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March 13, 2001

BY HAND DELIVERY

Janice Myles
Federal Communications Commission
Common Carrier Bureau
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445 12th Street, S.W.
Washington, D.C. 20554

Re: CC Docket No. 98-147-- Third Further Notice of Proposed Rulemaking
CC Docket No. 96-98 -- Fifth Further Notice of Proposed Rulemaking
Reply Comments of AT&T Corp.

Dear Ms. Myles:

Please find enclosed one paper copy and one diskette copy of AT&T Corp.'s Reply Comments in the above referenced docket.

Sincerely,

MINTZ, LEVIN, COHN, FERRIS,
GLOVSKY and POPEO, P.C.

James J. Valentino

Enclosure

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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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In the Matters of	)	
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Deployment of Wireline Services Offering Advanced Telecommunications Capability	)	CC Docket No. 98-147
	)	
And	)	
	)	
Implementation of the Local Competition Provisions of the Telecommunications Act of 1996	)	CC Docket No. 96-98

REPLY COMMENTS OF AT&T CORP.

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March 13, 2001

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Before the
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REPLY COMMENTS OF AT&T CORP.

AT&T Corp. ("AT&T") submits these reply comments in response to the Commission's Third Further Notice of Proposed Rulemaking in CC Docket No. 98-147 and Fifth Further Notice of Proposed Rulemaking in CC Docket No. 96-98 ("*FNPRM*").

INTRODUCTION AND SUMMARY

In its initial comments; AT&T asked the Commission to take the following actions in this proceeding:

- Clarify that competitive local exchange carriers ("competitive LECs" or "CLECs") are entitled to access the "entire" loop, including all of the attached electronics used to support the provision of transmission functionality. Such attached electronics include, but are not limited to, remotely deployed digital subscriber line access multiplexers ("DSLAMs") and central office deployed Optical Concentration Devices ("OCDs"), which provide complementary multiplexing/demultiplexing functions.

- Reiterate that an ILEC ("incumbent LEC" or "ILEC") must provide both line sharing and line splitting arrangements to requesting carriers regardless of the loop architecture the incumbent LEC has deployed.

- Reiterate that a CLEC's right to use the fiber feeder between a remote terminal and the ILEC's central office, even when shared among carriers, is included within the definition of the loop.

- Clarify that the existence of fiber feeder in the loop does not change the fact that the line sharing and line splitting transmission functionality between the remote terminal and the central office is part of the loop element and is not shared transport.

- Clarify that the Central Office Terminal ("COT"), OCD, or similar device is part of the transmission path between the customer's premises and the equivalent of a main distribution frame in the incumbent LEC's central office, so that the end of the loop is the network side of the COT, OCD, or similar device.

- Clarify that the rules permitting a CLEC the option of obtaining access to unbundled subloops, dark fiber, or "all-copper" loops do not -- and cannot -- displace a CLEC's right to access an entire loop.

- Remove all reference to DSLAMs from the Commission's "packet switching" and loop definitions to assure that CLECs have access to line sharing and line splitting transmission functionalities associated with the entire loop. In this regard, the Commission must also clarify in the *NGDLC NPRM* proceeding[1] that ILECs are required to provide collocation for equipment providing packet switching functionality.

The comments overwhelmingly confirm that AT&T is entitled to the relief identified above. Part I of these reply comments demonstrates that nothing about the next-generation loop architecture now being installed by the ILECs changes either (1) the basic characteristics of an entire loop or (2) the CLECs' right to provide *any* telecommunications service by accessing a digital loop carrier ("DLC") equipped, fiber-fed loop as an unbundled element, or by accessing a DLC-equipped, fiber-fed loop for line sharing or line splitting purposes. In Section I.B., AT&T responds to specific ILEC arguments that misread and misinterpret the law in an attempt to limit the CLECs' right to access the ILECs' next-generation loops. First, AT&T shows that the ILECs' attempt to limit access to a loop only when the underlying transmission is used to provision voice service is incorrect as a matter of law. Second, AT&T demonstrates how some ILECs are intentionally seeking to perpetuate definitional errors in the ILECs' unbundling rules to further their goal of foreclosing access to NGDLC-equipped, fiber-fed loops. Third, AT&T

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[1] *See Deployment of Wireline Services Offering Advanced Telecommunications Capability*, CC Docket No. 98-147, *Second Further Notice of Proposed Rulemaking*; *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket No. 96-98, *Fifth Notice of Proposed Rulemaking*, 15 FCC Rcd 17806 (2000) ("*NGDLC NPRM*").

shows that the comments reinforce AT&T's argument that access to the entire loop is essential in order to encourage all carriers to invest in advanced service networks and also to support mass-market competition for the growing number of customers who want to use those services.

Section II demonstrates that the Commission should reject the ILECs' renewed attempts to undermine their statutory unbundling obligations. Specifically, the Commission should: (1) reject any notion that the level of broadband competition could justify the abandonment of its unbundling rules; (2) dismiss ILEC suggestions that the enforcement of these existing unbundling obligations will deter ILEC investment in next-generation loop architecture; and (3) recognize that failure to enforce the requirement that ILECs must unbundle the entire loop will significantly deter CLEC investment and further ILEC monopolies, making it impossible for consumers to reap the benefits of a competitive marketplace. Finally, Section III explains why the ILECs' current next-generation loop deployment plans, coupled with the CLECs' inability to access these facilities (and the customers connected to them), warrant expedited review by this Commission.

I. THE COMMENTS REINFORCE THE FACT THAT CLECS ARE ENTITLED TO ACCESS THE FULL FEATURES, FUNCTIONS, AND CAPABILITIES OF THE LOCAL LOOP, REGARDLESS OF THE ARCHITECTURE AN ILEC CHOOSES TO IMPLEMENT

The comments overwhelmingly confirm that CLECs must continue to have the ability to access the full features, functions, and capabilities of the ILECs' loops.[2] Except for the incumbent LECs, the commenters support AT&T's showing that an ILEC's choice to implement next-generation loop architecture does not change any of the fundamental legal and policy principles that underlie the Commission's rules requiring the unbundling of loops and other network elements, especially its rules on line sharing and line splitting. In contrast, the ILECs

[2] *See, e.g.*, AT&T at 7-29; Joint Comments of Rhythms, Covad, and WorldCom ("Rhythms/Covad/WorldCom") at 7-21; *see also* Sprint at 4-12.

misread the law and attempt to confuse the issues in an effort to block CLECs' ability to access the ILECs' next-generation loop plant.

A. All Members of the CLEC Community Agree That They Are Entitled to the Entire Loop.

The legal argument in support of the CLECs' position is straightforward and compelling: CLECs are entitled to unbundled access to the entire loop functionality between customers' premises and the ILEC serving office. There can be no doubt that ILECs are still monopolists with respect to their primary service offering -- local telephony -- and their loop remains the "quintessential bottleneck facility for competing telecommunications carriers."[3] Incumbent LECs are obligated to provide requesting carriers with nondiscriminatory access to unbundled loops "used in the provision of a telecommunications service," including all "features, functions, and capabilities that are provided by means of such facility or equipment," subject "only to considerations of technical feasibility."[4]

Despite the ILECs' attempts to confuse the issue, this is not a close question. Indeed, the Commission has already defined all of the fundamental principles that establish the appropriate treatment of next-generation loop architecture.[5] First, the Commission has determined that the essential function of the loop is to provide transmission functionality between a customer's

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[3] FCC Brief for Respondents at 22, WorldCom, Inc., et al. v. FCC (D.C. Cir. filed Nov. 2, 2000) (No. 00-1002) ("FCC Appellate Br."); *see also Association of Communications Enterprises v. FCC*, 235 F.3d 662, 663 (D.C. Cir. 2001) ("*Ascent v. FCC*").

[4] *See* 47 U.S.C. § 153(29); *see also* 47 C.F.R. § 51.319(a)(1); *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996; Interconnection Between Local Exchange Carriers and Commercial Mobile Radio Service Providers*, 11 FCC Rcd 15499 ¶ 379 (1996) ("*Local Competition Order*") (subsequent history omitted); *see also Deployment of Wireline Services Offering Advanced Telecommunications Capability*, CC Docket No. 98-147, First Report and Order and Further Notice of Proposed Rulemaking, 14 FCC Rcd 4761 at ¶ 53 (1999) ("*Advanced Services Order*") (subsequent history omitted). Verizon erroneously claims that it may not be technically feasible for CLECs and ILECs to share use of the fiber feeder between a remote terminal and a central office. Verizon at 10-11. SBC's willingness to provide a "Broadband Service Arrangement" over its Project Pronto architecture, however, illustrates that NGDLC architecture permits retail customers to share statistically multiplexed traffic over the same fiber without imposing insurmountable capacity restraints on the network.

[5] *See, e.g.*, AT&T at 7-14; Rhythms/Covad/WorldCom at 7-20; Sprint at 4-12.

premises and an ILEC's central office, not between a customer's premises and an intermediate point such as a remote terminal.[6] Second, the Commission has repeatedly recognized that the local loop, as all network elements, is defined by its functionality and is not limited to particular services or technologies.[7] Here, even Qwest appears to comprehend the importance of the local loop to the development of advanced telecommunications competition: "[i]t is also important to keep in mind that CLECs still need access to ILEC loops in order to provide DSL services. It would be a serious mistake, in today's marketplace to allow a situation to develop whereby CLECs were unable to make efficient and cost-effective use of ILEC loops."[8]

Nothing about the next-generation-loop architecture now being installed by the ILECs changes either the basic characteristics of an entire loop or a CLEC's rights to access a DLC-equipped, fiber-fed loop as an unbundled element, or to access a DLC-equipped, fiber-fed loop for line sharing or line splitting purposes. The NG-enhanced loop provides *exactly* what the traditional loop has always provided: transmission functionality for telecommunications signals between a customer's premises and the serving ILEC's central office. Indeed, the Commission's past rulemakings make it abundantly clear that the loop unbundling obligations extend to remote terminals, DLCs, and other intermediate electronics on fiber-fed loops.[9] Thus, the Commission here need only clarify that CLECs are entitled to access the "entire" loop, including all of the attached electronics used to support the provision of transmission functionality. AT&T's initial

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[6] *See* 47 C.F.R. § 51.319(a)(1) ("[t]he local loop network element is defined as a *transmission facility* between a distribution frame (or its equivalent) in an incumbent LEC central office and the loop demarcation point at an end-user customer premises") (emphasis added).

[7] *See Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, 15 FCC Rcd 3696 ¶ 167 (1999) ("*UNE Remand Order*") ("[o]ur intention is to ensure that the loop definition will *apply to new as well as current technologies*, and to ensure that competitors will continue to be able to access loops as an unbundled network element as long as access is required") (emphasis added); *Local Competition Order* ¶ 292 ("section 251(c)(3) requires incumbent LECs to provide requesting carriers with all of the functionalities of a particular element, so that requesting carriers can provide *any telecommunications services* that can be offered by means of the element") (emphasis added).

[8] Qwest at 3.

[9] *See UNE Remand Order* at ¶ 175; *Local Competition Order* ¶ 383; *Advanced Services Order* at ¶ 54.

comments here and its comments filed in response to the *NGDLC NPRM* demonstrate that such attached electronics necessarily include, but are not limited to, both remotely deployed DSLAMs and central office deployed OCDs, which provide complementary multiplexing/demultiplexing functions.[10] Nothing in the ILECs' comments compel -- or even permit -- a contrary finding.

Likewise, the implementation of next-generation loop architecture does not change any of the fundamental legal and policy principles that underlie the Commission's other rules relating to the provision of network elements, especially line sharing and line splitting. As AT&T and other commenters showed,[11] the Commission has already recognized that CLECs have the right to engage in line sharing (and line splitting) over "the entire loop, even where the incumbent has deployed fiber in the loop," to provide all telecommunications services.[12]

B. The Commission Should Reject the ILECs' Unfounded Attempts to Limit Unbundling Obligations for Next-Generation Equipped Loops.

1. The ILECs' Argument that Access to a Loop Only Is Only Required When the Underlying Transmission Is Used to Provision Voice Service Is Incorrect as a Matter of Law.

The comments of BellSouth, SBC, and Verizon seek to limit the ILECs' loop, line-sharing, and line splitting obligations over NG-equipped loops by intentionally misreading and misinterpreting this straightforward UNE loop analysis. For example, Verizon argues that it must provide competitors with access to a loop only when the underlying transmission is used to provision voice service, claiming that the Commission may not require ILECs to provide what it calls "broadband transport" for CLECs.[13] This claim is nonsense and directly contrary to the

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[10] *See* AT&T at 10-14; *see also* Rhythms/Covad/WorldCom at 17-20; *NGDLC NPRM*, AT&T at 61-64; AT&T Reply at 46-50.

[11] *See* AT&T at 9-10; Rhythms/Covad/WorldCom at 6-7; IP Communications at 6.

[12] *Deployment of Wireline Services Offering Advanced Telecommunications Capability; Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket Nos. 98-147, 96-98, ¶¶ 10, 18 (rel. Jan. 19, 2001) ("*Line Sharing Reconsideration Order*"). SBC's argument that it does not have an obligation to provide line sharing or line splitting over DLC-equipped, fiber-fed loops is thus clearly wrong. *See* SBC at 41.

[13] *See* Verizon at 3.

express terms of the Act. In effect, Verizon argues that it may eliminate the service and technology neutrality principles that define the ILECs' statutory unbundling obligations and balkanize the loop element by prohibiting access to the underlying transmission functionality that is used to transmit the advanced telecommunications services a competitor wishes to provide and a technically feasible technology it wants to utilize. In a related argument, SBC, Verizon, and BellSouth all incorrectly imply that any decision requiring them to continue to provide access to unbundled loops so that competitors can provide the telecommunications services they seek to offer (whether voice or DSL) should somehow be trumped by the Commission's desire to refrain from regulating advanced services.[14] Here too ILECs are wrong as a matter of law.

Neither the Act nor the Commission's prior rulings regarding the loop network element make any distinction between the transmission functionality used to provide DSL and voice services between the customer's premises and the central office. The ILECs' arguments conveniently sidestep the appropriate legal question here; *i.e.*, whether competitive LECs may have access to the local network elements that have the capability of supporting both voice and DSL services. But the answer set forth by Congress in the 1996 Act is clear. The DSL/voice service distinction the ILECs proffer is not permissible under the Act. Both are "telecommunications services" and thus both are expressly covered by the unbundling obligations of section 251 -- as the Commission has already held.[15]

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[14] *See* BellSouth at 3, 17-20; SBC at 6-11; Verizon at 2-3.

[15] *See, e.g., Advanced Services Order* ¶ 11 ("all incumbent LECs must provide requesting telecommunications carriers with unbundled loops capable of transporting high-speed digital signals, and must offer unbundled access to the equipment used in the provision of advanced services, subject to considerations of technical feasibility and the provisions of section 251(d)(2)"). The Commission recently reiterated this point, noting that "section 251(c)(3) permits access to those facilities not just for the provision of 'telephone exchange service' or 'exchange access,' but more broadly for the provision of a 'telecommunications service,' a category that . . . includes the xDSL-based services." FCC Appellate Br at 21.

2. The ILECs' Erroneously Claim That Their Deployment of Next Generation Equipment Does Not Mandate Adjustment of the Commission's "Packet Switching" and Loop Unbundling Rules.

The ILECs raise several other fatally flawed arguments in an attempt to avoid their clear loop unbundling, line sharing, and line splitting obligations when they deploy next-generation architecture. For instance, some ILECs claim that the Commission should find that equipment used to provide transmission functionality using a packet format should be considered "packet switching." SBC, in particular, attempts to characterize the NGDLC architecture as including "packet switching functionality that this Commission has determined is generally not subject to unbundling," except in a limited set of circumstances.[16] In this regard, SBC claims that all of the equipment used to enhance SBC's network between the customers' premises and the equivalent of a distribution frame at its central office -- "the NGDLC and its line card, the inseparable fiber connection to the central office, and the OCD" -- together constitute a separate "packet network" that provides packet switching functionality.[17] Thus, under SBC's analysis, the voice transmission path from the remote terminal to the network side of the COT would remain part of the loop while the "data transmission path" from the remote terminal to the network side of the OCD -- which provides the same transmission functionality for DSL traffic -- would be eliminated from the definition of the loop. SBC's claim is both legally and factually wrong.

As explained in AT&T's comments,[18] the NGDLC equipment used to deploy SBC's Project Pronto architecture provides *only* the functions that the traditional loop has always provided: transmission functionality between a customer premises and the serving ILEC central office. Thus, as deployed in a next-generation architecture, there can be no dispute that DSLAMs provide only *transmission*, not switching, functionality.

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[16] SBC at 24; *see also* Verizon at 2 (describing DLC-equipped fiber-fed loops as providing "end-to-end packet transport").

[17] SBC at 28, 30.

[18] AT&T at 10-14; *see also NGDLC NPRM*, AT&T at 61-64; AT&T Reply at 44-53.

SBC claims that its NGDLC architecture gives the CLEC access to functions that "packetize the CLEC's data traffic, combine it in a bit stream with that of other carriers, and then separate it back out at the control office."[19] SBC states that these functions constitute "switching," but it is simply wrong. The remotely deployed DSLAM does create packets and multiplex traffic, but these are encoding, multiplexing and demultiplexing functions used in the transmission of telecommunications signals. Accordingly, these are classic transmission functionalities. In fact, the NGDLC equipment at the remote terminal, particularly the DSLAM, simply does not, and cannot perform switching functions -- that is, flexibly interconnecting facilities to create an end-to-end transmission path. The switching functionality is performed in the switching fabric of the service provider; it is not in the loop connecting a customer to the network.

SBC also claims that the OCD provides packet switching functionality, because it provides "aggregation and routing of digitized data."[20] SBC is wrong here too. As AT&T explained, the OCD is a necessary component of the loop because, when an ILEC uses a remotely deployed DSLAM, the OCD is required to enable CLECs to access their individual customers' signals.[21] In a next-generation loop configuration, ILEC DSLAMs in a remote terminal packetize and transmit an individual customer's communication in a commingled manner with other customer communications over a common feeder facility to the central office. Because the packets enter the central office in a commingled form, there must be a means to extract and deliver the packets to the appropriate destination carrier (*i.e.*, the customer' selected advanced service provider). For high-frequency (DSL) signals, this function is performed by the OCD located in the incumbent LEC's central office. In this capacity, the OCD provides only a demultiplexing/multiplexing and cross-connection function that simply puts all the packets

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[19] SBC at 29.

[20] SBC at 31.

[21] AT&T at 13-14; *see also NGDLC NPRM*, AT&T at 61-62 & Attachment 3, Declaration of Joseph P. Riolo ¶¶ 57-62 ("Riolo Decl."); AT&T Reply at 48-50.

destined for the same carrier on the same facility.[22] No carrier -- not even the ILEC itself -- can identify its own traffic until after the commingled transmissions of multiple customers and multiple carriers have been demultiplexed. Likewise, there is no routing (*i.e.*, switching) of data packets to individual carriers' data networks after this demultiplexing function has been performed; rather there is a direct interconnection from the OCD to the CLEC's (or the ILEC data affiliate's) collocation. Thus, the end of the loop for data signals must be established at the network side of the OCD (or similar device), *i.e.*, the first place a CLEC can access its individual customers' signals.

The inherent factual errors of SBC's "packet switching functionality" argument are not only exposed by the comments of AT&T (and Rhythms/Covad/WorldCom),[23] they are also squarely contradicted by the comments of another ILEC, BellSouth. Specifically, BellSouth shows that an NG-enhanced network provides essential transmission -- not packet switching -- functionality, which it associates with the loop.[24] Further, BellSouth states that equipment housed in remote terminals simply provides multiplexing and demultiplexing functionality and does not provide switching functionality.[25] And critically, Bell South concedes that that the "*transmission path on the fiber feeder is properly within the definition of the loop*"[26] and that "*the RT is merely a point on the loop* as the Commission has defined the loop."[27] Thus,

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[22] For low frequency (voice) signals, a Central Office Terminal ("COT") provides a parallel demultiplexing/multiplexing and cross-connection function, so that the voice traffic can be directed to circuit switches that, in turn, route the communications to diverse end points. No ILEC asserts this a "circuit switching" function, and indeed it is not.

[23] *See* Rhythms/Covad/WorldCom at 17-20.

[24] *See* BellSouth at 10-12.

[25] *See id.* at 12; *see also* Verizon at 12 (noting that remote terminal equipment does not provide switching functionality).

[26] BellSouth at 11 (emphasis added).

[27] *Id.* at 12 (emphasis added). Verizon, however, argues that the joint use of fiber between the central office and the remote terminal cannot fall within the definition of the local loop UNE because "the loop is defined only as a transmission path between the central office and the end user's customer, not between central office and remote terminal." Verizon at 11. Verizon's discussion of limitations of subloop unbundling is not -- and cannot -- be dispositive of the issue here, *i.e.*, CLEC's right to access an *entire* loop. As the Commission held, the ability to request subloop unbundling options does not limit a CLEC's

BellSouth's comments fully support AT&T's position that the feeder portion of the loop, along with the attached electronics associated with next-generation loop upgrades, must be considered part of the loop, as opposed to packet switching.

Inexplicably, however, BellSouth ultimately argues that "packet switching" elements (such as DSLAMs) and other equipment used to provide advanced services should not be unbundled, except under limited circumstances set forth in the Commission's *UNE Remand Order*.[28] If anything, BellSouth's illogical conclusion (*i.e.*, that packet switching unbundling limitations may apply to equipment that embodies no packet switching functionality at all) illustrates the fact that ILECs are -- and will continue to -- exploit the slightest ambiguity or inconsistency in the Commission's existing unbundling rules to deny CLECs access to essential inputs associated with the transmission functionality of next-generation loop technology. In BellSouth's case, it effectively admits that the Commission's current definition of the loop and packet switching elements miscategorize the functionality of the DSLAM, at least with regard to calling the DSLAM a "packet switch" when it is deployed at the remote terminal.[29] But after making this admission, BellSouth urges the Commission to perpetuate the definitional errors in the Commission's existing loop definition and packet switching rules in order to impair -- indeed virtually eliminate -- the CLECs' ability to compete when the ILECs implement next-generation DLC loop architecture.[30] The Commission should refuse to do so. Instead, the Commission must make clear that the existing unbundling rules require the ILECs to provide requesting carriers with the features and functionalities associated with DLC-equipped, fiber-fed loops, including line sharing and line splitting capabilities.

The Commission can effectuate the necessary clarification by removing all reference to DSLAMs from its packet switching and loop definitions, to assure that CLECs have access to

right to access an entire unbundled loop, including DLC-equipped, fiber-fed loops. *See, e.g.*, *Line Sharing Reconsideration Order* ¶ 10.

[28] *See* BellSouth at 15-16.

[29] *See id.* at 14.

[30] *See id.* at 15.

line sharing and line splitting transmission functionalities associated with the entire loop.[31] If the references to the DSLAM are removed from the definitions of both the packet switching and loop elements and CLECs are assured of getting access to entire loop, then there would no longer be any need to require that competitors meet a list of "conditions" before gaining access to unbundled DSLAM functionality at the remote terminal.[32] Accordingly, the Commission should simply eliminate these conditions.

3. The ILECs' Comments Do Not Refute AT&T's Showing that Access to the Entire Loop is Essential to Support Mass-Market Competition.

Finally, some ILECs incorrectly claim that the Commission must make a separate impairment determination before unbundling any "piece" of the entire loop. This argument is wrong for two separate reasons. First, CLECs that seek access to the entire loop are not seeking here access to a "piece" of this element. Second, the analysis that supported the Commission's finding of impairment with respect to the entire loop is no less valid when CLECs seek technically feasible access to a portion of the loop. Indeed, the Commission has already adopted rules requiring subloop unbundling.

As described above, the Commission has already determined that the loop is the quintessential bottleneck element. It has also determined that CLECs are entitled to access line sharing and line splitting over "entire" loops. Thus, the Commission need not make a separate impairment determination simply because a loop that has been upgraded with next generation equipment. The UNE at issue is the loop, which has already satisfied the section 251(d)(2) standard. Moreover, the mere fact that subloop unbundling -- which is an *option* available to CLECs -- may be feasible in some limited circumstances has no impact on the Commission's

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[31] Of course, consistent with its expectation in the *UNE Remand Order*, CLECs must be permitted to collocate equipment that actually delivers packet switching functionality, *i.e.*, the functionality that routes individual data units based on address or other routing information contained in the packets (at ¶ 302). *See, e.g.*, *NGDLC NPRM*, AT&T at 20-32; AT&T Reply at 30-34.

[32] *See* 47 C.F.R. § 51.319(c)(5).

holding that ILECs must provide line sharing and line splitting functionality over the "entire loop, even where the incumbent has deployed fiber in the loop."[33]

In all events, the comments reinforce AT&T's showing that access to the entire loop, including a NG DLC-equipped, fiber-fed loop, is essential to support mass-market competition.[34] Despite SBC's unsupported claims that dark fiber, and "all-copper" loops are widely available,[35] the comments overwhelming illustrate that competitive carriers will be impaired without access to NGDLC-equipped, fiber fed loops, because subloop unbundling and all-copper loop alternatives are not a mass-market alternative to the ILECs' loop unbundling obligation.[36] Specifically, the comments confirm what the Commission has already recognized, namely, that subloops, dark fiber, and all-copper subloops are insufficient to enable CLECs to serve customers broadly as ILECs rapidly deploy NGDLC-equipped, fiber-fed loops in their networks.[37] In particular, the comments demonstrate that:

- There is unlikely to be sufficient space and power available in the typical remote terminal to accommodate CLEC equipment that would be needed to light the dark

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[33] *See Line Sharing Reconsideration Order* ¶¶ 10, 18. In a separate argument, Verizon indicates that the Commission should not require ILECs to construct DLC-equipped, fiber-fed loops at the request of the CLECs. Verizon at 4-5. AT&T does not expect that Verizon should be required to upgrade its facilities for CLECs by adding DLC-equipped, fiber-fed loops where none exist in Verizon's network. AT&T does expect, however, that once an ILEC does deploy a loop with DSLAM functionality that exists between the customers' premises and the central office, the ILEC must provide unbundled and nondiscriminatory access to that ILEC-upgraded loop, including all attached electronics. This requirement must, of course, include any necessary modifications that must be made to provide CLECs with such access. *See Local Competition Order* ¶ 198 (section 251(c)(3) requires ILECs to provide modifications to their facilities to the extent necessary to accommodate access to network elements such as the loop); *see also Line Sharing Reconsideration Order* ¶ 20. In addition, the Commission must require that CLECs are able to access all technically feasible capabilities of the fiber feeder, subject only to network management considerations. Finally, the Commission must ensure that ILECs' capacity/network planning upgrades are made in a nondiscriminatory manner.

[34] *See* AT&T at 14-22; Rhythms/Covad/WorldCom at 23.

[35] *See* SBC at 20-25.

[36] *See* AT&T 14-22; Rhythms/Covad/WorldCom at 27-32; Sprint at 5-12; BellSouth at 8-10.

[37] *See Line Sharing Reconsideration Order* ¶ 13 (regarding collocation-based alternatives); UNE Remand Order ¶ 313(regarding all-copper subloops).

fiber.[38] Even where dark fiber is theoretically available, it is not an economically viable solution;[39]

- Remote terminal collocation space will not be generally physically available because cabinets are built and sized for the equipment they contain, with little or no space for expansion.[40] The availability of remote terminal collocation is further limited by the practice of some ILECs to hard-wire subloops to the remote terminal, thereby precluding CLECs from any reasonable access to subloops;[41] and

- "All-copper" loops are not available on a ubiquitous basis;[42] provide an inferior level of service where available,[43] and may not work for every DSL application, especially ADSL, because of interference concerns.[44]

Thus, while remote terminal collocation and "all-copper" loop alternatives must be offered to requesting carriers on an optional basis, these alternatives do not -- and cannot -- enable competitive carriers to ubiquitously serve customers affected by the ILECs' evolving network deployment of next generation loop architecture.

Moreover, although most incumbent LECs assert that CLECs' access options should be limited to remote-terminal-based alternatives,[45] BellSouth's comments confirm the CLECs' showing that there is no viable alternative to the unbundled loop, largely conceding that remote terminal and all-copper loop alternatives are unavailable to CLECs as mass-market solutions.[46] In particular, BellSouth acknowledges that: (1) it has limited collocation space at its remote terminals to support either dark fiber or subloop access; (2) it does not have sufficient dark fiber

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38 *See* AT&T 17-18; Rhythms/Covad/WorldCom at 27-28; Sprint at 10; IP Communications at 4.

39 *See* Rhythms/Covad/WorldCom at 27-28; IP Communications at 4.

40 *See* AT&T at 17; Sprint at 5.

41 *See* Rhythms/Covad/WorldCom at 30-31

42 *See* Sprint at 10; IP Communications at 5.

43 *See* AT&T at 20-21; Sprint at 11.

44 *See* Rhythms/Covad/WorldCom at 30-31.

45 *See, e.g.,* BellSouth at 6; *but see* Qwest at 3

46 *See* BellSouth at 8-10.

available in the feeder portion of the loop; (3) its electrical supply is not adequate to house and power equipment to light dark fiber; and (4) it has very few all-copper-loops available.[47]

In addition to these physical and technical limitations that preclude collocation and all-copper loop alternatives at the remote terminal, such options are also economically unsustainable. The record here and in related proceedings demonstrates that remote terminal collocation, where available, is prohibitively expensive.[48] Sprint's comments, in particular, dramatically illustrate this point. For instance, Sprint estimates that it would cost CLECs approximately $110,000 to construct an adjacent collocation at a single remote terminal, and that it would take about 6-8 months to complete such a collocation.[49] AT&T and Rhythms/Covad/WorldCom provide additional cost evidence demonstrating that physical collocation at a remote terminal is not an economically viable competitive option.[50]

BellSouth, SBC, and Verizon do not provide any record evidence to dispute the cost evidence set forth for the CLECs. Nevertheless, they claim, without support, that a CLEC does not need transmission from the ILEC to reach a remote terminal from the central office, or from any other terminal, because "it can accomplish that with its own facilities or those it obtains from one of the many other providers of fiber services."[51] Thus, BellSouth, SBC, and Verizon argue that CLECs are not impaired because they can essentially recreate that portion of the loop from the remote terminal to the central office. The Commission has repeatedly rejected this

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[47] *See id.* In contrast, although Verizon claims that dark fiber or "all-copper" loops are viable alternatives, it has not determined the extent to which such alternatives are actually available in its network. *See* Verizon at 13-14. Verizon does, however, admit significant limitations associated with virtual collocation alternatives, which are equally applicable to all potential collocation alternatives. Verizon at 7-8.

[48] *See* AT&T at 18-20; Rhythms/Covad/WorldCom at 31-32; IP Communications at 7-8; *see also NGDLC NPRM*, AT&T at 54-55; Covad at 4; Catena at 7; AT&T Reply at 61-63.

[49] *See* Sprint at 6.

[50] *See* AT&T at 19-20; Rhythms/Covad/WorldCom at 31-32.

[51] Verizon at 13; *see also* BellSouth at 19; SBC at 37.

argument,[52] recognizing that duplicating loop "facilities would be prohibitively expensive, even for the largest competitor, and in most areas there is no readily available technological substitute for bridging the last mile between end users and national telecommunications networks."[53] CLECs cannot provide service *at all* if they cannot effectively access their customers' premises and connect them to their networks. And a CLEC's inability to offer a comparable bundle of services to that of the ILECs will necessary discourage CLEC investment in both data and voice services.[54]

The Commission has expressly found that "[t]he inability of competing carriers to provide xDSL-based services over the same loop facilities that the incumbents use to provide local exchange service makes the provision of competitive xDSL-based services to customers that want a single line for both voice and data applications ... not just marginally more expensive, but so *prohibitively expensive* that competitive LECs will not be able to provide such services on a sustained economic basis."[55] The inability to offer a competitive voice and data

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[52] Some ILECs also suggest that access to unbundled NG-loops is unnecessary because the ILECs are either providing (SBC) or considering (Verizon) a "broadband service" offering. As both the AT&T and the Rhythms/Covad/WorldCom comments show, ILECs' offers of a "broadband service" is not a UNE, but a resale offering that is insufficient to meet ILECs' obligations under section 251(c)(3). AT&T at 21-22; Rhythms/Covad/WorldCom at 21-22. Indeed, as AT&T explained, the broadband offering represents a tacit admission that competitive LECs needs access to the functionalities of the entire loop in the NGDLC architecture, but does not afford competitors the full legal protections afforded by section 251(c)(3). AT&T at 21-22. Moreover, SBC's and Verizon's threats to pull (or withhold) their "broadband service" offering vividly illustrate AT&T's concern regarding the impermanence and inadequacy of such a substitute. *See* Verizon at 3 (indicating that it is "evaluating a potential wholesale service offering that CLECs could buy" implying that it would be less inclined to make this offering available if "the Commission required that it be unbundled and rebundled and offered at UNE prices"); *see also* SBC at 4, 36.

[53] FCC Appellate Br. at 22.

[54] The ILEC strategy here is essentially to drain the CLEC capital resources by forcing the CLECs into investing in loops that are prohibitively expensive, rather than permitting the CLEC to obtain the unbundled loop and invest in a service differentiated advanced service network.

[55] *Deployment of Wireline Services Offering Advanced Telecommunications Capability and Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, 14 FCC Rcd 20912 ¶ 39 (1999) ("*Line Sharing Order*") (emphasis added). Despite SBC's contention otherwise (at 37-38), the Commission has continuously cited the usefulness of the UNE-P in fostering competitive alternatives. *See, e.g.*, *UNE Remand Order* ¶ 5 ("[w]e continue to believe that the ability of requesting carriers to use unbundled network elements, including various combinations of unbundled network

bundle will necessarily lead to CLEC withdrawal from both markets. The fact is that while ILECs continue to sign up growing numbers of DSL customers, the number of potential customers that can choose competitive carriers to provide both voice and DSL service is decreasing.[56] The effect is even less competition in the voice market (where the ILECs already enjoy monopoly status) and elimination of competition in the high-speed data market at the starting gate, contrary to the goals of Section 706 of the Act.[57] Finally, if ILECs are not required to provide CLECs with access to UNE loops, regardless of the loop technology they choose to employ, CLECs' incentives to invest in advanced service networks are largely eliminated for the simple reason that they will be unable to connect retail customers to their data networks.[58]

II. ILECS' POLICY ARGUMENTS DO NOT -- AND CANNOT -- JUSTIFY THE ABANDONMENT OF CORE REGULATION AIMED AT LOCAL EXCHANGE MONOPOLIES

A. ILECs' Notions of "Regulatory Parity" Cannot Justify the Abandonment of Core Regulation Aimed at Local Exchange Monopolies.

The ILECs argue that the Commission cannot require the unbundling of network elements used to provide advanced services because it "would read the necessary and impairment standard completely out of the 1996 Act."[59] The ILECs also assert that they should

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elements, is integral to achieving Congress' objective of promoting rapid competition to all consumers in the local telecommunications market"). Indeed, the *Line Sharing Reconsideration Order's* recognition of the ILEC obligation to "permit competing carriers to engage in line splitting using the UNE-platform" is yet another case where the Commission has recognized the UNE-P as a viable strategy for competition in both voice and data services when the ILECs comply with unbundling obligations. *Line Sharing Reconsideration Order* ¶¶ 18-19.

[56] *See infra* Section II; *see also* Rhythms/Covad/WorldCom at 5 ("[r]egardless of the[] existing legal obligations, the ILECs continue to refuse to allow adequate and appropriate access to DLC-served residential and small business customers . . . . Without action by the Commission to ensure its rules are implemented and followed, customers will have no choice in service providers for DSL").

[57] Pub. Law No. 104-104, Title VII, § 706, reproduced in the notes under 47 U.S.C. § 157; *see also* Rhythms/Covad/WorldCom at 10-11 ("[a]s the Commission concluded in the *First Advanced Services Order*, 'if we are to promote the deployment of advanced telecommunications capability to all Americans, competitive LECs must be able to obtain access to incumbent LEC xDSL-capable loops on an unbundled and nondiscriminatory basis'" (*citing Advanced Services Order* at ¶ 52).

[58] *See* AT&T at 13-14.

[59] BellSouth at 19; *see also id.* at 16-20; Verizon at 2-4.

be the ones to define the terms and condition of access to their networks "as it relates to advanced services,"[60] and that they should not be hampered by the interconnection and statutory framework imposed by Congress. To support these arguments, the ILECs contend that the presence of (actual or potential) competition for advanced services between ILECs, cable operators, wireless providers, and satellite companies "means that any requests for additional unbundled network elements do not meet the 'impair' standard of section 251(d)(2)."[61] SBC takes this argument a step further, calling on the Commission to reject the proposals in the FNPRM and "immediately take steps to establish a common deregulatory framework applicable to all broadband services,"[62] because, in part, "cable modem providers, not incumbent LECs, are the dominant players in the broadband market."[63] These arguments, however, are fundamentally flawed and should be rejected.

First and foremost, CLECs are *not* here seeking regulation of ILEC advanced services. Rather, they are seeking unbundled access to a single unbundled network element -- the local loop -- so they can provide their own advanced services. As the Commission has recognized, without access to all of the functionality of their customers' loops, CLECs are seriously limited in their ability to compete with the ILECs' advanced services offerings. That is all that is at issue in this context.

And in all events, the mere existence of competition in emerging broadband services is not, in and of itself, a sufficient condition to deregulate the availability of UNEs that are critical to the provision of advanced services generally. The public interest needs for, and issues surrounding, regulation of ILEC UNEs necessary for any carrier to provide advanced services

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[60] BellSouth at 17; Verizon at 2.

[61] Verizon at 2; *see also* BellSouth at 18 ("this competition alone would seem to preclude a finding of impairment"); Qwest at 2-3 ("ILEC loops, over which Digital Subscriber Line ('DSL') service is provided, are not even the predominant delivery vehicle for broadband service"); SBC at 34; USTA at 2-3.

[62] SBC at 11; *see also id.* at 2-4, 6-12, 34-35.

[63] *Id.* at 8.

are inextricably linked to the ILECs' monopolies over the voice local telephone services that share the same facilities. The ILECs' "regulatory parity" argument impermissibly ignores, or simply assumes away, the unique factors that are associated with their ownership of the local loop and that provide the foundation for the interconnection and unbundling statutory framework adopted by Congress.

The ILECs remain monopolists with respect to their primary service offering -- local voice telephony -- and the local loop remains, in the Commission's own words, the "quintessential bottleneck facility for competing telecommunications carriers."[64] In sharp contrast, cable operators do not control all of the essential inputs necessary to monopolize their primary service offering -- video services -- and, they indeed face increasing competition in the multichannel video programming distribution ("MVPD") market. Two recent decisions by the D.C. Circuit and the Commission's own statistics illustrate the key distinctions between these primary markets.[65]

In *Ascent v. FCC*, the D.C. Circuit noted that "[b]ecause the local loop is a natural monopoly, control over it allowed the Bell System, and then the RBOCs, to control telecommunications access to most homes and businesses."[66] The Commission's own statistics demonstrate that five years after the unbundling, interconnection, and other requirements applicable to ILECs were imposed by Congress (at which time, ILECs controlled 99% of the local telephone market), ILECs still control approximately 94% of the nation's access lines, and almost 97% of all residential and small business lines.[67] In contrast, in *TWE v. FCC*, the D.C.

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[64] FCC Appellate Br. at 22.

[65] *See Association of Communications Enterprises v. FCC*, 235 F.3d 662 (D.C. Cir. 2001) ("*Ascent v. FCC*"); *Time Warner Entertainment Co., L.P. v. FCC*, No. 94-1035, slip op. (D.C. Cir. March 2, 2001) (No. 94-1035) ("*TWE v. FCC*").

[66] *Ascent v. FCC*, 235 F.3d 662, 664-665 ("[t]he Act's strictest obligations are levied on 'incumbent local exchange carriers' (ILECs), which are those local exchange carriers (LECs) that were providing a given area with monopoly or near-monopoly telephone exchange service").

[67] *See Trends in Telephone Service*, Industry Analysis Division, Common Carrier Bureau, Federal Communications Commission, at 9-5.

Circuit noted that direct broadcast satellite ("DBS") not only accounts for "15.4% of MVPD households," but also that the annual increase in DBS' total subscribership "is almost three times that of cable (nearly three million additional subscribers over the period June 1999 to June 2000, as against one million for cable)."[68]

More importantly, and central to invalidity of the ILECs' regulatory parity argument, is the fact that the Commission has squarely found that absent existing common carrier regulations, ILECs could "leverage their control of their bottleneck assets to perpetuate their monopolistic dominance of existing and emerging telecommunications markets."[69] Therefore, the Commission has consistently found that, absent unbundling of the loop network element, ILECs would retain the ability to use their bottleneck control over the facilities used to provide voice and DSL services to impede competition in both the voice and data market segments.[70] The ILECs' monopoly bottlenecks give them strong and unique incentives and opportunities to impair competition for voice and high-speed services. Therefore, ILEC arguments calling for regulatory parity in this context are simply inapposite. This proceeding is about enforcing existing unbundling obligations for the purpose of promoting competition and enhancing consumer welfare. It is not about stepping backward to enable ILECs to further entrench their monopolies in existing services and to leverage their unique position to create new monopolies in new services.

B. ILECs' Investment Will Not Be Impaired By the Commission's Enforcement of Their Existing Statutory Unbundling Requirements.

Some ILECs incorrectly claim that any decision by the Commission requiring them to provide CLECs with access to next-generation loop equipment as part of the unbundled loop will

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68 *TWE v. FCC*, slip op. at 13.

69 FCC Appellate Br. at 22.

70 AT&T at 2-3.

"jeopardize[] future investment and innovation in advanced services equipment."[71] These claims reflect nothing more than a back-door attempt to evade the basic statutory obligations designed by Congress to promote competition in the provision of local telecommunications services.[72] These arguments should be flatly rejected as thinly-veiled ILEC attempts both to retain their voice monopolies and to extend their monopolies to advanced services.

As an initial matter, these arguments attempt to lessen the overall importance of the next-generation loop architecture in the ILECs' overall service plans. But the ILECs have made it clear in real-world contexts that they intend to meet ever-increasing consumer demand for voice and high-speed data services over a single line.[73] The deployment of next-generation loop architecture enhances the ILECs' ability (and the ability of their affiliates) to meet growing consumer demand by introducing more services to more customers.[74] Additionally, ILECs have announced that they have every incentive to increase efficiencies in their network architecture as

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[71] BellSouth at 3; *see also* Verizon at 3-5 ("[the] Commission should not add any such requirements because they would only create additional disincentives for ILECs to deploy broadband capabilities"); SBC at 3, 26, 35 ("[m]aking Pronto subject to the full panoply of UNE obligations would undermine the business case for that investment and would lead SBC to scale back, if not cancel, the installation of DSL-capable Pronto facilities"), USTA at 3 (ILECs are "unlikely to invest financial resources to deploy new and innovative technologies and services in underserved markets given the ongoing requirement to provision line sharing over such facilities").

[72] If nothing else, claims by the ILECs that they can afford to forego investments that would allow them to offer a panoply of new services, yet still retain their existing consumer base demonstrates just how little competition there is in the local exchange market.

[73] *See, e.g.*, Ivan Seidenberg, Chairman and CEO, Verizon, Presentation at Credit Suisse First Boston Global Telecommunications CEO Conference, at slide 10 (Mar. 5, 2001) ("Seidenberg Presentation") (demonstrating Verizon's "consumer growth strategy" to "increase wallet share" by offering a single customer local telephony, DSL, long-distance, and wireless services); Dick Kelsey, *Qwest 3Q Profit Up 18 Percent*, Newsbytes (Oct. 24, 2000) (discussing how Qwest Chairman and CEO, Joseph Nacchio, stated "in a recent conference call with analysts that the company will push bundled services to business and resident customers. 'We think bundles do play,' he said. 'We think people who are moving away from bundled services, frankly, don't get it'"); *see also Line Sharing Order* ¶ 39 (stating that "typically small businesses and mass market residential consumers" tend to "want a single line for both voice and data applications").

[74] *See* Qwest at 2 ("fiber loop technology offers numerous public benefits, most significantly by dramatically increasing the capacity of the loops and by making greater service options available to consumers"); *see also* Rhythms/Covad/WorldCom at 2-3 ("[i]t is without question that DLC will become increasingly important to providing advanced services to consumers").

the "entire network is undergoing a transformation from a predominately voice network, to a network that is inherently based on data."[75] For this reason, ILECs acknowledge that they "aren't just planning to transform [their] network[s], [they're] already well down that path."[76] All of these facts fly directly in the face of ILEC claims here that complying with the Act's mandates will stall investment in advanced services equipment.

Critically, there is also a fundamental inconsistency between the ILECs' dire predictions and their recent representations to the financial community. According to SBC's statements to investors, "[d]ata and broadband services comprise SBC's most powerful growth driver."[77] In the next breath, however, SBC argues that if the Commission follows the law and its own precedent here it will cause SBC to possibly "cancel the installation of DSL-capable Pronto facilities."[78] It defies all business logic for SBC to put an end to further enhancements in the network that will support its "most powerful growth driver." SBC's recent statement is likewise directly contrary to the advice it provided to the investment community that "[t]he network efficiency improvements alone pay for this [Project Pronto] initiative, leaving SBC with a data network that will be second to none."[79]

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[75] Duane Ackerman, *Talk Notes*, Salomon Smith Barney Conference, at 10 (Jan. 9, 2001) ("Ackerman Talk Notes").

[76] *Id.*; *see also* Rhythms/Covad/WorldCom at 5 ("[s]ince the FCC announced the obligation to provide unbundled access to subloops to serve DLC-supported customers . . . SBC has grown Project Pronto from a press release into a reality . . . and Qwest quietly installs fiber loops in large metropolitan communities").

[77] SBC Investor Briefing, *SBC Outlines Action Plans for 2001*, at 2 (Dec. 19, 2000).

[78] SBC at 26. SBC's claim regarding its recent holdback in deploying next-generation architecture in Illinois is simply grandstanding and gamesmanship. To be sure, according to SBC, it "continues to make good progress with Project Pronto, ... [which] pushes fiber deeper into neighborhoods and to the doorsteps of businesses so that more customers can benefit from high-speed Internet access and other applications." SBC Investor Briefing, *SBC Updates Progress in Major Growth Drivers, Reaffirms Target of 11-14 Percent Earnings Per Share Growth in 2001*, at 2 (Mar. 1, 2001) ("[a]t the end of February, 21 million of SBC's customer locations were DSL-capable, compared with 12.9 million at the end of the first quarter of 2000").

[79] SBC Investor Briefing, *SBC Announces Sweeping Broadband Initiative*, at 2 (October 18, 1999).