATING IN AN RT?

A. Two of Ameritech Illinois' UNEs may be accessible to a CLEC at an RT site. The first is unbundled dark fiber. Unbundled dark fiber is available at an RT site only if the RT is fed by fiber cable, and if any of the fiber strands are spare. The second is unbundled copper distribution subloops including the full subloop or just the high frequency portion of the subloop. These unbundled subloops are available at an RT only if the CLEC's collocated equipment is cabled to the nearest cross-connect access point to those subloops (e.g., the SAI cabinet), or to the "engineering controlled splice" referred to in Ameritech Illinois' voluntary commitments adopted in the Project Pronto Order.[24]

Q. CAN A CLEC OBTAIN ACCESS TO UNES AVAILABLE AT AN RT BY PLACING AN ADLU CARD INTO AMERITECH ILLINOIS' NGDLC EQUIPMENT?

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[22] Id., para. 14.
[23] Id., paras. 34, 35, and 61; and App. A, para. 5.
[24] Id, para. 61, App. A, para. 5.

A. No. A CLEC cannot obtain access to the UNEs available at an RT site by placing an ADLU card in Ameritech Illinois' NGDLC RT equipment. The ADLU card is simply not capable of providing access to any UNE. As previously explained in my testimony, the ADLU card is only a sub-component of the complex system of hardware and software that collectively make up the complete functionality of a NGDLC RT. In fact, the ADLU is merely one sub-component of one physical part (i.e., the Project Pronto RT) of Ameritech Illinois' Project Pronto architecture and related Broadband Service. There are no means to physically cross-connect the ADLU card to any UNE at the RT. Instead, it can only be physically inserted into a slot within the rest of the NGDLC RT equipment.

However, even if it were able to access UNEs or interconnect two carriers' networks for the exchange of traffic, the ADLU card is <u>not necessary</u> for performing these tasks. In other words, access to the dark fiber and subloop UNEs at the RT site (or interconnection) neither involves nor requires the CLECs' use or ownership of the ADLU card.

Q. ARE THERE ANY OPERATIONAL PROBLEMS WITH ALLOWING CLECS TO OWN OR CONTROL LINE CARDS FOR USE WITH AMERITECH ILLINOIS' PROJECT PRONTO NGDLC RTS?

A. Yes. One of the most serious operational problems caused by a CLEC owning or controlling the ADLU card is the premature exhaust of the NGDLC itself.

Q. PLEASE EXPLAIN HOW CLEC OWNERSHIP OF LINE CARDS COULD CREATE THIS CONDITION.

A Each type of NGDLC has a limited number of physical slots in which to place these line cards. Each NGDLC is planned and deployed with enough slot capacity to serve customers in a specific geographic area. In the Project Pronto NGDLCs used by Ameritech Illinois, the ADLU card has multiple ports for customer service (i.e, each port serves a separate end user). Each line card slot is wired to an SAI to accommodate the total number of ports (i.e., end users) that will be served by that ADLU card and slot. When a carrier other than Ameritech Illinois owns or controls a line card for one end user, the entire port capacity of that card slot and the associated copper feeder pairs become unavailable for use by any other CLEC. The Alcatel NGDLC used in the Project Pronto architecture is designed and cabled to the SAI for four ports per ADLU card. Therefore, if a CLEC is allowed to own or control the ADLU card and uses that card to serve one customer, 75% of that slot capacity and associated cable pairs would become unavailable to other CLECs to serve other DSL end users. This condition is exacerbated if multiple CLECs own and place their own line cards in the Project Pronto NGDLC. As a result, this equipment would exhaust much sooner than if Ameritech Illinois owns all of the line cards, which allows all of the ports to be shared by all of the CLECs.

Q. ARE THERE ANY OTHER OPERATIONAL PROBLEMS WE SHOULD BE AWARE OF?

A. Yes. CLEC ownership of the ADLU cards would result in several significant complications to the provisioning processes. First, Ameritech Illinois would have to maintain a record of which slots in which RTs in which wire centers were dedicated to which CLECs. The CLEC's

provisioning systems would also have to inventory, assign, and track the use of individual slots on individual cards in individual RTs in individual wire centers. Passing this CLEC slot/port assignment information between the two companies could complicate and very likely delay the provisioning intervals for new connect orders.

Second, when a new card is needed to work a new connect order, the CLEC would have to physically ship a card to Ameritech Illinois so that Ameritech Illinois could place the card into the NGDLC RT. Ameritech Illinois' internal processes allow for this type of activity to occur within normal provisioning intervals when Ameritech Illinois owns the cards. If the CLECs own the cards; having to properly identify these types of new connect orders and having to physically obtain the cards from the CLECs would only complicate and very likely delay this process.

Q. WOULD THERE ALSO BE ONGOING MAINTENANCE PROBLEMS CAUSED BY CLEC OWNERSHIP OF THE ADLU CARD?

A. Yes, the CLECs would have to provide Ameritech Illinois with spare line cards so that defective line cards could be replaced promptly. In addition, CLECs would have to identify to Ameritech Illinois the locations of its plugs when the manufacturer initiates necessary product modifications or upgrades. Tracking these maintenance spares would place undue burden on Ameritech Illinois. This becomes particularly onerous when multiple CLECs own multiple types of line cards. In other words, Ameritech Illinois' technicians would be required to identify the owner of a defective line card or a line card to be upgraded, determine whether the owner has provided a spare, locate that spare, or place a call or an order to the owner to provide a spare.

This could increase the repair interval for the end user's POTS or data service, which means longer out-of-service conditions, customer dissatisfaction, and even complaints to this Commission.

Q. ARE THERE ANY OTHER PROBLEMS WITH CLECS' OWNERSHIP OF LINE CARDS?

A. Yes, another problem with CLECs owning the line cards is that the Project Pronto NGDLCs are subject to numerous taxing entities' requirements. Even within one Ameritech Illinois wire center, there could be up to 24 geographically scattered NGDLC RTs where the CLEC could own line cards. Each of these individual RT sites could be subject to different combinations of taxing jurisdictions, including but not limited to state, county, city, school district, and fire protection. Each of these entities has different methods for assessing property taxes. CLECs would have to develop inventory and reporting procedures to ensure the proper taxing entity is notified of when the asset is placed and the value of that asset. In addition, as these line cards are replaced or moved to other locations, the appropriate taxing entities would have to be kept informed of this activity by the CLECs. Ameritech Illinois already has the processes in place to handle this tracking, reporting, and tax remittance for all of its assets; it is impractical for each CLEC to have to undertake the development of such systems for the line cards it owns.

Q. IS THERE ANY WAY ALL THESE PROBLEMS CAN BE AVOIDED AND STILL ALLOW CLECS REASONABLE ACCESS TO THE END USERS THAT CAN BE SERVED BY THE PRONTO PRONTO RT?

A. Yes. The problems I've just discussed would create substantially increased, yet avoidable, costs for both Ameritech Illinois and the CLECs. The CLECs' increased cost would be driven by the new processes and systems that would be required for provisioning, maintenance, and ad valorem taxes; and to reflect the increase in Ameritech Illinois' costs. For Ameritech Illinois, added cost would be incurred for the additional NGDLC capacity (required because of the premature exhaust of that equipment caused by the CLECs' ownership of the multi-port line cards at the NGDLC RT sites) and the new processes required for provisioning and maintenance. In addition, some Operational Support System (OSS) enhancements would have to be undertaken by Ameritech Illinois to eliminate some of the manual processes created by CLEC line card ownership. All of this taken together would add significant costs to both CLECs and Ameritech Illinois. All of these costs could be avoided by Ameritech Illinois' ownership of these line cards.

Q. WOULD THERE BE ANY OTHER CONSEQUENCE OF THE CLECS' OWNING PROJECT PRONTO NGDLC RT LINE CARDS?

A. Yes. Besides the utilization and operational problems described above in my testimony, the CLECs' ownership of these line cardswould first require SBC to re-evaluate and/or refocus its deployment plans for Project Pronto. The added cost to SBC and Ameritech Illinois for CLECs to own the line cards would have to be factored into the overall economics of this architecture deployment, and could delay or eliminate the continued deployment of Project Pronto in Illinois.

V. ADDITIONAL CAPABILITIES AND FEATURES FOR THE PROJECT PRONTO NGDLC

Q. WITNESSES MURRAY (PAGE 25) AND RIOLO (PAGES 60 AND 67) HAVE EXPRESSED CONCERNS ABOUT NEW TECHNOLOGIES FOR ADDITIONAL LINE SHARING OPTIONS AND THE PROCESS FOR OBTAINING THEM. HOW DO YOU RESPOND?

A. In Ameritech Illinois' Voluntary Commitments adopted by the FCC's recent Project Pronto Order, Ameritech Illinois outlined the efforts it will undertake to work collaboratively in the future with individual CLECs, groups of CLECs, and the industry-at-large to introduce additional capabilities and features into the Project Pronto network architecture. Included in these collaborative efforts will be the establishment of a process whereby all interested carriers will work directly with the supplier industry for the creation of new, compatible technologies, capabilities, and features, subject to reasonable criteria.

Q. WHAT ARE THESE CRITERIA?

A. One of these criteria is that the introduction of an additional feature or capability into this architecture cannot impair the capacity of the deployed Project Pronto RTs. It would be completely unreasonable for Ameritech Illinois to be forced to introduce such a capability or feature into its network if doing so would strand any part of Ameritech Illinois' considerable investment in Project Pronto RTs, or otherwise impair other present and future end users from receiving advanced services and POTS through these RTs.

Another criterion is that such introductions are technologically and operationally feasible in Ameritech Illinois' network architecture. Additional criteria include the existence of a

reasonable market or CLEC commitment for the new capability or feature, and a willingness by the CLEC(s) to pay for Ameritech Illinois' reasonable costs for that new capability or feature.

Q. DO AMERITECH ILLINOIS' PROJECT PRONTO NGDLCS INCLUDE ANY SONET EQUIPMENT TO WHICH THE CLECS MAY CONNECT THEIR REMOTELY LOCATED DSLAMS, AS SUGGESTED BY MR. RIOLO (PAGE 58)?

A. No. SONET transport is integrated in the Alcatel NGDLC as part of the total system configuration. This OC-3 SONET transport system capacity is dedicated to the narrowband (i.e., voice) portion of the NGDLC system. There is no capability for accessing a lower-speed electrical channel in the NGDLC equipment configuration. Placement of a stand-alone SONET multiplexer at a Project Pronto RT site would be required for interconnection with a CLEC's remotely-located DSLAM. Ameritech Illinois does not place such stand-alone SONET multiplexers at RT sites unless some other high-capacity service demand warrants this additional SONET capacity.

Q. SHOULD AMERITECH ILLINOIS BE REQUIRED TO OFFER PVCs AS AN OPTION FOR TRANSPORTING A CLEC'S DSL TRAFFIC OVER PROJECT PRONTO, AS MR. RIOLO SUGGESTS (PAGES 60-61)?

A. Such a requirement would be unnecessary, because Ameritech Illinois' Broadband Service offering already does utilize permanent virtual circuits ("PVCs") for transporting DSL services through the common OC-3c fiber facility between the Project Pronto NGDLC RT and the central office OCD, as well as through the OCD to the CLEC's OCD port.

Q. SHOULD AMERITECH ILLINOIS ALSO BE REQUIRED TO OFFER PVPs AS AN OPTION FOR TRANSPORTING A CLEC'S DSL TRAFFIC OVER PROJECT PRONTO, AS MR. RIOLO SUGGESTS (PAGE 61)?

A. Not at this time. A PVP (permanent virtual path) would dedicate a fixed amount of bandwidth within the Project Pronto data OC-3c fiber facility. This amount of bandwidth comprising the PVP would be useable only by that CLEC's DSL end-users. The remaining bandwidth in the data OC-3c fiber facility would be used by all other CLECs' DSL end-users. Ameritech Illinois has agreed, through its Voluntary Commitments adopted by the FCC's Project Pronto Order, to consider the deployment of other features and functions in the Project Pronto architecture, such as PVPs. However, Ameritech Illinois must analyze the impact of PVPs on the capacity of it's Project Pronto RTs and on the service quality of other CLECs' DSL end-users before it will agree to provide PVPs within the data OC-3c fiber facility to one or more CLECs.

Q. SHOULD AMERITECH ILLINOIS FURTHER BE REQUIRED TO OFFER TDM AS AN OPTION FOR TRANSPORTING A CLEC'S DSL TRAFFIC OVER PROJECT PRONTO, AS MR. RIOLO SUGGESTS (PAGE 61)?

A. No. Ameritech Illinois' Project Pronto architecture can only use ATM multiplexing for DSL traffic. TDM is used by this architecture only for voice traffic. The Project Pronto equipment cannot do what Mr. Riolo suggests.

Q. SHOULD AMERITECH ILLINOIS BE REQUIRED TO OFFER PERMANENT VIRTUAL CIRCUITS AND PERMANENT VIRTUAL PATHS IN ANY OF THE ATM QUALITY OF SERVICE CLASSES, AS MR. RIOLO SUGGESTS (PAGE 61)?

A. No. Ameritech Illinois' Project Pronto architecture currently cannot support all ATM Quality of Services ("QoS") classes. Therefore, it is simply not possible for all of these types of service to be provided by Ameritech Illinois over Project Pronto.

Q. WHAT ARE QOS CLASSES?

A. With digital services, the quality of the service may be defined in terms of specific error conditions. For example, Quality of Service ("QoS") parameters (such as Cell Delay Variation and Cell Loss Ratio) have been defined for ATM technology.[25] Further, ATM QoS classes have been defined based upon factors such as these QoS parameters, traffic parameters (such Peak Cell Rate), and end user application (such as Internet access or full-motion video).

Q. WHAT ARE THE ATM QOS CLASSES?

A. The ATM QoS classes are:

- Constant Bit Rate ("CBR") – a constant bandwidth allocation, typically used for voice traffic, videoconferencing, and television;
- Variable Bit Rate ("VBR") – a statistical (average) bandwidth allocation, typically used for interactive compressed video and multimedia services;
- Available Bit Rate ("ABR") – a bandwidth allocation based upon network availability, primarily for data traffic such as file transfers; and,
- Unspecified Bit Rate ("UBR") – a best-effort bandwidth allocation, ideal for bursty traffic such as Internet access.

Q. HOW DO QOS CLASSES RELATE TO PROJECT PRONTO?

[25] ATM, or "Asynchronous Transfer Mode," is a technology where information is divided into a series of "cells" of fixed byte-length, and routed across a network from the originating point to the termination point via transmission links connected by ATM switches. Cells are allocated to a specific service based upon demand and priority.

A. The Project Pronto architecture utilizes an ATM-type of data transmission for the DSL services provided by the CLECs.

Q. WHAT ATM QOS CLASSES WILL BE AVAILABLE WITH PROJECT PRONTO AND AMERITECH ILLINOIS' BROADBAND SERVICE?

A. Through its Broadband Service, Ameritech Illinois will offer the UBR ATM QoS class. This is based upon the following factors. First, Ameritech Illinois' intent with Project Pronto is to extend the reach of DSL to more of the general public than can otherwise receive such services today, particularly consumers living beyond the range of central-office-based DSLAMs and all-copper loops. Second, the data needs for these end users are generally connections that provide bursty, asymmetric Internet access, which is satisfied by the UBR QoS class. Third, the use of other ATM QoS classes can result in significant portions of the total bandwidth capacity of the NGDLC RT and data transport being allocated to some DSL end users, and therefore, less of the total bandwidth capacity being available for the remainder of the DSL end users. Therefore, offering other QoS classes requires consideration of the capacity of the Project Pronto architecture and the effect on the quality of other CLECs' end users' DSL services.

Q. WILL AMERITECH ILLINOIS OFFER TO CLECS ANY ADDITIONAL CAPABILITIES OF ITS PROJECT PRONTO ARCHITECTURE AS THOSE CAPABILITIES ARE DEVELOPED IN THE FUTURE BY AMERITECH ILLINOIS' EQUIPMENT VENDORS?

A. Even though Ameritech Illinois is not obligated to build, and provide CLECs access to, a network that is superior than that which is already in place, regardless of what other technology

may or may not be commercially available today, Ameritech Illinois will undertake collaborative processes with CLECs and equipment vendors to introduce additional capabilities and features into the Project Pronto network architecture, subject to the reasonable criteria that I described above.

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A. Yes it does.