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

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

REPLY COMMENTS OF AT&T CORP.

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Pursuant to the Commission's Public Notice, DA 00-2036, released September 6, 2000, AT&T Corp. ("AT&T") submits these reply comments in response to the Commission's Second 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

The broad range of responses to the Commission's Notices confirms both the critical importance of this proceeding and the path the Commission should take in resolving it. The issues raised in this rulemaking are of central importance to the development of competition in telecommunications markets, for both traditional and advanced services. With the exception of some of the incumbent monopolists, whose objective is to prevent or impede such competition, all commenters agree on the need for the Commission to adopt national rules to implement the collocation, interconnection, and network element requirements of the Act.

Part I of these Reply Comments addresses the need for national rules that allow competitive LECs to collocate equipment that performs transmission, switching, and surveillance

functions. As the opening comments demonstrate, the D.C. Circuit's decision did not foreclose such rules; to the contrary, it remanded the proceeding precisely so that the Commission could conduct this very inquiry. The D.C. Circuit invalidated the Commission's prior interpretation of "necessary" to mean "used and useful" because it concluded that the prior interpretation lacked any limiting principle and would permit the collocation even of non-telecommunications functions like payroll or data collection. The Court did not, by contrast, question the Commission's authority to order collocation of any specific telecommunications functionalities, so long as the Commission gave the statute a reasonable interpretation and provided a "better explanation" for its decision.

The comments in this proceeding provide abundant legal and factual bases for such a decision. In particular, the comments support the three important principles that AT&T identified in its opening comments and that should be used to define the scope of competitive LECs' rights to collocate equipment. First, contrary to the incumbent LECs' pervasive and mistaken assumption, collocation duties extend beyond the establishment of mere physical "connections" to the incumbent LECs' networks, because the Commission has expressly defined "interconnection" and "access" more broadly to include interconnection "equal in quality" to that which the incumbent provides to itself, and access sufficient to "use" all of the "features, functions, and capabilities" of a network element. Second, the statutory term "necessary" must include, at a minimum, situations in which, absent the ability to collocate particular equipment, (1) competitive LECs would be precluded from providing at least some services to at least some customers through the use of unbundled network elements or interconnection, or (2) the competitive LECs could not offer service of the same quality as the incumbent through the use of unbundled network elements or interconnection. Third, because the Act requires that collocation

be made available on terms and conditions that are "just, reasonable, and nondiscriminatory," where equipment has functionalities and capabilities that are necessary for interconnection or access to unbundled network elements, incumbents may not deny collocation of additional functionalities in multifunctional equipment that does not consume any appreciable additional space.

These principles strongly support rules specifying that incumbents must permit the collocation of equipment that performs transmission, switching, and surveillance functionalities. For example, with respect to transmission functionalities, collocation is plainly "necessary" to competitive entry, because the only alternative would be to engage in a prohibitively expensive deployment of interoffice transport facilities. Collocation of packet switching is likewise necessary because packet switches perform a number of critical transmission functions, and also because packet switching functions are routinely integrated into a single piece of equipment that performs transmission functions. Indeed, if the Commission were to conclude otherwise, it would have to reconsider its decision not to order the unbundling of packet switches under Section 251(d)(2) of the Act, because that decision was premised on the finding that competitive LECs would be able to collocate packet switches under Section 251(c)(6). The Commission should also require collocation of circuit switch functionality, which can be "necessary" to a carrier's ability to serve more rural and heavily residential offices and to compete in other circumstances as well. And, as the comments confirm, requirements that CLEC-to-CLEC cross connects be permitted is similarly both consistent with the terms of the Act and would advance its procompetitive purposes.

The comments also overwhelmingly confirm that competitive LECs must continue to have the ability to access the full features, functions, and capabilities of incumbent

LECs' loops. The deployment of "next-generation" loop technologies and architectures does not alter the fundamental legal and policy principles that have guided the Commission's definition of the local loop network element. Nor does the new architecture diminish (indeed, it heightens) the competitive LECs' need for access to the entire loop. These issues are addressed in Parts II, III, and IV.

The record leaves no doubt that the loop remains the quintessential bottleneck facility. The essential function of the loop is to provide transmission functionality between a customer's premises and an incumbent LEC's central office, not between the customer's premise and an intermediate point such as a remote terminal. As many comments explain, the availability of the unbundled loop functionality is not limited to use for particular services or to the capabilities of specific technologies. Thus, the record confirms the continuing need for an unbundled loop element that consists of all features, functions, and capabilities that provide transmission functionality between a customer's premises and the central office, regardless of the technologies used to provide, or the services offered over, such facilities.

The addition of next-generation electronics in the incumbent LECs loop plant enables greater bandwidth to be transmitted between the customer's premises and the central office, but it does *not* change the loop's basic function of supplying transmission between the customer premises and the incumbent LEC's central office. And the central office remains the place where competitive LECs can practically and economically obtain access to their customers' telecommunications transmissions so they are able to provide the telecommunications services of their choosing. Unless competitive LECs can obtain access to their customers' bits at the central office, competition – particularly for mass-market services -- will be seriously jeopardized.

The comments clearly support AT&T's showing that no type of remote collocation -- whether physical, adjacent, or virtual -- can support broad-based competition or provide a viable basis for an exception to the incumbent LECs' existing loop unbundling obligations. Physical collocation at the remote terminal is precluded by lack of space and economic unsustainablity. "Adjacent" collocation is impractical and even more costly than physical collocation. As for "virtual" collocation, although the ILECs disagree among themselves, the comments from competitive LECs and from manufacturers demonstrate forcefully why this is no substitute for access at the central office.

The comments also prove that neither access to spare copper nor an incumbent LEC's offering of a "broadband service" is a viable substitute for competitive LEC access to the entire loop, especially for the purpose of delivering a full array of telecommunications services to residential consumers. As even incumbent LECs' concede, reliance on spare copper will not support the high-bandwidth services that consumers increasingly demand. Incumbent LECs' offers of a "broadband service" represent a tacit admission that competitive LECs need access to the functionalities of the entire unbundled loop in the NGDLC architecture, but competitors require the full legal protections afforded by Section 251(c)(3) regarding *network elements*, not some lesser substitute.

The Commission's rules should be adjusted to recognize that the DSLAM's pure multiplexing functionality – especially when deployed in a remote terminal loop architecture – is part of the local loop element. In contrast to the assumption in the *UNE Remand Order*, DSLAMs do not perform packet-switching. AT&T, other carriers, and equipment manufacturers have all demonstrated that a DSLAM performs *only* transmission-related functions. Thus, the current definitions of the local loop and packet switching elements miscategorize the

functionality of the DSLAM and -- especially as applied to next-generation loop architecture -- they undermine the procompetitive purpose of the Commission's unbundling rules.

AT&T believes that the Commission should correct this mistake of fact across the board. At a minimum, however, in developing unbundling rules that are applicable to next-generation loop architecture, the Commission must closely examine the incumbent LECs' use of DSLAM functionality in a remote terminal. Critically, the Commission must recognize that failure to require unbundled access to DSLAM functionality in next-generation loop plant would make it virtually impossible for competitive LECs to provide packet-based services and entirely undermine the assumptions underlying the Commission's decision not to unbundle packet switching.

Consistent with the comments of other competitive carriers, incumbent LECs should be required to retain unused copper for a reasonable period of time; to provide advance notice of plans to retire or replace copper; to identify the availability of spare copper; and to consider the availability of spare copper when competitors request a UNE loop. The comments also demonstrate a need for the Commission to modify its existing collocation rules to require neutral space usage and reservation practices, encourage industry-wide resolution of OSS concerns, ensure that collocation rates are consistent with the Commission's pricing policies, and ensure that collocation disputes can be resolved promptly. Finally, consistent with the comments of other competitive carriers, AT&T urges the Commission to ensure that incumbent LECs engage in nondiscriminatory network planning for future network changes, and that such changes accommodate competitors' unique needs in a nondiscriminatory manner.

I. THE COMMENTS OVERWHELMINGLY CONFIRM THAT THE COMMISSION SHOULD ADOPT NATIONAL RULES UNDER SECTION 251(c)(6) THAT ALLOW COMPETITIVE LECS TO COLLOCATE EQUIPMENT THAT PERFORMS TRANSMISSION, SWITCHING AND SURVEILLANCE FUNCTIONS.

Almost all of the commenters – including one of the largest incumbent LECs (Qwest) – overwhelmingly agree that the Commission should adopt national rules to assure that competitive LECs can collocate transmission and switching functionality. As most of the commenters recognize, the D.C. Circuit did *not* preclude the Commission from adopting rules on remand requiring collocation of such functionality. Rather, it held only that the Commission was required to give a better explanation for such rules. Moreover, the commenters demonstrate that the standard in Section 251(c)(6) is sufficiently broad to encompass collocation of transmission and switching functionalities, including "transmission equipment, [such as] multiplexers; ATM switches; DSLAMs; routers and concentrators; frame relay switches; and Ethernet switches." Qwest at 4.

The only dissenters are three of the incumbent LECs and USTA. They assert that the D.C. Circuit's decision precludes the Commission on remand from requiring incumbents to permit collocation of whole categories of equipment, especially so-called "multifunctional" equipment, but their positions are based on a misreading of the D.C. Circuit's opinion. Moreover, these incumbents have provided no evidence to refute the commenters' extensive factual showings that transmission and switching functionalities are in fact "necessary" for interconnection or to obtain access to unbundled network elements, or that the inability to collocate such functions would be discriminatory.

A. The Comments Clearly Demonstrate That The D.C. Circuit Did Not Foreclose The Commission From Adopting National Rules Requiring Incumbents To Permit Collocation Of Transmission, Switching and Surveillance Functionality.

Virtually all of the commenters, including Qwest, recognize that the D.C. Circuit did not preclude the Commission from readopting rules requiring incumbent LECs to permit collocation of transmission, switching and surveillance functionalities.[1] To the contrary, these commenters support AT&T's demonstration that the Court held merely that the Commission's original interpretation of the statutory term "necessary" was "impermissibly broad," and as a result the Commission had not adequately explained why incumbents were required to collocate equipment that performs such functions. *GTE Service Corp.* v. *FCC*, 205 F.3d 416, 422-24 (D.C. Cir. 2000). Although some incumbent LECs argue that the D.C. Circuit in fact barred the Commission from requiring collocation of certain types of equipment, particularly so-called "multi-use" equipment, their claim is based on a misreading of both the Act and the Court's opinion.[2]

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[1] *See* Qwest at 4-6; Covad at 12-13 ("[T]he court made clear that the Commission's task was not to rewrite the substance of the collocation rules" but "rather to better explain [their] basis"); Covad at 17 ("[T]he Court did not state that multi-functional equipment could not be allowed"); Cisco at 3 (The "Court invited the Commission to refine its collocation requirements on remand by adopting a formulation that falls within the limits of the 'ordinary and fair meaning' of section 251(c)(6)"); CompTel at 8 ("Commission is not precluded from re-adopting its previous rule if it provides a 'better explanation' as to why that rule makes sense in light of the statutory language and structure."); Focal at 2 (The "court did not dispute the underlying premise of those rules," but "[I]nstead, the Court requested the Commission to provide further analysis and rationale"); Corecomm at 5 ("[T]he court did *not* adopt such a restrictive definition of the word 'necessary,' nor did it require the FCC to do so on remand."); Tachion at 6 ("[C]onstruing the Court of Appeals order to eliminate all but minimal collocation is overreaching and beyond a fair reading of either the Court of Appeals" decision or other relevant precedent.").

[2] The incumbent LECs' arguments ignore both the language used in the D.C. Circuit's opinion and the clear language of the Act. For example, Verizon contends that the Court held that "cost efficiency *cannot* be a factor in determining whether physical collocation is 'necessary.'" Verizon at 5. This is a clear misreading of the Court's decision and contrary to the

The Commission originally interpreted the term "necessary" in Section 251(c)(6) to mean "used or useful." *See Local Competition Order* at ¶¶ 579-82 (adopting 47 C.F.R. § 51.323(b)).[3] The D.C. Circuit, however, held that this interpretation of "necessary" was "impermissibly broad." *GTE Service Corp.*, 205 F.3d at 424. Specifically, the Court held that "the Collocation Order *as presently written* seems overly broad and disconnected from the statutory purpose enunciated in § 251(c)(6)," because the order as written would potentially require the collocation of *any* functionality, no matter how unrelated to interconnection or access to unbundled network elements. *Id.* at 422 (emphasis added). Critically, however, the Court offered only two examples of functions that would fall outside of a reasonable interpretation of the term "necessary": "enhancements that might facilitate payroll or data collection features." *Id.* at 424. The Court did *not* question the Commission's authority to order collocation of any specific telecommunications functionalities, such as optical terminating equipment, multiplexers,

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nondiscrimination obligation imposed by the Act. In fact, as Verizon tacitly concedes, the Commission must consider economic efficiency as one of the principal indications that certain equipment must "necessarily" be collocated where inefficiencies would prevent competitors from offering a service altogether. *See* Verizon at 4 (conceding that if alternative arrangements are so costly that "the competitor would be unable to offer a commercially viable service" or so "technologically inferior" as to render the service "non-competitive," the "the alternative is effectively unavailable."). Thus, as all parties to these proceedings recognize, the definition of "necessary" cannot be based on some abstract, absolute measure, but is in reality a difficult exercise in economic line-drawing. The real issue is at what point does economic inefficiency of the alternatives render collocation "necessary." The incumbent LECs similarly misconstrue the Court's holding with respect to cross-connects, claiming that the Court "confirmed that the Commission's authority is tightly circumscribed by the [statutory] language." *Verizon* at 3. Again, the incumbents ignore the language of the Act and the decision both. The Court merely stated that the Commission's rule "ha[d] no *apparent* basis in the statute." GTE at 423 (emphasis added). The Court's holding that the need for cross-connects was not obvious or "apparent," and thus required further explanation, clearly does not amount to the affirmative negation or "strict circumscription" of the Commission's authority as the incumbents claim.

[3] In 1999, the Commission further clarified that, under this standard, incumbent LECs were required to permit collocation of DSLAMs, routers, ATM multiplexers, remote switch modules, and any other multi-functional equipment that was in some way used for interconnection or access to unbundled network elements. *See Collocation Order* ¶¶ 26-31.

DSLAMs, routers, ATM multiplexers, packet switches, remote switch modules, or any other equipment that new entrants typically collocate.[4]

Thus, the Court remanded the matter to the Commission for "further consideration," *id.* at 424, simply because the Commission's original interpretation contained no appropriate limiting principle. On any fair reading of the opinion, the Court left it to the Commission to adopt a new, permissible interpretation of the statute on remand.[5] Moreover, the Court did not attempt to prejudge what types of telecommunications equipment might be collocated under the Commission's subsequent review, but rather left it to the Commission to determine on remand after development of a full record. Indeed, the Court expressly contemplated that the Commission could readopt much of its previous rules on remand as they related to telecommunications equipment performing telecommunications functions. *GTE Service Corp.*, 205 F.3d at 424 (Court emphasized that it did "not mean to vacate the Collocation Order to the extent that it merely requires LECs to provide collocation of competitors' equipment that is directly related to and thus necessary, required, or indispensable to interconnection or

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[4] *See, e.g.*, RCN at ii ("[T]he court did *not* foreclose the Commission from permitting CLECs to collocate a full range of contemporary telecommunications equipment on ILEC premises."); Covad at 13 ("Th[e] two [Commission] decisions at issue in this proceeding [*i.e.*, that ILEC must allow collocation of multifunction equipment and that ILEC may not limit competitor's ability to use all feature and functions of collocated equipment] not because the D.C. Circuit thought they fell beyond the Commission's authority, nor because the D.C. Circuit thought the substance of those decisions was incorrect."); *see also* Sprint at 7-9 (equipment that Sprint believes can clearly be placed in the 'safe harbor' list includes DLSAMs, Network Management Devices, ATM Multiplexer, Timing Sources, Fiber Optical Terminating Equipment, Cross-connect Equipment, Test Heads, Fuse and Alarm Panels, Splitters, and Line Cards.).

[5] *See, e.g.*, AT&T at 2, 8-9; Cisco at 4 ("Commission's task in this proceeding is to develop an appropriate limiting standard"); Corecomm at 3 ("proceeding is an opportunity for Commission to define the scope of its authority to require collocation and adopt collocation standards coextensive with that authority," as in *UNE Remand* proceeding); Covad at 12-13 (the Court "made it quite clear that it was for the Commission to determine an appropriate interpretation of

access to unbundled network elements," but that "[a]nything beyond this, however, demands a better explanation from the FCC").

For these reasons, the Court did not preclude the Commission from requiring collocation of any particular telecommunications functionality on remand. Therefore, the incumbents' are simply wrong that "any attempt to re-impose the multi-functional equipment collocation requirement . . . would be at odds with both the court's decision and the plain language of section 251(c)(6)." *See, e.g.*, SBC at 8, 11; USTA at 4. In fact, the D.C. Circuit's decision precludes only the readoption of the Commission's original "used and useful" definition.

Further, the Court expressly held that Section 251(c)(6) is ambiguous and subject to multiple interpretations. *GTE Service Corp.*, 205 F.3d at 420-21. Because Section 251(c)(6) has no single "plain meaning," the Court left it to the Commission to fashion a new, permissible interpretation of the statute on remand. As the Court fully recognized (*id.* at 421), such an interpretation may well permit the Commission to require collocation of much (if not all) of the telecommunications functionalities that it had sought to require in the *Collocation Order*, including "multifunctional" equipment. As shown below and in the comments, the Commission has more than ample basis in the statute to require collocation of multifunctional equipment.

B. The Commenters Confirm That The Commission Should Adopt The Three Principles Identified In AT&T's Opening Comments.

The commenters similarly agree with AT&T that the Commission should use this opportunity not only to respond to the D.C. Circuit's concerns regarding its interpretation of the

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that statutory language" on remand; "the Commission is simply charged with explaining more clearly how some of these rules relate to the statutory language of the Act").

term "necessary," but also to undertake a thorough examination of Section 251(c)(6), in order to assure that its rules clearly establish the full extent of the incumbent LECs' duties under the statute. In its Comments, AT&T demonstrated (at 9-10) that the Commission should recognize here that Section 251(c)(6) encompasses three important principles that define the scope of new entrants' rights to collocate equipment on incumbent LECs' premises. The commenters broadly echo those principles.

First, incumbent LECs' Section 251(c)(6) duties go beyond mere physical connections to the incumbent's network, because the Commission has always defined the statutory terms "interconnection" and "access" to unbundled network elements more broadly. In particular, the Commission held in the *Local Competition Order* that "access" to unbundled network elements requires more than a bare physical connection to an element; it also requires that competitors must have the ability to "use" all of the features, functionalities, and capabilities of the element.[6] Similarly, "interconnection" is defined in the statute as interconnection that is "equal in quality" to that which the incumbent provides to itself. Thus interconnection means more than a mere physical connection.[7]

Second, although the term "necessary" need not be interpreted this restrictively, at a minimum, the term encompasses situations in which, absent the ability to collocate particular

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[6] *See* Joint Commenters at 32 ("The Commission recognizes that the nondiscrimination requirement is met only if the elements *and the access to those elements* that CLECs receive are of the same quality as the elements and access thereto that *the ILEC itself enjoys.*") (citing the *Local Competition Order* ¶ 312).

[7] 47 U.S.C. § 251(c)(2)(C). *See* Covad at 30 ("Congress clearly intended 'interconnection' as used in section 251(c)(6)" to be read broadly, "[h]ad it intended differently, [Congress] would have provided so" as it has done elsewhere); RCN at 15-16 ("[N]othing in the plain meaning of the statute, its procompetitive purpose or its legislative history supports [ILECs'] argument" that

equipment, (i) new entrants would be precluded from providing at least some services to at least some customers through the use of unbundled network elements or interconnection, or (ii) the new entrant could not offer service of the same quality as the incumbent through the use of unbundled network elements or interconnection. Under either of these circumstances, the subject equipment is "necessary" for interconnection and access to unbundled elements under any plausible definition of the term.

Third, Section 251(c)(6) requires that collocation must be available on terms and conditions that are "just, reasonable, and nondiscriminatory." Thus, where equipment has functionalities and capabilities that are necessary for interconnection or access to unbundled network elements, the statute prohibits incumbents from denying collocation of additional telecommunications functionalities in multifunctional equipment that does not consume any appreciable additional space. The only purpose of prohibiting the collocation of such additional functionality would be an anticompetitive one that would necessarily be unjust, unreasonable, and discriminatory.

1. Collocation of Equipment Necessary for "Access" to UNEs and "Interconnection." The incumbents' narrow arguments overlook the fact that Section 251(c)(6) requires incumbents to provide for collocation of equipment that is necessary for "interconnection and access to unbundled network elements." As the commenters recognize, the Commission has always interpreted those two terms broadly to encompass more than mere physical connections. *See, e.g.*, Joint Commenters at 21 ("the inquiry is not whether collocation of a particular type of equipment is necessary to interconnect or access a UNE in some

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"interconnection" was intended to be narrow and limited a term as the ILECs suggest.); *Local Competition Order* ¶ 224.

minimalist engineering sense," but rather "to ascertain what equipment in what types of arrangements must requesting carriers, taken as a whole, have the ability to collocate if the statutory purposes of Section 251(c)(2) and 251(c)(3) are to be fulfilled").[8]

First, the Commission held in the *Local Competition Order* that "the term[] 'access' to network elements . . . mean[s] that incumbent LECs must provide the facility or functionality of a particular element to requesting carriers," and "that a telecommunications carrier purchasing access to an unbundled network facility is entitled *to exclusive use* of that feature, function, or capability." *Local Competition Order* at ¶ 268 (emphasis added). Moreover, the Commission's rules entitle competitors to such access in a manner that enables them "to provide *any* telecommunications service that can be offered by means of that network element." 47 C.F.R. § 51.307(c) (emphasis added). In order to "access" an element, a CLEC must therefore be able to "use" all of the capabilities of the element to provide *any* telecommunications service of its choosing. Therefore, as AT&T showed (at 23-24), requesting carriers have the right under the Act to collocate not only equipment that performs the narrow functions of termination and interconnection, but also multi-use equipment that is required in order to make *full* use of the element in question.[9]

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[8] GSA at 6 (definition of "necessary" previously "adopted for purposes of applying section 251(d)(2)(A) of the [Act], should apply similarly in applying section 251(c)(6) of the same legislation."); GSA at 4 (Commission should "respond to the court's remand by prescribing 'necessary' conditions in a manner that will maximize the opportunities for more competition to develop."); Covad at 14-15 (Commission should "step back and look at the entirety of section 251(c)(6)" to "come up with a workable definition of 'necessary'" that embodies the statutory duty of nondiscrimination and statutory mandate to foster competition.)

[9] *See, e.g.*, Connectiv at 9-10 (in order to access the features and functionalities of unbundled elements, "CLECs must employ equipment that is fully capable of interacting with those features, functions, and capabilities," and "[a]s ILECs continue to employ more advanced electronics in loops and central offices, the range of equipment that CLECs may collocate to

This is confirmed by the Supreme Court's decision in *AT&T Corp.* v. *Iowa Utilities Board*, 522 U.S. 366 (1999). There the incumbents argued that unbundled network elements "must be [defined as] part of the physical facilities and equipment used to provide local phone service." *See id.* at 368. The Court rejected the incumbents' argument, and expressly held that, for example, software features that are not themselves physical facilities or equipment, including "vertical switching features, such as caller I.D., are 'functions . . . provided by means of' the switch, and thus fall squarely within the statutory definition" of an unbundled network element. *Id.* Just as network elements themselves are not confined to physical facilities, but encompass software-based features and functions and all other "capabilities" of the use of equipment, so too may the equipment "necessary" to obtain "access" to unbundled elements also require the collocation of software and other functions capable of interacting, and using, all of the element's "features, functions, and capabilities."

Second, Section 251(c)(2)(C) expressly requires that the incumbent must provide interconnection that is "at least equal in quality to that provided by the [incumbent LEC] to itself or to any subsidiary, affiliate, or any other party to which the carrier provides interconnection." 47 U.S.C. § 251(c)(2)(C); *see also Local Competition Order* ¶ 224 (incumbents must provide "interconnection" that is "equal in quality" to that available to the incumbent itself and that this obligation is "not limited to the quality perceived by end users"). Thus, "equipment necessary

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access those loops and the related electronics correspondingly increases"); Covad at 27 (Once equipment is shown to be "necessary" it "is clear that the incumbent *cannot* unjustly, unreasonably or discriminatorily restrict the *use* of that equipment"); RCN at 14 ("[T]here is no reason to believe that Congress intended to freeze the term equipment necessary for interconnection at the technology available in 1996," and there is every reason to believe that Congress not only assumed, but intended, CLECs to be allowed to benefit from "rapid[] private sector deployment of advanced [technologies and services]").

for interconnection" is the equipment necessary to achieve interconnection that is equal in quality to that which the incumbent provides to itself or others.[10]

In this regard, the incumbent LECs (except Qwest) simply repeat the same mistake they made in the Court of Appeals. For example, SBC (at 10) states that the Commission may require collocation only where "it can be demonstrated that the equipment is intrinsically required for connection to the ILEC's networks for purposes of interconnection or access to unbundled network elements." *See also* SBC at 11. The incumbents never even address, much less come to grips with, the statutory terms "interconnection" and "access" to UNEs, and the broad definitions the Commission has consistently given those terms. As shown above, those terms encompass far more than physical connections "in some minimalist engineering sense."[11] The incumbents' extraordinarily cramped reading of their obligations under Section 251(c)(6) is therefore directly at odds with the Commission's prior rulings and the Act's broad purpose to promote competition in all telecommunications markets.

2. The Interpretation of the Term "Necessary." The commenters also agree generally that, although the FCC need not interpret Section 251(c)(6) so restrictively,

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[10] *See, e.g.*, Corecomm at 13-14 ("[t]he term 'necessary' therefore comprehends the entire scope of the interconnection . . . obligations imposed in Section 251(c)(2)[]," which requires incumbents to provide equal-in-quality interconnection).

[11] Joint Commenters at 4 & 21; *id.* at 11 ("[T]he 1996 Act allowed several forms of interconnection and access, of which physical collocation was only one," and accordingly the Commission has consistently held that "for the procompetitive purposes of the Act to be fulfilled, carriers must be able to . . . take advantage of *each* of them"; *see also* Covad at 30 ("Congress clearly intended 'interconnection' as used in section 251(c)(6)" to be read broadly, "[h]ad it intended differently, [Congress] would have provided so" as it has done elsewhere); GSA at 4 (Commission should "respond to the court's remand by prescribing 'necessary' conditions in a manner that will maximize the opportunities for more competition to develop."); Covad at 14-15 (Commission should "step back and look at the entirety of section 251(c)(6)" to

collocation of particular equipment that performs a particular telecommunications functionality is "necessary," at a minimum, if, without the right to collocate such equipment, (1) the cost of providing service would increase to the point that, in a significant number of cases, CLECs would not offer that service through interconnection or UNEs, or (2) CLECs would be unable to offer service through interconnection or UNEs that has the same quality as the incumbent's offering. Such a standard unquestionably would be consistent with the D.C. Circuit's opinion, as well as with the Supreme Court's interpretation of the term "necessary" in Section 251(d) in *Iowa Utils. Bd.* and the Commission's implementation of that provision in the *UNE Remand Order*.[12]

Even the incumbent LECs cannot dispute that such a standard would easily pass muster under Section 251(c)(6) and *GTE Service Corp.* For example, Verizon agrees that the Commission may lawfully require incumbents to provide collocation where it is necessary for the collocator to provide service through interconnection or access to unbundled network elements. Verizon at 4. Indeed, Verizon expressly refers to the standard adopted in the *UNE Remand Order*, and argues (as does AT&T) that collocation is surely "necessary" when "the competitor is unable to offer service without access to [here, the collocation] because no practical, economic, and operational alternative is available, either by self-provisioning or from other sources." Verizon at 4 (quoting *UNE Remand Order* ¶ 44).

"come up with a workable definition of 'necessary'" that embodies the statutory duty of nondiscrimination and statutory mandate to foster competition.).

[12] *See, e.g.*, Cisco at 6 (Commission "can and should use a similar approach [to *UNE Remand Order*] in defining the term necessary in this proceeding"); GSA at 5-6 (advocating approach similar to *UNE Remand*); WorldCom at 3-5 & 5 n.8 ("WorldCom's [proposed] definition is similar to the definition for 'necessary' set forth by the Commission . . . in the *UNE Remand* Proceeding"); CompTel at 9; Covad at 21.

Moreover, the "necessary" standard clearly would be met if collocation is required to provide services that are comparable in quality to the incumbents'. Again, even Verizon recognizes that "if the competitor can show that the cost of alternative interconnection arrangements is so significant that the competitor would be unable to offer a commercially viable service, or if it can prove that the alternative is technologically inferior and makes its service non-competitive, then the alternative [to collocation] is effectively unavailable." Verizon at 4; *see also* Qwest at 9 & n.10 ("necessary" standard is satisfied where collocation a carrier's "brings about significant economies necessary to compete" and absent collocation "ability to compete must be materially impaired").

CompTel suggests an alternative means of expressing this limiting principle. *See* CompTel at 4-5. The considerations that are the basis of AT&T's proposed test – the relative costs of serving customers through collocated and non-collocated facilities, and relative quality of services that can be provided – are generally correlated with the relative efficiency of the transmission facilities at issue. As CompTel states (at 4), "[w]ith respect to any particular collocation practice, the Commission should focus on whether it is materially more efficient [in terms of interoffice transmission capacity and efficiency] for a CLEC to engage in that practice within the collocation arrangement, or whether the CLEC suffers no material efficiency losses if it must engage in that practice elsewhere in the network.."[13] Functionalities and practices that result in a material increase in the efficiency of interoffice transport (and thus the amount of traffic that can be exchanged between ILEC and CLEC at that central office) would also tend to

[13] CompTel describes this as "collocation throughput" – the amount of traffic that an individual CLEC routes through its collocation arrangement. *See* CompTel at 2 & n.2. CompTel argues that collocation of equipment that materially increases collocation throughput should be deemed "necessary" under Section 251(c)(6).

expand the possible geographic reach of the CLEC, as well as the range of services that the CLEC can provide. Thus, collocation of such functionalities should be deemed "necessary" under Section 251(c)(6). Equally important, this limiting principle would exclude collocation of functions that have no direct bearing on interoffice transport efficiency, such as the "payroll" and "data collection" functions referenced by the Court of Appeals. *See* CompTel at 8.

Finally, SBC, alone among the incumbents, appears to argue that Congress intended the collocation standard to be so strict that it would in many cases preclude the use of equipment necessary to provide a competitive service.[14] Congress, however, clearly did not intend for the Commission to interpret Section 251(c)(6) in a manner that would defeat the purposes of Section 251 as a whole. Although it is true that the Commission must not blind itself to the statutory term "necessary" in the name of efficiency (*see* SBC at 11), SBC's proposed standards would require the Commission to blind itself not only to efficiency but to necessity itself. If, absent collocation of specific equipment or functionality, a new entrant could not provide some services or could not serve some customers, then the collocation of such is "necessary" under any conceivable standard.[15]

SBC also erroneously contends that "ancillary panels, equipment, and structures" such as cross-connect panels, or other simple frames, routers, portable test equipment, cabinets for spares, or battery distribution fuse bays cannot be collocated. SBC at 15. First, to the extent such "ancillary" equipment permits the collocator to monitor and control its service quality,

[14] *See* SBC at 10-11; Covad at 21 ("Congress recognized that competitive LECs must have access to central office space for certain equipment, namely, equipment that competitive LECs use for access to UNEs or for interconnection").

supply reliable power or to physically interconnect equipment and provide test access, it is "necessary" for interconnection that is equal in quality to what the incumbent provides to itself.[16] Remote test access and monitoring functions are critically important, because they permit the CLEC to (1) detect actual or impending component failures; (2) implement a high level of network utilization; (3) minimize the effect of network overloads; and (4) support a CLEC's national security and emergency preparedness commitments. Without the ability to perform such testing, service quality in the loop could deteriorate. Customers expect high standards of service, and the monitoring and testing of cable and collocated equipment is necessary to make certain that those standards are maintained. In addition, data traffic, which is becoming more and more prevalent, will run only on facilities that are well maintained. Remote test access and monitoring are not simply a convenience or a mere "cost savings" to the CLEC; rather, they are a critical component of operating the transmission and other functions that are collocated in the central office.

3. "Just, Reasonable, and Nondiscriminatory" Terms for Collocation of Equipment That is Necessary for Interconnection or Access to UNEs. The commenters also support AT&T's showing (at 17-18) that the statute clearly prohibits incumbents from imposing discriminatory terms and conditions on collocation arrangements. In particular, they recognize that any attempt by an incumbent to preclude so-called "multifunctional equipment" that does

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[15] *See also* CompTel at 11-12 ("the ILECs would like the Commission to construe Section 251(c)(6) so narrowly that CLECs cannot use collocation arrangements efficiently to provide competitive local services").

[16] Covad at 21 ("For a DSL providedr like Covad, UNE loops must be accessed at the central office, because DLS services [are provisioned from] that end at the office," resulting in the dual need for DLS providers to avoid the longer loops that would "seriously degrade the variety and quality of service" as well as the need to perform maintenance and testing at the point of interconnection.).

not consume any more space than "single-use" equipment would be an unjust and discriminatory term and condition of collocation.[17]

Except for Qwest, which supports AT&T and most other commenters, the incumbents barely even mention the explicit statutory requirement that the terms and conditions of collocation be just, reasonable, and nondiscriminatory. SBC makes only the general comment that whether a term or condition is discriminatory can only be determined after the Commission has first established "that a CLEC's equipment is lawfully collocated." SBC at 13. That may be true, but it is irrelevant with respect to multi-use equipment. In each such case, the equipment at issue contains functionalities that are unquestionably "necessary" for either interconnection or access to unbundled network elements, and thus may be collocated. Under those circumstances, any attempt by an incumbent to insist that a CLEC disable other functionalities integrated into the circuitry of that equipment would be blatantly unjust, unreasonable, and discriminatory. This is particularly so where the incumbents or their affiliates are deploying at an unprecedented pace the very equipment they seek to keep from the CLECs. As Corecomm states, "statutory proscriptions against 'undue' or 'unreasonable' discrimination [like those in Section 251(c)(6)]

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[17] *See, e.g.*, Covad at 15 ("limit[ing] the competitive LECs' ability to utilize all functions of multifunctional equipment collocated in a central office" is an unjust, unreasonable, and discriminatory term and condition of collocation); Joint Commenters at 32-34; Focal at 6 ("just and reasonable" provides "further authority to ensure that CLECs have collocation rights that place them on equal footing with the CLECs"); Conectiv at 5-6 (antidiscrimination provisions requiring "just and reasonable" terms apply to "necessary" collocation); Fiber Technologies at 4 (urging application of "just and reasonable" requirement to support broad definition of "necessary"); Supra Technologies at 5 ("just and reasonable" applies to "necessary" in context of collocation); McLeod at 2-3 (nondiscrimination requirement of "just and reasonable" terms must be used to help define "necessary"); RCN a 7 ("necessary" must be defined in light of "just and reasonable" requirement of nondiscriminatory terms); Rhythms at 9 (definition of "necessary for interconnection" must be formed in light of "just and reasonable" nondiscrimination requirements); CTSI at 14 ("just and reasonable" applies to definition of term "necessary").

comprehend *every* form of unreasonable discrimination within the power of Congress to condemn."[18]

Critically, permitting CLECs to make use of such additional functionalities raises no legitimate takings concern. As the commenters note, the only purpose of Section 251(c)(6) is to provide the Commission with the express authority to order physical collocation that the D.C. Circuit found lacking under the original Communications Act in *Bell Atlantic Tel. Cos.* v. *FCC*, 24 F.3d 1441 (D.C. Cir. 1994). As the D.C. Circuit recognized, the 1996 Act "completely revamped the statutory landscape by providing explicit congressional authorization for physical collocation." *GTE Service Corp.*, 205 F.3d at 419. Thus, the Commission indisputably has authority to order collocation of equipment containing functions necessary for interconnection or access to unbundled network elements. If such equipment's circuitry has additional functions integrated within it that do not make additional demands on the incumbent for collocation *space*, the incumbent could not possibly claim that the inclusion of such functions threatens a new or incremental taking is declared to be a taking deserving little or no compensation, the net result will have been a large expenditure of judicial resources on a constitutional claim of little moment. *Loretto* v. *Teleprompter Manhattan CATV Corp.*, 458 U.S. 419 (1982). Therefore, any attempt to preclude collocation of such functions could only be for unlawful discriminatory purposes.

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[18] *See* Corecomm at 14-15 (citing cases); *see also* Covad at 16 & 22 (not only does the Commission have clear and distinct authority to enforce the antidiscrimination clauses of Section 251, but it has general discretion and power separately to "utilize its section 201 authority to help drive swift implementation of [its] collocation rules," and has itself recongized as well as ancillary authority to enforce discriminatory practices by carriers subject to similar restrictions under tariffing rules and agreements long before the 1996 Act.").