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 of the Telecommunications Act of 1996	)	CC Docket No. 96-98

ORDER ON RECONSIDERATION AND 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

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I. INTRODUCTION

1. In the *Advanced Services First Report and Order*,[1] we adopted measures to facilitate the development of competition in the advanced services market. These measures include strengthened collocation rules adopted pursuant to section 251(c)(6) of the Communications Act of 1934, as amended (Communications Act or Act), which imposes a statutory duty on incumbent local exchange carriers (incumbent LECs) to provide collocation to requesting telecommunication carriers.[2] This item contains an *Order on Reconsideration* and the *Second Further Notice of Proposed Rulemaking* in our advanced services proceeding, CC Docket No. 98-147. In the *Order on Reconsideration*, we further strengthen our collocation rules in response to Sprint Corporation's (Sprint's) June 1999 petition for partial reconsideration or clarification of the *Advanced Services First Report and Order*. In the *Second Further Notice*, we invite comment on additional changes to our collocation rules. Many of these proposed changes are in response to the recent decision of the United States Court of Appeals for the District of Columbia Circuit (D.C. Circuit), which affirmed some of our collocation rules, but vacated and remanded others.[3]

2. We adopted the *Advanced Services First Report and Order* last year to address charges that many incumbent LECs were improperly delaying, making more expensive, or precluding entirely the competitive local exchange carriers' (competitive LECs') physical collocation efforts. Rules adopted in that *Order* required incumbent LECs to expand their collocation offerings to include cageless and adjacent collocation, among other physical collocation arrangements.[4] We precluded incumbent LECs from imposing unreasonable minimum space

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[1] *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 (1999) (*Advanced Services First Report and Order*), *aff'd in part and remanded in part sub nom. GTE Service Corp. v. FCC*, 205 F.3d 416 (D.C. Cir. 2000) (*GTE v. FCC*). For purposes of this Order, we use the term "advanced services" to mean high speed, switched, broadband, wireline telecommunications capability that enables users to originate and receive high-quality voice, data, graphics or video telecommunications using any technology. Today's broadband services include services that are based on digital subscriber line technologies (commonly referred to as xDSL), such as ADSL (asymmetric digital subscriber line) and HDSL (high-speed digital subscriber line).

[2] 47 U.S.C. § 251(c)(6).

[3] *See GTE v. FCC*, 205 F.3d at 420-27.

[4] In a caged physical arrangement, a competitive LEC leases and has direct physical access to caged space at an incumbent LEC structure for its equipment. Cageless physical collocation eliminates the cage surrounding the competitive LEC's equipment. In adjacent physical collocation, the competitive LEC's equipment is located within (continued....)

requirements on collocators. We also required incumbent LECs to allocate the costs of preparing a premises for collocation among potential collocators, rather than making the first collocator in a premises responsible for all site preparation charges. On March 17, 2000, the D.C. Circuit affirmed these aspects of our collocation rules.[5] These judicial actions advance considerably our efforts to ensure that incumbent LECs meet their statutory duty to provide collocation necessary for interconnection or access to unbundled network elements on just, reasonable, and nondiscriminatory rates, terms, and conditions.[6] Nonetheless, the record developed in response to Sprint's petition makes clear that some incumbent LECs' collocation practices continue to impede competition.[7] In this *Order on Reconsideration*, we take appropriate immediate steps to ensure that incumbent LECs meet their statutory collocation obligations.

3. While many aspects of the collocation rules were affirmed on appellate review, the D.C. Circuit did vacate and remand for further consideration certain aspects of our *Advanced Services First Report and Order*.[8] The vacated rules required that an incumbent LEC permit the physical collocation of equipment that provides functionalities in addition to interconnection and access to unbundled network elements. The court also vacated rules requiring incumbent LECs to permit collocating carriers to interconnect their equipment with other collocating carriers through cross connections. In addition, the court vacated rules that allowed the requesting carrier to select its physical collocation space and precluded the incumbent from requiring collocators to use separate or isolated rooms or floors. The court determined that the Commission had not explained how the vacated rules were consistent with section 251(c)(6).[9] The court made clear, however, that the Commission would have the opportunity to refine its physical collocation requirements on remand, as long as the Commission stayed "within the limits of 'the ordinary and fair meaning'" of section 251(c)(6) and adequately explained how its rules are consistent with the statutory standards.[10] In this *Second Further Notice*, we invite comment on what action we should take regarding the rules the D.C. Circuit vacated and remanded, and on other collocation-related issues. Our goals are to ensure that our collocation rules adhere to statutory standards and further Congress' purpose in enacting section 251(c)(6).

(Continued from previous page)
a controlled environmental vault or similar structure that the competitive LEC or its contractor constructs on property leased from the incumbent LEC.

[5] *GTE v. FCC*, 205 F.3d at 420-27.

[6] 47 U.S.C. § 251(c)(6).

[7] *E.g.*, Letter from Russell M. Blau, *et al.*, Counsel for @link, to Magalie Roman Salas, Secretary, FCC, at 2-4 (filed Dec. 7, 1999) (*@link Dec. 7, 1999 Letter*); Letter from Glenn B. Manishin, *et al.*, Counsel for Rhythms, to William A. Kehoe, FCC, at 2 (filed Oct. 19, 1999) (*Rhythms Oct. 19, 1999 Letter*); Letter from Patrick J. Donovan, *et al.*, Counsel for BroadSpan, to Magalie Roman Salas, Secretary, FCC, at att., p. 1 (filed Aug. 4, 1999) (*BroadSpan Aug. 4, 1999 Letter*).

[8] *GTE v. FCC*, 205 F.3d at 420-27.

[9] *Id.* at 424 & 426.

[10] *Id.* (*quoting AT&T v. Iowa Util. Bd.*, 525 U.S. 366, 390 (1999)).

4. Finally, this item contains the *Fifth Further Notice of Proposed Rulemaking* in our local competition docket, CC Docket No. 96-98. In this *Fifth Further Notice*, we invite comment on whether to modify our local competition rules, particularly our rules requiring unbundled access to transport, loops, and subloops, in view of the deployment of new network architectures by incumbents.

II. EXECUTIVE SUMMARY

5. In the *Order on Reconsideration* in CC Docket No. 98-147, we take several collocation-related actions, including:

- Because of the critical importance of the timely provisioning of physical collocation to telecommunications carriers' ability to compete effectively, we require that, except to the extent a state sets its own standard or a requesting carrier and an incumbent LEC have agreed to an alternative standard, an incumbent LEC must provide physical collocation, including cageless collocation, no later than 90 calendar days after receiving a collocation application.

- Consistent with the D.C. Circuit's opinion in *GTE v. FCC*, we make clear that an incumbent LEC must allow a competitive LEC to construct a controlled environmental vault or similar structure on land adjacent to an incumbent LEC structure that lacks physical collocation space.

- We decline to adopt specific limitations on incumbent LECs' and competitive LECs' ability to reserve potential collocation space for future use at this time. We urge those state commissions that have not yet acted in this area to adopt space reservation policies that promote competition.

- The collocation rules set forth in this *Order* serve as minimum standards, and permit states to adopt additional requirements, including shorter provisioning intervals, consistent with the Communications Act and our implementing rules.

6. In the *Second Further Notice* in CC Docket No. 98-147, we invite comment on a number of collocation-related issues, including:

- In response to the D.C. Circuit's opinion in *GTE v. FCC*, we invite comment on the meaning of "necessary" and "physical collocation," as section 251(c)(6) uses those terms. We seek to develop a complete record on issues relating to what equipment an incumbent must allow a competitive LEC to physically collocate and on how physical collocation space should be assigned. We ask whether an incumbent LEC must permit collocators to cross-connect with other collocators.

- We invite comment on whether we should require incumbent LECs to make physical collocation space available in increments smaller than the space necessary to

accommodate a single rack or bay of equipment.

- We request comment on issues relating to collocation at remote incumbent LEC premises, and on whether we should change our collocation rules to facilitate line sharing and subloop unbundling.

- We ask whether we should specify an overall maximum collocation provisioning interval shorter than 90 calendar days or shorter intervals for particular types of collocation arrangements, such as cageless collocation, modifications to existing collocation arrangements, or collocation within remote incumbent LEC structures. Like the 90 day interval specified in the *Order*, any shorter intervals would apply except to the extent a state sets its own standard, or the requesting carrier and the incumbent LEC have agreed to an alternative standard.

- We also ask whether we should adopt national standards governing the period for which incumbent LECs and collocating carriers can reserve space for future use in incumbent LEC premises. These standards would apply except to the extent a state sets its own standard.

7. In the *Fifth Further Notice* in CC Docket No. 96-98, we invite comment on several issues concerning the deployment of new network architectures, including:

- We ask whether we should modify or clarify our definition of the loop and transport elements to include access for requesting carriers at the wavelength level.

- We request comment on the features, functions, and capabilities of the subloop created by the deployment of new network architectures.

- We invite comment on incumbent LECs' obligations to provide unbundled access to the subloop, particularly the fiber feeder portion, in situations where there is inadequate existing capacity.

- We invite comment on whether, as part of their deployment of additional fiber facility, incumbent LECs plan to retire and remove existing copper plant and how that would affect their obligations under our local competition rules.

- We seek comment on whether we should change the technically feasible points at which competing carriers may access subloops at remote terminal locations.

III. BACKGROUND

8. In the Telecommunications Act of 1996 (1996 Act),[11] Congress established a "pro-competitive, deregulatory national policy framework" for telecommunications, designed to open all telecommunications markets to competition so as to make advanced telecommunications and information technologies and services available to all Americans.[12] One of the 1996 Act's core market-opening provisions is section 251(c)(6) of the Communications Act, which requires incumbent LECs:

> [T]o provide, on rates, terms, and conditions that are just, reasonable, and nondiscriminatory, for physical collocation of equipment necessary for interconnection or access to unbundled network elements at the premises of the local exchange carrier, except that the carrier may provide for virtual collocation if the local exchange carrier demonstrates to the State commission that physical collocation is not practical for technical reasons or because of space limitations.[13]

9. In a physical collocation arrangement, a competitor leases space at an incumbent LEC's premises for its equipment. The competing provider has physical access to this space to install, maintain, and repair its equipment. In a virtual collocation arrangement, the competitor designates the equipment to be placed at the incumbent LEC's premises. The competing provider, however, does not have physical access to the incumbent's premises. Instead, the equipment is under the physical control of the incumbent LEC, and the incumbent is responsible for installing, maintaining, and repairing equipment designated by the competing provider.[14]

10. The ability of competitive LECs to collocate equipment is particularly important to facilities-based competition for advanced telecommunications services. An xDSL carrier providing service over unbundled local loops, for instance, would require a digital subscriber line access multiplexer (DSLAM) placed within a reasonable distance of the customer's premises, usually less than 18,000 feet. A competitive LEC must have the ability to collocate DSLAMs at the incumbent LEC's premises (i.e., in or adjacent to the central office or remote terminal) where the customer's unbundled loop or subloop terminates. Without viable collocation arrangements, the customer will not have a choice of LECs from which to purchase advanced services.

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[11] Pub.L. 104-104, Title VII, Feb. 8, 1996, 110 Stat. 153, *codified at* 47 U.S.C. §§ 151 *et seq.* Hereinafter, all citations to the 1996 Act will be to the 1996 Act as codified in the United States Code. The 1996 Act amended the Communications Act of 1934. We will refer to the Communications Act of 1934, as amended as the "Communications Act" or the "Act."

[12] Joint Statement of Managers, S. Conf. Rep. No. 104-230, 104th Cong. 2d Sess. 1 (1996) (*Joint Explanatory Statement*).

[13] 47 U.S.C. § 251(c)(6).

[14] *See Advanced Services First Report and Order*, 14 FCC Rcd at 4771, n.27.

11. In 1996, in the *Local Competition First Report and Order*, the Commission adopted rules to implement section 251(c)(6).[15] These rules addressed, among other matters, where competitive LECs could physically collocate equipment, the types of equipment that could be collocated, and how incumbent LECs should allocate space in the event insufficient physical collocation space is available. While the Commission adopted specific and detailed national collocation rules, the Commission concluded that state commissions should have the flexibility to adopt additional collocation requirements that are consistent with the Communications Act and the Commission's implementing rules.[16]

12. Three years later, in the *Advanced Services First Report and Order*, we recognized that we needed to modify the collocation rules to remove barriers to competition in the nascent advanced services market.[17] We therefore adopted strengthened collocation rules designed to foster timely, cost-effective deployment of advanced services by competitive LECs. These rules, which apply to all collocation arrangements under section 251(c)(6), require incumbent LECs to make available to requesting competitive LECs additional forms of collocation known as shared and cageless collocation arrangements.[18] Further, when collocation is exhausted at a particular incumbent LEC location, the incumbent LEC must permit collocation in adjacent controlled environmental vaults or similar structures to the extent technically feasible. We specified, among other requirements, that a collocation method used by one incumbent LEC or mandated by a state commission is presumptively technically feasible for any other incumbent LEC. We also specified that these strengthened collocation rules should serve as minimum requirements, and we continued to encourage the state commissions to adopt additional collocation requirements.[19]

13. As indicated previously,[20] the D.C. Circuit recently affirmed much of the *Advanced Services First Report and Order*, but did vacate and remand for further consideration certain aspects of that *Order*. Specifically, the court vacated and remanded the requirement that an incumbent LEC permit collocation of any equipment that is used or useful for either

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[15] *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, First Report and Order, CC Docket No. 96-98, 11 FCC Rcd 15499, 15782-807, ¶¶ 555-607 (1996) (*Local Competition First Report and Order*), *aff'd in part and vacated in part sub nom. Competitive Telecommunications Ass'n v. FCC*, 117 F.3d 1068 (8th Cir. 1997) & *Iowa Util. Bd. v. FCC*, 120 F.3d 753 (8th Cir. 1997), *affirmed in part, reversed in part, and remanded sub nom. AT&T v. Iowa Util. Bd.*, 525 U.S. 366 (1999), *aff'd in part and vacated in part on remand*, 2000 WL 979117 (2000), *Order on Reconsideration*, 11 FCC Rcd 13042 (1996) (*Local Competition First Reconsideration Order*), *Second Order on Reconsideration*, 11 FCC Rcd 19738 (1996) (*Local Competition Second Reconsideration Order*), *Third Order on Reconsideration and Further Proposed Rulemaking*, 12 FCC Rcd 12460 (1997) (*Local Competition Third Reconsideration Order*), *further recon. pending*.

[16] *Local Competition First Report and Order*, 11 FCC Rcd at 15783-84, ¶ 558.

[17] *Advanced Services First Report and Order*, 14 FCC Rcd at 4773-74, ¶¶ 23-24.

[18] *Id.* at 4784, ¶ 41. In a shared physical collocation arrangement, two or more competitive LECs share caged collocation space pursuant to terms and conditions agreed to by the competitive LECs. *Id.*

[19] *Id.* at 4773-74, ¶ 24, & 4787-88, ¶¶ 47-48.

[20] *See* para. 2, *supra*.

interconnection or access to unbundled network elements, regardless of the other functionalities inherent in such equipment.[21] The court also vacated and remanded the *Advanced Services First Report and Order* to the extent it gave requesting carriers the option of selecting physical collocation space from among the unused space within the incumbent LEC's premises, prohibited the incumbent from placing collocators in a room or isolated space separate from the incumbent's own equipment, or precluded the incumbent from requiring competitors to use separate entrances to access their own equipment.[22]

IV. ORDER ON RECONSIDERATION IN CC DOCKET NO. 98-147

A. Provisioning Intervals

1. Background

14. In the *Advanced Services First Report and Order*, we concluded that an incumbent LEC may not impose unreasonable restrictions on the time period within which it will consider applications for collocation space from requesting telecommunications carriers. We required incumbent LECs to make new collocation arrangements, including cageless and shared collocation, available to requesting telecommunications carriers.[23] We stated that the practices of several carriers suggest that provisioning intervals can be short and that we viewed ten days as a reasonable period within which to inform a new entrant whether its collocation application has been accepted or denied.[24] We recognized the significant competitive harm new entrants suffer when they must wait as long as six to eight months after their initial collocation requests before collocation space becomes available.[25] We declined, however, to adopt provisioning intervals within which incumbent LECs would have to provide collocation because we did not yet have sufficient experience with cageless, shared, and adjacent collocation, to suggest time frames for their provisioning.[26] We emphasized that we retained authority to adopt specific time frames in the future as we deem necessary.[27] We also encouraged state commissions to ensure that incumbent LECs are given specific time intervals within which to respond to collocation requests.[28]

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[21] *GTE v. FCC*, 205 F.3d at 422-24.

[22] *Id.* at 424-26.

[23] *Advanced Services First Report and Order*, 14 FCC Rcd at 4784-86, ¶¶ 42-44.

[24] *Id.* at 4791, ¶ 55.

[25] *Id.* at 4790-91, ¶ 54.

[26] *Id.*

[27] *Id.*

[28] *Id.*

15. In its petition, Sprint requests that we reconsider our decision not to provide state commissions with time frames for the provisioning of collocation space.[29] Sprint contends that we should establish maximum provisioning intervals of 90 calendar days when space previously conditioned for collocation is available and 180 calendar days when only unconditioned space is available.[30] Sprint proposes that these intervals run from the date that a competitive LEC first applies for collocation space at an incumbent LEC premises to the date the incumbent LEC makes space at that premises available for collocation.[31] Other competitive LECs suggest that 90-day and 180-day provisioning intervals are too protracted and request that we establish significantly shorter national collocation provisioning intervals.[32] Rhythms points out that collocation providers that are not incumbent LECs commonly turn over cageless collocation space to a competitive LEC within fourteen days after receiving a competitive LEC's application.[33]

16. Incumbent LECs contend that the record does not support the provisioning intervals Sprint proposes and that those intervals are far too limiting to be incorporated into a rule.[34] These parties argue that a variety of factors affect the time required to provide collocation at each

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[29] Sprint Petition at 9-10.

[30] *Id.* at 9-10; *see BroadSpan Aug.4, 1999 Letter*, *supra* note 7, at att., p. 2 (Commission should establish a minimum provisioning interval of no more than 90 days for physical collocation when previously conditioned space is available).

[31] Sprint Petition at 10; *see* AT&T Comments at 2.

[32] *E.g.*, *Rhythms Oct. 19, 1999 Letter*, *supra* note 7, at 7 (proposing that we require incumbent LECs to provide physical collocation within 90 days from the date of application and no more than 45 days from the date the incumbent LEC receives a competitive LEC's deposit); Letter from Norton Cutler, Vice President Regulatory and General Counsel, Bluestar, to Magalie Roman Salas, Secretary, FCC, at 1 (filed Nov. 19, 1999) (*Bluestar Nov. 19, 1999 Letter*); Letter from Richard M. Rindler, Counsel for Allegiance, to Magalie Roman Salas, Secretary, FCC, at 1 (filed Dec. 10, 1999) (*Allegiance Dec. 10, 1999 Letter*) (proposing that the Commission establish an interval of no more than 90 day for all caged collocation); *@link Dec. 7, 1999 Letter*, *supra* note 7, at 1 (proposing 45 days where space and power are readily available and 90 days otherwise); Letter from William B. Wilhelm, Jr., Counsel for BroadSpan, to Magalie Roman Salas, Secretary, FCC, at 4-5 (filed Dec. 21, 1999) (*BroadSpan Dec. 21, 1999 Letter*) (urging a collocation provisioning interval of 45 days when power is available and 90 days when power is unavailable); Letter from Jason Oxman, Senior Government Affairs Counsel, Covad, to William A. Kehoe, FCC, 2-5 (filed Jan. 20, 2000) (*Covad Jan. 20, 2000 Letter*) (proposing a collocation interval of 45 days from date the competitive LEC submits its collocation order).

[33] *Rhythms Oct. 19, 1999 Letter*, *supra* note 7, at 6-7.

[34] *E.g.*, Bell Atlantic Comments at 10; BellSouth Comments at 14-15; U S WEST Comments at 9; Bell Atlantic Reply at 7. Although we recognize that Bell Atlantic is now operating as "Verizon Communications," *see Application of GTE, Transferor, and Bell Atlantic Corporation, Transferee, For Consent to Transfer Control of Domestic and International Sections 214 and 310 Authorizations and Application to Transfer Control of a Submarine Cable Landing License*, CC Docket No. 98-184, Memorandum Opinion and Order, FCC 00-221 (rel. June 16, 2000), we nonetheless refer to Bell Atlantic and GTE in this *Order*, rather than to Verizon, because the bulk of those parties' filings in these dockets were made prior to completion of the merger.

individual incumbent LEC premises.[35] They assert that adoption of Sprint's proposal would prevent carriers and states from establishing collocation intervals reflecting varying local conditions and that the Commission should continue to defer to state commissions in this area.[36] Bell Atlantic contends that collocators must provide the incumbent LEC with a projection of their specific needs sufficiently in advance so that Bell Atlantic can plan the office configuration that will best meet those needs.[37]

2. Discussion

a) Need for National Standards

17. Section 251(c)(6) requires incumbent LECs to provide for collocation of equipment necessary for interconnection or access to unbundled network elements "on . . . terms and conditions that are just, reasonable, and nondiscriminatory . . . ."[38] We conclude that national collocation standards are necessary to ensure that incumbent LECs comply with this statutory obligation. In both the *Local Competition First Report and Order* and the *Advanced Services First Report and Order*, we concluded that national rules implementing the collocation requirements of the 1996 Act would reduce barriers to entry and speed the development of competition.[39] The record in this proceeding makes clear that we must modify these rules to include provisioning interval requirements for physical collocation. The record shows that the timely provisioning of collocation space is essential to telecommunications carriers' ability to compete effectively in the markets for advanced services and other telecommunications services.[40] We released the *Advanced Services First Report and Order* on March 31, 1999. Since that date, collocation intervals in a few states have become significantly shorter than the intervals prevalent prior to that date, generally as a result of state commission intervention.[41] The Public Utility Commission of Texas (Texas Commission), for example, has specified that a requesting

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[35] *E.g.*, SBC Comments at 10-12; U S WEST Comments at 9 (asserting that factors such as the availability of personnel and manufacturer's equipment affect collocation intervals).

[36] *E.g.*, Bell Atlantic Comments at 10; SBC Comments at 11-12.

[37] Bell Atlantic Comments at 10-11.

[38] 47 U.S.C. § 251(c)(6).

[39] *Advanced Services First Report and Order*, 14 FCC Rcd at 4773, ¶ 13; *Local Competition First Report and Order*, 11 FCC Rcd at 15783, ¶ 558.

[40] *E.g.*, *Rhythms Oct. 19, 1999 Letter*, *supra* note 7, at 5 (stating that short collocation intervals are of absolute necessity in the nascent competitive telecommunications market); *Allegiance Dec. 10, 1999 Letter*, *supra* note 32, at 3 (arguing that collocation intervals are delaying facilities-based competitive entry); *@link Dec. 7, 1999 Letter*, *supra* note 7, at 2 (collocation delays make planning a nationwide facilities-based roll-out all but impossible).

[41] *See, e.g.*, *Allegiance Dec. 10, 1999 Letter*, *supra* note 32, at 2; *Investigation of Southwestern Bell Telephone Company's Entry into the Texas InterLATA Telecommunications Market, Project No. 16251*, Order No. 51 Approving Time Intervals for Provisioning Collocation under Revised Physical Collocation Tariff, at 1-2 (Texas PUC Aug. 18, 1999) (*Texas Commission Order No. 51*).

telecommunications carrier is entitled to obtain caged physical collocation within 90 days and cageless physical collocation within 70 days after accepting SBC's price quotation for Texas central offices having active collocation space available. The requesting carrier may shorten its waiting period for cageless collocation in these premises to 55 days by agreeing to install its own bays or racks. In offices within Texas having only inactive space available for collocation, SBC must provide collocation within 140 days.[42]

18. Similarly, under the Pennsylvania Public Utility Commission's (Pennsylvania Commission's) interim standards, Bell Atlantic must inform a requesting telecommunications carrier whether collocation space is available within ten days after receiving a request for physical collocation. If space is available, Bell Atlantic must complete its planning and quote preparation processes within 35 days after receiving a collocation request. Bell Atlantic, in addition, must complete all its work on the collocation arrangement within 90 days after its receipt of the requesting carrier's collocation deposit.[43] U S WEST has agreed throughout virtually all its region to provide cageless collocation space within 45 days after receiving a requesting telecommunications carrier's deposit when space and power are available, and within 90 days after receiving that deposit when space and power are not available.[44] We view these commitments as very positive developments.

19. Other state commissions also have specified collocation intervals. The New York Public Service Commission, for example, requires Bell Atlantic in New York to provide caged and cageless collocation within 76 business days (roughly, 105 calendar days) and virtual collocation within 105 business days (roughly, 147 calendar days) of receiving a collocation request.[45] The Florida Commission has required BellSouth to provide physical collocation within three months of receiving certain competitive LECs' deposits, unless BellSouth demonstrates to the Florida Commission why it is not technically feasible to do so.[46]

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[42] *Texas Commission Order No. 51*, *supra* note 41, at 1-2. Collocation space is active when it has sufficient telecommunications infrastructure systems, including power, to support collocation. *Investigation of Southwestern Bell Telephone Company's Entry into the Texas InterLATA Telecommunications Market*, Project No. 16251, Order No. 59 Approving Revised Physical and Virtual Collocation Tariffs, at 4 (Texas PUC Oct. 29, 1999) (*Texas Commission Order No. 59*).

[43] *Nextlink Pennsylvania, Inc.*, P-00991648 *et al.*, 1999 USWL 983416 (Pa. PUC 1999) (*Pennsylvania Commission Order*).

[44] *See @link Dec. 7, 1999 Letter*, supra note 7, at 3-4; Letter from Patrick J. Donovan, Counsel for New Edge, to Magalie Roman Salas, Secretary, FCC, at att., p. 1 (filed Dec. 9, 1999) (*New Edge Dec. 9, 1999 Letter*); *Bluestar Nov. 19, 1999 Letter*, *supra* note 32, at 3.

[45] *New York Telephone Co.*, Case 99-C-0715 *et al.*, Order Directing Tariff Revisions, 1999 USWL 1054136, at *5 (N.Y. PSC, Aug. 31, 1999) (*New York Commission Aug. 31, 1999 Order*). The virtual collocation interval includes time for testing prior to start-up of the virtual collection arrangement. *Id.*

[46] *E.g.*, *Supra Telecommunications and Information Systems v. BellSouth Telecommunications, Inc.*, Docket No. 980-800-TP, Final Order Resolving Complaint regarding Physical Collocation, 1999 USLW 99534, at *17 (Fla. PSC 1999).

20. We agree with the competitive LECs that these developments demonstrate that incumbent LECs can provision collocation arrangements in significantly less than six to eight months after receiving initial collocation requests.[47] Most state commissions, however, have not set time limits for provisioning collocation space.[48] As a consequence, physical collocation has not been provisioned as quickly as we anticipated when we adopted the *Advanced Services First Report and Order*.[49] This lack of progress has impeded competitive LECs' ability to provide facilities-based service throughout the country.[50]

21. Based on the foregoing, we find a need for national application processing and provisioning interval standards for physical collocation that will apply in the absence of state standards. Such national standards are necessary to ensure that incumbent LECs comply with their statutory obligation to provide collocation on terms and conditions that are just, reasonable, and nondiscriminatory. Incumbent LECs first became obligated to provide either physical or virtual collocation to competing carriers during 1992.[51] On February 6, 1996, Congress made clear, through the enactment of section 251(c)(6), that incumbent LECs must provide physical collocation to requesting telecommunications carriers. Incumbent LECs also have known since March 31, 1999, the date we released the *Advanced Services First Report and Order*, that physical collocation offerings must include cageless as well as caged collocation. Despite this ample notice and some incumbent LEC's efforts to provide collocation on a timely basis, many competitive LECs continue to encounter substantial delays in obtaining physical collocation.[52] This is unacceptable.

22. Timely provisioning of physical collocation space is critically important to telecommunications carriers' ability to compete effectively in the markets for advanced services

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[47] *E.g.*, *Rhythms Oct. 19, 1999 Letter*, *supra* note 7, at 7; *Bluestar Nov. 19, 1999 Letter*, *supra* note 32, at 1-2.

[48] *E.g.*, *Bluestar Nov. 19, 1999 Letter*, *supra* note 32, at 1; @link *Dec. 7, 1999 Letter*, *supra* note 7, at 2; *Allegiance Dec. 10, 1999 Letter*, *supra* note 32, at 2; *Rhythms Oct. 19, 1999 Letter*, *supra* note 7, at 5.

[49] *See* Letter from Patrick J. Donovan, Counsel for New Edge, to Magalie Roman Salas, Secretary, FCC, at 4 (filed Feb.8, 2000) (*New Edge Feb. 8, 2000 Letter*); *see also Bluestar Nov. 19, 1999 Letter*, *supra* note 32, at 2; @link *Dec. 7, 1999 Letter*, *supra* note 7, at 2; *BroadSpan Dec. 21, 1999 Letter*, *supra* note 32, at 4-5.

[50] *E.g.*, *Allegiance Dec. 10, 1999 Letter*, *supra* note 32, at 3; @link *Dec. 7, 1999 Letter*, *supra* note 7, at 2-3.

[51] *See Expanded Interconnection with Local Telephone Company Facilities*, CC Docket Nos. 91-141 & 92-222, Report and Order and Notice of Proposed Rulemaking, 7 FCC Rcd 7369 (1992) (*Expanded Interconnection Order*), *vacated in part and remanded sub nom. Bell Atlantic v. FCC*, 24 F.3d 1441 (D.C. Cir. 1994); *First Reconsideration*, 8 FCC Rcd 127 (1993); *Second Reconsideration*, 8 FCC Rcd 7341 (1993); *Second Report and Order*, 8 FCC Rcd 7374 (1993); Memorandum Opinion and Order, 9 FCC Rcd 5154 (1994), *remanded sub nom. Pacific Bell v. FCC*, 81 F.3d 1147 (D.C. Cir. 1996).

[52] *See, e.g.*, *Rhythms Oct. 19, 1999 Letter*, *supra* note 7, at 5 (intervals as high as 120 to 180 days); Letter from Norton Cutler, Vice President Regulatory and General Counsel, Bluestar, to Magalie Roman Salas, Secretary, FCC, at 2 (filed Oct. 19, 1999) (*Bluestar Oct. 19, 1999 Letter*) (average provisioning intervals of 150 days from date of application); *New Edge Feb. 8, 2000 Letter*, *supra* note 49, at 1-2.

and other telecommunications services.[53] Absent national standards, applicable in the absence of state standards or alternative standards agreed to by requesting carriers and incumbent LECs, incumbent LECs in many states will continue to delay unreasonably competitive LECs' build-out of their facilities.[54] We therefore conclude that we should adopt national standards for physical collocation provisioning that will apply when the state does not set its own standards or if the requesting carrier and incumbent LEC have not mutually agreed to alternative standards.[55] A state could set its own standards by statute, through an existing or future rulemaking order, by enforcing a state tariff, or by applying the precedent of a state arbitration decision. An incumbent LEC, of course, may petition a state to extend the application processing and provisioning interval deadlines in specific circumstances (e.g., conditioning space in a premises is particularly difficult). For purposes of our rules, a state decision granting an extension constitutes a state standard for the arrangement in question.

23. We reject the suggestion that we should defer all collocation interval issues to the states.[56] In *AT&T v. Iowa Utilities Board*, the Supreme Court specifically held that we have rulemaking authority to carry out the provisions of section 251.[57] Although we defer to those states that set application processing or provisioning intervals standards, for the reasons just stated we must act to fill the void where other states have not acted. Therefore, in the exercise of our authority, we find that maximum application processing and provisioning intervals for physical collocation that apply, except to the extent a state sets its own standard or the parties have mutually agreed to an alternative standard, are necessary to ensure that incumbent LECs provide physical collocation under reasonable terms and conditions and that competitive LECs are able to compete effectively in the provision of advanced services and other telecommunications services. We conclude that national standards for collocation provisioning that apply, in the absence of a state standard or the parties' mutual agreement to an alternative standard, will help avoid having telecommunications services delayed indefinitely pending the completion of state proceedings.

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[53] *Advanced Services First Report and Order*, 14 FCC Rcd at 4790-91, ¶ 55 (recognizing that new entrants suffer competitive harm when collocation arrangements are delayed); *see, e.g.*, *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, Third Report and Order and Fourth Further Notice of Proposed Rulemaking, CC Docket No. 96-98, 15 FCC Rcd 3696, 3819, ¶ 270 (1999) (*UNE Remand Order*) (finding that collocation delays prevent a competitive LEC from responding quickly to demand for its services); *Rhythms Oct. 19, 1999 Letter*, *supra* note 7, at 5; *Bluestar October 19, 1999 Letter*, *supra* note 52, at 1 (stating that establishing collocation intervals may represent the most important procompetitive activity the Commission can undertake); *Covad Jan. 20, 2000 Letter*, *supra* note 32, at 2.

[54] *E.g.*, *UNE Remand Order*, 15 FCC Rcd at 3741-42, ¶¶ 90-91 (indicating that incumbent LECs can take advantage of collocation provisioning delays to lock-up customers in advance of competitive entry); *@link Dec. 7, 1999 Letter*, *supra* note 7, at 3.

[55] *New Edge Feb. 8, 2000 Letter*, *supra* note 49, at 4. In part IV.D.2.c. below, we describe how the national standard should be applied.

[56] *See, e.g.*, Bell Atlantic Comments at 10; SBC Comments at 11-12.

[57] *AT&T v. Iowa Util. Bd.*, 525 U.S. at 378.

b) Selection of National Standards

24. An incumbent LEC must perform essentially three groups of tasks in order to provision collocation space in response to a competitive LEC's request. The incumbent LEC must determine whether the competitive LEC's application for collocation space meets any requirements the incumbent has established for such applications. In the *Advanced Services First Report and Order*, we stated that ten days constitutes a reasonable period within which an incumbent LEC should inform a new entrant whether its collocation application has been accepted or denied.[58] Based on the record before us, we believe that an incumbent LEC has had ample time since the enactment of section 251(c)(6) to develop internal procedures sufficient to meet this deadline, absent the receipt of an extraordinary number of complex collocation applications within a limited time frame. We therefore require that, where neither the state nor the parties to an interconnection agreement set a different deadline, an incumbent LEC must tell the requesting telecommunications carrier whether a collocation application has been accepted or denied within ten calendar days after receiving the application.[59] If the incumbent LEC deems that application unacceptable, it must advise the competitive LEC of any deficiencies within this ten calendar day period. The incumbent LEC must provide sufficient detail so that the requesting carrier has a reasonable opportunity to cure each deficiency. To retain its place in the incumbent LEC's collocation queue, the competitive LEC must cure any deficiencies in its collocation application and resubmit the application within ten calendar days after being advised of them.[60]

25. In some instances, an incumbent LEC also must perform specific design or planning work to accommodate the competitive LEC's specific collocation request.[61] The incumbent LEC also may have to determine the price it will charge for the proposed collocation arrangement.[62] We conclude that an incumbent LEC should normally be able quickly to complete any necessary design, planning, and price quotation processes.[63] We decline, however, to specify any deadlines for completion of these processes. We conclude that the better course is to specify deadlines

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[58] *Advanced Services First Report and Order*, 14 FCC Rcd at 4791, ¶ 55. Contrary to certain incumbent LECs' apparent position, ten days means ten calendar days, not ten business days. We are amending our rules to make this clear.

[59] We note that a state commission may find a different interval as reasonable as our ten calendar day national default standard based on the specific evidence before it in proceedings on this issue.

[60] *See* 47 C.F.R. § 51.323(f)(1). This deadline would be twenty calendar days after the requesting carrier submits its collocation application if the incumbent LEC advises that carrier of deficiencies in that application on the last day of the ten calendar day period set forth in paragraph 24, *supra*.

[61] *See* Letter from Norton Cutler, Vice President Regulatory and General Counsel, Bluestar, to Magalie Roman Salas, Secretary, FCC, at att B, pp. 3-4 (filed Nov. 23, 1999) (*Bluestar Nov. 23, 1999 Letter*) (testimony of Florida Competitive Carriers Association witness Joseph Gillan before the Florida Commission).

[62] *Id.*

[63] *See, e.g.*, *Allegiance Dec. 10, 1999 Letter*, *supra* note 32, at 2 (alleging that even slow-moving incumbents take 30 to 45 days to complete these processes); *Bluestar Nov. 19, 1999 Letter*, *supra* note 32, at 2 (arguing that incumbent LECs can eliminate time-consuming price quotation processes).

within which an incumbent LEC must complete the provisioning of all physical collocation arrangements, absent specific state action or an interconnection agreement setting different deadlines. An incumbent LEC then will have every incentive to complete its design, planning, and price quotation processes expeditiously so as to allow more time for actually provisioning collocation arrangements. We note that an incumbent LEC can streamline its design, planning, and price quotation processes by developing standardized rates, terms, and conditions for different collocation arrangements.[64]

26. Finally, the incumbent LEC must promptly provision the collocation arrangement in those instances where the competitive LEC wishes to proceed with collocation. We believe that the requesting carrier should be able to inform an incumbent LEC that physical collocation should proceed within seven calendar days after receiving the incumbent LEC's price quotation. If the requesting carrier meets this deadline, the incumbent LEC must comply with the 90 calendar day provisioning interval set forth in paragraph 27, below, or any alternative interval set by a state commission or agreed to by the requesting carrier and the incumbent LEC. If the requesting carrier fails to meet this deadline, the provisioning interval will begin on the date the requesting carrier informs the incumbent LEC that physical collocation should proceed (i.e., makes clear its intent to obtain a particular collocation arrangement from the incumbent) or any alternative date set by a state commission or agreed to by the parties. Restarting the collocation interval when the requesting carrier fails to respond to a price quotation within seven calendar days will facilitate the incumbent LEC's collocation provisioning operations and will prevent the requesting carrier from imposing unnecessary burdens on those operations to the potential detriment of other requesting carriers.

27. We also conclude that an incumbent LEC should be able to complete any technically feasible physical collocation arrangement, whether caged or cageless, no later than 90 calendar days after receiving an acceptable collocation application, where space, whether conditioned or unconditioned, is available in the incumbent LEC premises and the state commission does not set a different interval or the incumbent and requesting carrier have not agreed to a different interval.[65] We select this provisioning interval based on a balancing of competing considerations. First, we agree with the competitive LECs that an interval of relatively short duration is necessary to help ensure timely deployment of advanced services and other telecommunications

[64] *See, e.g.*, *Bluestar Nov. 23, 1999 Letter*, *supra* note 61, at att B, pp. 2-5 (testimony of Florida Competitive Carriers Association witness Joseph Gillan before the Florida Commission); *see generally Texas Commission Order No. 59*, *supra* note 42, at 4-12.

[65] This deadline is 80 calendar days after the ten calendar day deadline for processing applications set forth in paragraph 24, above, if the competitive LEC does not have to cure deficiencies in its collocation application and meets the deadline set forth in paragraph 26, above. We note that if the incumbent provides a price quotation on or before the application processing deadline, the requesting carrier must have made clear its intent to obtain a particular collocation arrangement from the incumbent LEC within 17 days of the incumbent's receipt of an acceptable collocation application. The requesting carrier also may have paid portions of the total collocation changes by that date. *See* paras. 26, *supra*, & 38, *infra*.

services.[66] A 90 calendar day interval, which is somewhat tighter than those that certain state commissions have set for caged physical collocation, but exceeds the interval U S WEST has committed itself to achieve for cageless physical collocation,[67] should enable competitive LECs to bring competitive services to customers throughout the nation much more quickly than they have in the past.[68] While a shorter interval, such as the 45 calendar day interval Covad urges,[69] obviously would provide even quicker deployment of advanced services, we are not persuaded on this record that an interval significantly shorter than 90 days would be reasonable for many collocation arrangements.[70] We note that in part V.D, *infra*, we invite comment on whether should specify a collocation interval shorter than 90 calendar days.

28. Based on the record before us, we believe, in addition, that a maximum 90 calendar day interval will give an incumbent LEC ample time to provision most, if not all, physical collocation arrangements.[71] We recognize, of course, that many incumbent LECs will have to improve their collocation provisioning performance significantly in order to meet this interval. Significant improvement is needed, however, only where incumbent LECs have taken insufficient steps to ensure the adequacy of their collocation provisioning processes.[72] We believe that in order to discharge its statutory obligation to provide physical collocation under reasonable terms and conditions, an incumbent LEC must implement internal controls, methods, and procedures for ensuring the timely provisioning of physical collocation.[73] We also believe that these controls, methods, and procedures should improve over time. Incumbents already have extensive experience with handling large numbers of collocation applications on an ongoing basis. This experience should enable them to upgrade their internal controls, methods, and procedures to the extent necessary to provision all, or virtually all, physical collocation arrangements in no more than 90 calendar days.[74]

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[66] *See, e.g., @link Dec. 7, 1999 Letter, supra* note 7, at 2; *Allegiance Dec. 10, 1999 Letter, supra* note 32, at 3; *Rhythms Oct. 19, 1999 Letter, supra* note 7, at 5.

[67] *See* paras. 17-18, *supra*.

[68] *See, e.g., Rhythms Oct. 19, 1999 Letter, supra* note 7, at att. pp. 3-4.

[69] *See Covad Jan. 20, 2000 Letter, supra* note 32, at 2-3.

[70] *See, e.g.*, Letter from Dee May, Director, Federal Regulatory Group, Bell Atlantic, Magalie Roman Salas, Secretary, FCC, at att., pp. 1-2 (filed Dec. 17, 1999) (*Bell Atlantic Dec. 17, 1999 Letter*).

[71] *See, e.g., Rhythms Oct. 19, 1999 Letter, supra* note 7, at 6-7; *Bluestar Nov. 19, 1999 Letter, supra* note 32, at 1-2; *Covad Jan. 20, 2000 Letter, supra* note 32, at 5.

[72] *See, e.g., Covad Jan. 20, 2000 Letter, supra* note 32, at 5. We would expect, for example, that an incumbent LEC begin the process of improving collocation provisioning as soon as an incumbent LEC becomes aware that improvement is needed.

[73] *See, e.g., Bluestar Oct. 19, 1999 Letter, supra* note 52, at 2 (asserting that a multi-billion dollar corporation such as BellSouth should have the force and creativity to meet strict provisioning intervals).

[74] We note that incumbent LECs have known since August 8, 1996, the release date of the *Local Competition Order*, that they had to made caged physical collocation available to competitors and since March 31, 1999, the (continued....)

29. We also continue to believe, based on the record before us, that intervals significantly longer than 90 days, such as the 180 calendar day interval Sprint suggests for previously unconditioned space,[75] would not generally result in competitive LECs' receiving access to space within incumbent LEC premises within reasonable time frames. Instead, we believe, based on this record, that intervals significantly longer than 90 days generally will impede competitive LECs' ability to compete effectively,[76] although we recognize that in specific circumstances a significantly longer provisioning interval may be warranted based on detailed information presented to and evaluated by a state commission. We therefore require that, except to the extent a state sets its own collocation provisioning standard or an incumbent LEC and requesting carrier have an interconnection agreement that sets an alternative standard, an incumbent LEC must complete physical collocation provisioning within 90 calendar days after receiving an acceptable collocation application. We recognize, however, that a state may establish different provisioning intervals, either shorter or longer than the national default standard, based on the facts before that state, which may differ from our record here.

30. To complete provisioning of a collocation arrangement, an incumbent LEC must finish construction in accordance with the requesting carrier's application and turn functional space over to the requesting carrier.[77]

31. Failure to meet either the deadline for determining whether a collocation application is acceptable or the specified provisioning deadline, where the state does not set a different deadline or the parties have not mutually consented to alternative standards, could expose an incumbent LEC to possible action at both the federal and state level. For instance, we will consider a Bell Operating Company's (BOC's) collocation provisioning performance as part of our review of any application to provide in-region, interLATA service pursuant to section 271 of the Communications Act.[78] Failure to meet collocation deadlines after obtaining section 271 approval would expose a BOC to possible enforcement action under section 271(d)(6)(A) of the Act, which authorizes the Commission to impose monetary penalties, or to suspend or revoke interLATA approval after notice and an opportunity for hearing.[79] Similarly, the Texas

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release date of the *Advanced Services First Report and Order*, that they had to make cageless, adjacent, and shared physical collocation available to competitors. *See, e.g.*, *Advanced Services First Report and Order*, 14 FCC Rcd at 4783-84, ¶ 40; *Local Competition First Report and Order*, 11 FCC Rcd at 15576, ¶ 152.

[75] Sprint Petition at 9-10.

[76] *Advanced Services First Report and Order*, 14 FCC Rcd at 4790-91, ¶ 54; *see, e.g.*, *Rhythms Oct. 19, 1999 Letter*, *supra* note 7, at 7; *Allegiance Dec. 10, 1999 Letter*, *supra* note 32, at 1; *@link Dec. 7, 1999 Letter*, *supra* note 7, at 1.

[77] *Allegiance Dec. 10, 1999 Letter*, *supra* note 32, at 3; Letter from Andrew D. Lipman, *et al.*, Counsel for DSLnet, to Magalie Roman Salas, Secretary, FCC, at 4 (filed Dec. 3, 1999) (*DSLnet Dec. 3, 1999 Letter*).

[78] *See Application of Bell Atlantic New York for Authorization under Section 271 of the Communications Act To Provide In-Region, InterLATA Service in the State of New York, FCC 99-400*, ¶¶ 73-75 (rel. Dec. 22, 1999) (*Bell Atlantic New York Order*).

[79] 47 U.S.C. § 271(d)(6)(A); *see Bell Atlantic New York Order*, *supra* note 78, at ¶ 451. We emphasize that, where a state does not set its own provisioning standard, 90 calendar days defines the outer limit of incumbent LEC (continued....)

Commission has specified collocation provisioning performance measurements for Southwestern Bell Telephone Company (SWBT). Failure to meet these measurements would expose SWBT to liquidated damages payable to the affected competitive LECs and assessments payable to the State Treasury.[80]

32. We decline at this time to set provisioning intervals for virtual collocation. Although certain competitive LECs request that we take that step,[81] we are not convinced on this record that a national standard for provisioning virtual collocation arrangements is necessary to enable competitive LECs to compete effectively in the market for advanced services and other telecommunications services. We invite competitive LECs to provide additional information for the record in this proceeding if they believe incumbent LECs are not complying with our virtual collocation rules.

c) Application of National Standards

33. As indicated previously, in *AT&T v. Iowa Utilities Board*, the Supreme Court confirmed our rulemaking authority to carry out the provisions of section 251.[82] To implement the application processing and collocation interval requirements we adopt here pursuant to that authority, an incumbent LEC must offer to provide all forms of physical collocation (i.e., caged, cageless, shared, and adjacent) in accordance with those requirements, except to the extent a state sets its own application processing and collocation interval deadlines.[83] To make an offer to provide physical collocation, an incumbent LEC must propose in response to a request from a competitive LEC an interconnection agreement or an amendment to an interconnection agreement including all necessary rates, terms, and conditions. This offer to provide physical collocation may be subject to the incumbent LEC's ability to seek from the state, based on

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performance that we would generally find consistent with the reasonableness standard in section 251(c)(6). We believe that incumbent LECs can provision many collocation arrangements in periods significantly shorter than 90 calendar days. We note, for example, that competitive LECs argue that an incumbent LEC should make minor modifications to an existing collocation arrangement, such as relocating racks or increasing transmission capacity, within very short time frames. *See Covad Jan. 20, 2000 Letter*, *supra* note 32, at 6-7; *Bluestar Nov. 23, 1999 Letter*, *supra* note 61, at att. A, pp. 1 & 19 (stating that the North Carolina Utilities Commission has set a 15 calendar day interval for augmenting certain cabling arrangements and a 30 calendar day interval for augmenting other specified cabling arrangements); *see also Texas Commission Order No. 51*, *supra* note 41, at 3-4 (provisioning intervals as low as 15 calendar days for certain augments for certain power, lighting, and interconnection conduit).

[80] *Investigation of Southwestern Bell Telephone Company's Entry into the Texas InterLATA Telecommunications Market, Project No. 16251*, Order No. 50 Approving Proposed Interconnection Agreement As Amended, at att., p. 140-68 (Texas PUC Aug. 16, 1999) (*Texas Commission Order No. 50*).

[81] *Rhythms Oct. 19, 1999 Letter*, *supra* note 7, at 7 (proposing a 30-day provisioning interval for virtual collocation); *Allegiance Dec. 10, 1999 Letter*, *supra* note 32, at 1 (proposing a provisioning interval of no more than 60 days for virtual collocation).

[82] *See* para. 23, *supra*.

[83] *See Advanced Services First Report and Order*, 14 FCC Rcd at 4783-86, ¶¶ 40-44 (requiring incumbents to make cageless, adjacent, and shared collocation available to requesting carriers).

specific circumstances, application processing and provisioning intervals different from the federal standards or to "demonstrate[] to the State commission that physical collocation is not practical for technical reasons or because of space limitations."[84] Subject to the same exceptions, the incumbent LEC must make this offering available to all carriers that seek to physically collocate equipment necessary for interconnection or access to unbundled network elements at any of the incumbent's premises. The incumbent LEC must make this offer in response to any requests made after this *Order's* effective date. We do not adopt Covad's suggestion that the national standards adopted here apply even in the absence of an interconnection agreement.[85] We find that the approach we take here, allowing parties to complete the negotiation process as contemplated by section 252, but imposing a requirement that should avoid unreasonable delays thereafter, reasonably balances the parties' interests.

34. The interconnection agreement between the incumbent LEC and the requesting carrier may contain a clause that provides for reopening negotiations in the event we change our rules.[86] The incumbent and its competitor must comply with any such clause in negotiating specific provisions to implement changes in our collocation rules, including the application processing deadline and 90 calendar day physical collocation interval we adopt above.[87] We note that the failure of an incumbent LEC to offer an amendment upon request may subject the incumbent LEC to enforcement action for failure to negotiate in good faith under section 251(c)(1) of the Act and our implementing rules. The incumbent LEC and competitive LEC also must negotiate in good faith regarding any rates, terms, and conditions necessary to implement our rule changes. The incumbent LEC and the requesting carrier, of course, have the duty to negotiate in good faith if they have not already entered into an interconnection agreement.[88] We expect the negotiating process will not unreasonably delay implementation of the application processing and provisioning deadlines adopted in this *Order*.

35. The parties must negotiate and arbitrate any open issues in good faith and in accordance with the specific timetable set forth in section 252 of the Act. We encourage the state commissions to monitor this area closely to ensure that incumbent LECs do not use the negotiating or arbitration process to delay unnecessarily requesting carriers' collocation efforts. We note that an incumbent LEC's use of the arbitration process as a means to delay

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[84] 47 U.S.C. § 251(c)(6). This offer also is subject to the parties' right to negotiate a different provisioning interval.

[85] *Covad Jan. 20, 2000 Letter*, *supra* note 32, at 8.

[86] In the *Local Competition Order*, the Commission determined that it would constitute a *per se* failure to negotiate in good faith for a party to refuse to include in an interconnection agreement a provision that permits the agreement to be amended to take into account future changes in Commission rules. *Local Competition First Report and Order*, 11 FCC Rcd at 15576, ¶ 152.

[87] Agreements that evidence an express intent not to reopen negotiations in the event of changes in our collocation rules are not subject to this requirement. *See* 47 U.S.C. § 252(a)(1).

[88] *See* 47 U.S.C. § 251(c)(1).

unnecessarily collocation efforts could be viewed as a failure to negotiate in "good faith," as required by section 251(c)(1).[89]

36. In some instances, a state tariff sets forth the rates, terms, and conditions under which an incumbent LEC provides physical collocation to requesting carriers. An incumbent LEC also may have filed with the state commission a statement of generally available terms and conditions (SGAT) under which it offers to provide physical collocation to requesting carriers.[90] Because of the critical importance of timely collocation provisioning, we conclude that, within 30 days after the effective date of this *Order*, the incumbent LEC must file with the state commission any amendments necessary to bring a tariff or SGAT into compliance with the national standards. At the time it files these amendments, the incumbent also must file its request, if any, that the state set intervals longer than the national standards as well as all supporting information. For a SGAT, the national standards shall take effect within 60 days after the amendment's filing except to the extent the state commission specifies other application processing or provisioning intervals for a particular type of collocation arrangement, such as cageless collocation.[91] Where a tariff must be amended to reflect the national standards, those standards shall take effect at the earliest time permissible under applicable state requirements.

37. Absent the incumbent LEC's and requesting carrier's mutual consent, the ten calendar day deadline for responding to a collocation application and the 90 calendar day provisioning deadline will serve as maximum intervals, to the extent a state does not set its own deadlines.[92] An incumbent LEC that seeks additional time to advise a requesting carrier of defects in a collocation application could show the state commission, for example, that its receipt of an extraordinary number of collocation applications within a short time frame warrants a limited extension of the ten calendar day deadline set forth in paragraph 24.[93] An extension of this deadline by a state commission will not automatically result in an extension of the 90 calendar day provisioning deadline. Instead, an incumbent LEC must complete all technically feasible collocation arrangements within 90 calendar days, unless a state sets or the parties have agreed to a different deadline. Where an incumbent LEC seeks a departure from either deadline, the incumbent also must provide any additional information the state commission requires to resolve whether a departure is warranted. States will continue to have flexibility to adopt different intervals and additional collocation requirements, consistent with the Act. For instance, a state would be free to set shorter provisioning intervals for cageless collocation arrangements,

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[89] *Id.*

[90] *See* 47 U.S.C. § 252(f).

[91] *See* 47 U.S.C. § 252(f)(3).

[92] *See Allegiance Dec. 10, 1999 Letter*, *supra* note 32, at 3 (arguing that collocation intervals set by the Commission should not apply where state commissions have acted, or act in the future, to set specific intervals); *@link Dec. 7, 1999 Letter*, *supra* note 7, at 3 (urging that the Commission establish national collocation intervals to be used in circumstances where the state commission has not prescribed intervals).

[93] *See generally Bell Atlantic Dec. 17, 1999 Letter*, *supra* note 70, at att., pp. 2-3.

augments to existing collocation arrangements, and collocation within remote terminals.[94] Indeed, we encourage states to adopt shorter provisioning intervals in circumstances where the nature of the collocation arrangements may render shorter provisioning intervals particularly appropriate.

38. To the extent the state commission permits, the incumbent LEC may require a competitive LEC to pay reasonable application fees or portions of the total collocation charges prior to processing a collocation application or provisioning a collocation arrangement. A competitive LEC's exercise of any right it has to dispute those fees or charges, or any of the rates, terms, or conditions under which an incumbent LEC seeks to provide collocation, shall not relieve the incumbent LEC of its obligation to comply with each of the time limits set forth in this section. We note that a competitive LEC's ability to meet the seven-day interval specified in paragraph 26, above, may depend on whether the incumbent LEC has provided adequate cost support to justify its price quote. An incumbent LEC that fails to provide adequate cost support upon the request by the competitive LEC could be subject to enforcement action under our "good faith" rules, which bar incumbent LECs from "refus[ing] to provide information necessary to reach agreement."[95] This information includes "cost data . . . necessary for the requesting carrier to determine whether the rates offered by the incumbent LEC are reasonable."[96]

39. An incumbent LEC also may require a competitive LEC to forecast its physical collocation demands.[97] Absent state action requiring forecasts, a requesting carrier's failure to submit a timely forecast will not relieve the incumbent LEC of its obligation to comply with the time limits set forth in this section. Similarly, an incumbent LEC may penalize an inaccurate collocation forecast by lengthening a collocation interval only if the state commission affirmatively authorizes such action.

B. Adjacent Collocation

40. In the *Advanced Services First Report and Order*, we required an incumbent LEC, when space is legitimately exhausted in a particular incumbent LEC structure, "to permit collocation in adjacent controlled environmental vaults or similar structures to the extent technically feasible."[98] These vaults or similar structures are located on the incumbent LEC's property. We recognized that an adjacent structure would have to be consistent with zoning and other state and local requirements, and that the incumbent LEC might exercise some control over an adjacent structure's design or construction parameters.[99] We required, however, that "[t]he

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[94] *See Texas Commission Order No. 51, supra* note 41, at 1-2.

[95] 47 C.F.R. § 51.301(c)(8).

[96] *Local Competition First Report and Order*, 11 FCC Rcd at 15577-78, ¶ 155.

[97] *See Bell Atlantic Dec. 17, 1999 Letter, supra* note 70, at att., p. 1

[98] *Advanced Services First Report and Order*, 14 FCC Rcd at 4786, ¶ 44; *see* 47 C.F.R. § 51.323(k)(3).

[99] *Advanced Services First Report and Order*, 14 FCC Rcd at 4786, ¶ 44.

incumbent LEC must permit the new entrant to construct or otherwise procure such an adjacent structure, subject only to reasonable safety and maintenance requirements."[100] In *GTE v. FCC*, the D.C. Circuit affirmed these requirements.[101] The court determined that section 251(c)(6) authorizes us to require incumbent LECs to make collocation space available on their premises beyond particular structures, such as central offices, where space within the structures is legitimately exhausted.[102] The court also stated that our adjacent collocation "rule clearly furthers the purpose underlying section 251(c)(6)" and is "eminently reasonable."[103]

41. In its petition, Sprint contends that certain incumbent LECs are not allowing competitive LECs to construct adjacent vaults when space is exhausted within an office and asks that we clarify that such construction is required.[104] Ameritech states that allowing competitive LECs to construct controlled environmental vaults on land surrounding an incumbent LEC structure would be inconsistent with the language of section 251(c)(6) of the Communication Act, the public interest, and the definition of "premises" in section 51.5 of our rules.[105]

42. Ameritech's argument regarding the language of section 251(c)(6) is similar to the argument the D.C. Circuit rejected in *GTE v. FCC*, where the court made clear that our adjacent collocation requirements are permissible under section 251(c)(6).[106] Consistent with the court's opinion, we conclude that the language of section 251(c)(6) does not restrict mandatory physical collocation to places within incumbent LEC structures. Instead, section 251(c)(6) requires physical collocation "*at* the premises of the local exchange carrier."[107] We find that this term encompasses land owned, leased, or controlled by an incumbent LEC as well as any incumbent LEC network structure on such land.[108]

43. We also conclude that requiring an incumbent LEC to permit collocation in adjacent controlled environmental vaults or similar structures, when physical collocation space is

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[100] 47 C.F.R. § 51.323(k)(3); *Advanced Services First Report and Order*, 14 FCC Rcd at 4786, ¶ 44.

[101] *GTE v. FCC*, 205 F.3d at 425.

[102] *Id.*

[103] *Id.*

[104] Sprint Petition at 1-4; *see* AT&T Reply at 2.

[105] Ameritech Comments at 3-4.

[106] *See GTE v. FCC*, 205 F.3d at 425.

[107] 47 U.S.C. § 251(c)(6) (emphasis added).

[108] We note that at least some definitions of "premises" encompass land adjacent to a structure. *See, e.g.*, Mariam Webster's Collegiate Dictionary, 920 (10th ed. 1994) (defining premises as "a tract of land with the buildings thereon); Black's Law Dictionary, 1199 (7th ed. 1999) (defining premises as "a house or building along with its grounds"); 47 C.F.R. § 68.3 (defining "premises" as generally meaning "a dwelling unit, other building or a legal unit of real property on which a dwelling unit is located . . .").

otherwise exhausted, is consistent with the procompetitive purposes of section 251(c)(6).[109] As we indicated in the *Advanced Services First Report & Order*, such a requirement is an effective means of ensuring that competitive LECs can compete with the incumbent LEC even when no physical collocation space is available within an incumbent LEC structure.[110]

44. We recognize, however, that Ameritech has claimed that collocation in controlled environmental vaults that a competitive LEC constructs or procures on land adjacent to an incumbent LEC structure is inconsistent with the definition of "premises" in section 51.5 of our rules.[111] The Commission adopted that definition in the *Local Competition Order*, after recognizing that neither the 1996 Act nor its legislative history defines "premises" and that in other contexts "premises" is defined in varying ways.[112] The Commission determined that it should define "premises" broadly in order to permit competitive LECs to collocate at a broad range of points under incumbent LEC control.[113] The Commission adopted the definition in section 51.5, under which "[p]remises refers to an incumbent LEC's central offices and serving wire centers, as well as all buildings or similar structures owned or leased by an incumbent LEC that house incumbent LEC facilities on public rights-of-way, including but not limited to vaults containing loop concentrators or similar structures."[114] To avoid any possible confusion regarding this matter, we amend that definition to make clear that "premises" includes all buildings and similar structures owned, leased, or otherwise controlled by the incumbent LEC that house its network facilities, all structures that house incumbent LEC facilities on public rights-of-way, and all land owned, leased, or otherwise controlled by an incumbent LEC that is adjacent to these structures.[115] This definition, of course, excludes land and buildings in which the incumbent LEC has no interest. In that circumstance, the incumbent LEC and its competitors have an equal opportunity to obtain space within which to locate their equipment.

45. We also clarify that under section 51.323(k)(3) of our rules, an incumbent LEC must make available collocation in adjacent controlled environmental vaults or similar structures, to the extent technically feasible, at premises where physical collocation space is legitimately exhausted, even if virtual collocation space is not exhausted.[116] This approach is consistent with the language of section 251(c)(6), which permits an incumbent LEC to substitute virtual collocation for physical collocation only when "physical collocation is not practical for technical

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[109] *Local Competition First Report and Order*, 11 FCC Rcd at 15791, ¶ 573.

[110] *Advanced Services First Report and Order*, 14 FCC Rcd at 4786, ¶ 44.

[111] Ameritech Comments at 2.

[112] *Local Competition First Report and Order*, 11 FCC Rcd at 15791, ¶ 573.

[113] *Id.*

[114] 47 C.F.R. § 51.5.

[115] *See* Sprint Reply at 3.

[116] We did not make clear our intent in this area in the *Advanced Services First Report and Order*. *See Advanced Services First Report and Order*, 14 FCC Rcd at 4786, ¶ 44.

reasons or because of space limitations."[117] It also furthers the purposes behind section 251(c)(6), because it will increase the collocation options available to requesting telecommunications carriers in situations where no space within an incumbent LEC structure is available for physical collocation. We do not now require, however, that an incumbent LEC must permit collocation in adjacent controlled environmental vaults or similar structures when physical collocation space within an incumbent LEC structure is not exhausted.[118]

46. If collocation space becomes available in a previously exhausted incumbent LEC structure, the incumbent LEC must obtain the state commission's express approval before requiring a competitive LEC to move, or prohibiting a competitive LEC from moving, a collocation arrangement into that structure, unless the incumbent LEC and the collocator have an interconnection agreement that expressly provides for a different outcome. Instead, absent such state approval, the incumbent LEC must continue to allow collocation in any adjacent controlled environmental vault or similar structure that a competitive LEC has constructed or otherwise procured.[119] We conclude that these limitations are necessary to ensure that incumbent LECs do not unreasonably or discriminatorily infringe a collocator's physical collocation rights. For instance, an incumbent could potentially delay making collocation space available within a structure until after a competitive LEC had completed construction of an adjacent arrangement. Similarly, a collocator might wish to replace an adjacent collocation arrangement with collocation within a central office or remote terminal in order to significantly improve the quality of its telecommunications services. State oversight should help prevent incumbent LEC abuses in these areas.

47. Where technically feasible, an incumbent LEC must make physical collocation available in any incumbent LEC structure that houses network facilities and has space available for collocation.[120] Such structures include, to the extent technically feasible, central offices, controlled environmental vaults, controlled environmental huts, cabinets, pedestals, and other remote terminals. As we stated in the *UNE Remand Order*, our collocation rules apply to collocation at any technically feasible point, from the largest central office to the most compact feeder distribution interface.[121] Whenever physical collocation space becomes exhausted within

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[117] 47 U.S.C. § 251(c)(6).

[118] We note that in part V.D, *infra*, we invite comment on whether we should require that an incumbent LEC permit adjacent collocation at remote premises even when physical collocation space is available within an incumbent LEC's structure at that premises.

[119] *See DSLnet Dec. 3, 1999 Letter*, *supra* note 77, at 7.

[120] *Advanced Services First Report and Order*, 14 FCC Rcd at 4784-85, ¶ 42; *see also UNE Remand Order*, 15 FCC Rcd at 3796, ¶ 221.

[121] *UNE Remand Order*, 15 FCC Rcd at 3796, ¶ 221. We note that the *UNE Remand Order*, which was released after the *Advanced Services First Report and Order*, defines controlled environmental vaults as being located below ground and controlled environmental huts as being located above ground. *Id.* We are amending our collocation rules to make clear our intent to require collocation in either controlled environmental huts or vaults, as well as other remote terminals, in appropriate circumstances.

any of these structures, the incumbent must permit a competitive LEC to construct its own physical collocation structure as described above.[122]

C. Reserving Space for Future Use

1. Background

48. Under section 251(c)(6) of the Communications Act, an incumbent LEC must provide physical collocation unless it demonstrates to the state commission that "physical collocation is not practical for technical reasons or because of space limitations."[123] In the *Local Competition First Report and Order*, the Commission recognized that incumbent LECs should be allowed to retain a limited amount of floor space for specific future uses.[124] The Commission specified, however, that incumbent LECs may not reserve space for future use on terms more favorable than those that apply to other telecommunications carriers seeking to reserve collocation space for their own future uses.[125] In the *Advanced Services First Report and Order*, the Commission did not adopt any new warehousing requirements, despite Sprint's request that we preclude incumbent LECs from reserving collocation space beyond their needs for the next year.[126]

49. In its petition, Sprint asks that we limit incumbent LEC and competitive LEC reservations of potential collocation space to one year.[127] Sprint also asks that we require that any reservation of collocation space be made pursuant to specific business plans to utilize that space. Sprint argues that, absent these actions, incumbent LECs will reserve excessive space in order to limit the amount of collocation space available to competitors.[128] Several incumbent LECs state that Sprint proposed similar actions previously in this proceeding. These parties contend that the

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[122] We are amending section 51.323(k)(3) of our rules to make clear that a competitive LEC may hire a third party to construct an adjacent collocation arrangement. *See Advanced Services First Report and Order*, 14 FCC Rcd at 4786, ¶ 44 (requiring that an incumbent LEC permit a new entrant to construct or otherwise procure an adjacent collocation arrangement in certain circumstances).

[123] 47 U.S.C. § 251(c)(6).

[124] *Local Competition First Report and Order*, 11 FCC Rcd at 15805, ¶ 604; *see* 47 C.F.R. § 51.323(f)(4).

[125] *Local Competition First Report and Order*, 11 FCC Rcd at 15805-06, ¶ 604; *see* 47 C.F.R. § 51.323(f)(4).

[126] *Compare Advanced Services First Report and Order*, 14 FCC Rcd at 4791-94, ¶¶ 56-60 *with* Sprint Sept. 25, 1998 Comments at 17-18.

[127] Sprint now acknowledges that the space reservation period for common system equipment may properly differ from the space reservation period for transmission equipment. Sprint Reply at 7; *see also* GTE Comments at 3 (asserting that a one-year limitation on reserving space for common system equipment would prevent rational network planning and expansion); SBC Comments at 7-9; note 136, *infra*.

[128] Sprint Petition at 7-9; *see also* AT&T Comments at 2 (urging that where an incumbent LEC claims that space is exhausted at a particular premises, the state commission should be required to ensure that space reservations by the incumbent LEC or its affiliates are limited to one year and justified by specific business plans); *Rhythms Oct. 19, 1999 Letter*, *supra* note 7, at 9 (incumbent LECs' practice of reserving central office space for three or more years is anticompetitive and problematic for DSL carriers, such as Rhythms, that are only two years old).

Commission has already rejected Sprint's proposals and should do so again.[129] Incumbent LECs also maintain that existing safeguards adequately protect against hoarding of space,[130] that effective network growth and service deployment requires considerably longer than a one-year planning horizon,[131] and that the Commission should not restrict the state commissions' discretion in resolving collocation space disputes.[132]

2. Discussion

50. In the *Advanced Services First Report and Order*, we recognized that incumbent LECs have the incentive and capability to impede competition by reducing the amount of space available for collocation by competitors.[133] We conclude that space reservation policies should recognize both the importance of providing physical collocation to competitive LECs as well as incumbent LECs' and competitive LECs' need to reserve space to meet the future needs of their customers.[134] However, as competitive LECs point out, excessive space reservations can create

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[129] Ameritech Comments at 8; Bell Atlantic Comments 8; BellSouth Comments at 13; SBC Comments at 5.

[130] *E.g.*, Ameritech Comments at 8-9 (arguing that safeguards such as central office tours and state commission review of floor plans in space exhaustion situations protect against hoarding).

[131] *Id.* (arguing that a one-year limit on space reservations would make long-term network planning virtually impossible); Bell Atlantic Comments 8-10 (stating that its planning horizon for infrastructure growth is at least five years); BellSouth Comments at 13; GTE Comments at 2-3 (arguing that a one-year limit would be totally unreasonable for switching systems, main distribution frames, and power plants); SBC Comments at 8-9 (one-year reservation period ignores incumbent LECs' and competitive LECs' need to reserve space for a sufficient time to decrease the likelihood that they will run out of space before more becomes available); US WEST Comments at 7-8 (stating that Sprint's proposal could delay switch deployment and postpone access to unbundled network elements); Letter from James K. Smith, Executive Director, Federal Regulatory, SBC, to William A. Kehoe, FCC, 1-2 (filed Mar. 2, 2000) (arguing that engineering concerns require space reservation period of 20 years for space for common system equipment, such as switches and power equipment).

Although we recognize that US West is now operating as "Qwest,", *see Qwest Communications International Inc. and US West, Inc., Applications For Consent to Transfer Control of Domestic and International Sections 214 and 310 Authorizations and Application to Transfer Control of a Submarine Cable Landing License*, CC Docket No. 99-272, Memorandum Opinion and Order, FCC 00-91 (rel. Mar. 10, 2000), we nonetheless refer to "US WEST" in this Order, rather than to Qwest, because the bulk of its filings in these dockets were made prior to completion of the merger.

[132] Ameritech Comments at 9; Bell Atlantic Comments 9-10; GTE Comments at 2 (asserting that state commissions should consider local space requirements and evaluate regional growth); SBC Comments at 6 (maintaining that states are requiring incumbent LEC to justify their claims of space shortages by explaining their space reservations); Bell Atlantic Reply at 6 (Commission should not restrict state commissions' discretion in determining the availability of space in each central office). *But see* Sprint Reply at 9 (contending that the Commission should adopt a national rule, rather than allowing states to adopt differing reservation standards, in order to foster nationwide deployment of advanced services).

[133] *Advanced Services First Report and Order*, 14 FCC Rcd at 4793, ¶ 56.

[134] *See, e.g.*, SBC at 7; Bell Atlantic Reply at 6-7 (stating that incumbent LECs and competitive LECs both need the ability to group similar equipment in common locations and provide for future growth in adjacent areas); *see* (continued....)

artificial space exhaustion that would prevent the timely deployment of advanced services.[135] This can be a particular problem for new entrants, whose space needs remain unfilled as space reserved for future use sits idle in many incumbent LEC premises. In addition, in premises where collocation space is not exhausted, the incumbent may have incentives to reserve for its own future use all or virtually all the previously conditioned space suitable for collocation. Competitive LECs will continue to encounter excessive delays in their collocation efforts if incumbent LECs are able to reserve for their own future use disproportionate portions of this space.

51. Several state commissions have taken significant steps to limit the period for which incumbent LECs and collocators can reserve space in incumbent LEC premises. The California Public Utilities Commission (California Commission), for example, has adopted an interim policy that limits space reservations in Pacific Bell (Pacific) premises to one year for equipment similar to that used by collocators and five years for other equipment.[136] Similarly, the Texas Commission limits space reservations by SWBT to one year for transport equipment, three years for digital cross-connect systems, and five years for switching equipment, power equipment, and main distribution frames.[137] In addition, the Texas Commission prohibits incumbent LECs from reserving a disproportionate amount of conditioned space.[138] The Washington Utilities and Transportation Commission (Washington Commission) limits space reservations by U S WEST to one year for transmission equipment and three years for switching equipment.[139]

52. We believe that the state commissions should have the primary responsibility for resolving space reservation disputes. Because of their knowledge of local circumstances, the state commissions are in the best position to determine whether a carrier has reserved more space than necessary to meet its future needs. Given this knowledge, the state commissions also are in the best position to assess whether excessive space reservations are impeding physical collocation. We strongly urge the state commissions to adopt space reservation policies similar

(Continued from previous page)
also SBC Comments at 9 (arguing that technical factors preclude placing transmission equipment within the growth path of common system equipment).

[135] *E.g.*, *Rhythms Oct. 19, 1999 Letter*, *supra* note 7, at 9.

[136] *Rulemaking on the Commission's Own Motion to Govern Open Access to Bottleneck Services and Establish a Framework for Network Architecture Development of Dominant Networks*, Decision 98-12-069, 1998 WL 995609, at 68-69 (Ca. PUC 1998). The California Commission also requires that any entity, including Pacific, that fails to use space reserved for "similar" equipment within one year to forfeit a deposit that would be applied against the collocation charges of the next entity to collocate in the relevant central office. *Id.* at *69.

[137] *Texas Commission Order No. 59*, *supra* note 42, at 3.

[138] *Id.*

[139] *MFS Communication Co.*, Docket Nos. UT 960323 *et al.*, 1998 USWL 996190 (Wash. Util. & Trans. Comm'n 1998). Other state commissions also have acted in this area. *See, e.g.*, *AT&T Communications of the Midwest*, Docket No. P-442, 407/M-96-939, 1997 USWL 178602 (Minn. PUC 1997) (rejecting GTE request that it be permitted to reserve central office space for five years); *see also AT&T Communications of Hawaii*, Docket No. 96-0329, Decision No. 15229, 1996 WL 762358 (Hawaii PUC 1996) (same).

to the state policies described above. We decline, however, to mandate specific space reservation periods at this time that would apply where a state does not set its own standard. Unlike the situation with regard to provisioning intervals, the record before us does not establish a need for immediate Commission action to keep incumbent LECs' space reservation policies from limiting competitive LECs' collocation opportunities. As described in the *Second Further Notice*, below, however, we invite comment on whether this is an area in which we should adopt national standards governing the periods for which incumbent LECs and collocating carriers can reserve space for future use in incumbent LEC premises that would apply except to the extent a state sets its own standard.[140]

53. As indicated previously,[141] our rules require that an incumbent LEC may not reserve space for future use on terms more favorable than those that apply to other telecommunications carriers seeking to reserve collocation space for their own future uses. Our rules, however, do not directly preclude an incumbent LEC from allowing an affiliate to reserve space for future use on preferential terms and thus do not ensure that all competitors are able to reserve space on a nondiscriminatory basis. In order to deter potential discrimination, we amend our rules to specify that neither an incumbent LEC nor any incumbent LEC affiliate may reserve space for future use on preferential terms.

D. Other Issues

1. Safety Standards

54. In the *Advanced Services First Report and Order*, we determined that compliance with the Network Equipment and Building Specifications (NEBS) Level 1 safety requirements generally is sufficient to protect competitive LEC and incumbent LEC equipment from harm from equipment that competitive LECs collocate in incumbent LEC offices.[142] Certain competitive LECs maintain that incumbent LECs are continuing to subject equipment that meets NEBS Level 1 safety requirements to additional safety and performance review. These competitive LECs request that we clarify that incumbent LECs must allow competitive LECs to collocate equipment used for interconnection or access to unbundled elements if such equipment has received a NEBS Level 1 safety certificate.[143]

55. We agree that an incumbent LEC may not preclude collocation of any equipment necessary for interconnection or access to unbundled network elements based on performance, as opposed to safety, standards. In particular, as we determined in the *Advanced Services First*

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[140] *See* part V.E, *infra*.

[141] *See* para. 48, *supra*.

[142] *Advanced Services First Report and Order*, 14 FCC Rcd at 4781, ¶ 35.

[143] *BroadSpan Aug. 4, 1999 Letter*, *supra* note 7, at Att, at att., p. 2; Letter from Paul D. Hudson, Counsel for DSLnet, to Magalie Roman Salas, Secretary, FCC, at 1 (filed Oct. 1, 1999) (*DSLnet Oct. 1, 1999 Letter*); *Allegiance Dec. 10, 1999 Letter*, *supra* note 32, at 4.

Report and Order, an incumbent LEC cannot claim NEBS performance, as opposed to safety, requirements as grounds for refusing to permit collocation of competitive LEC equipment.[144]

56. We recognized, however, in the *Advanced Services First Report and Order*, that an incumbent LEC may impose safety standards in addition to the NEBS safety standards, provided the incumbent does not impose safety requirements that are more stringent than the safety requirements it imposes on its own equipment that it locates at its premises.[145] Because we remain unconvinced that the NEBS safety standards address all legitimate safety concerns that may arise, we do not preclude incumbent LECs from imposing on their own equipment and collocators' equipment safety standards in addition to the NEBS Level 1 safety requirements. Any such standards must be reasonable and nondiscriminatory.[146]

57. In the *Advanced Services First Report and Order*, we required that an incumbent LEC that denies collocation of a competitor's equipment, citing safety standards, must provide to the competitive LEC within five business days a list of all equipment that the incumbent LEC locates at the premises in question, together with an affidavit attesting that all of that equipment meets or exceeds the safety standard that the incumbent LEC contends the competitor's equipment fails to meet.[147] To ensure that incumbent LECs do not use safety concerns as a guise for restricting collocators' equipment choices, we also require that this affidavit set forth in detail: the exact safety requirement that the requesting carrier's equipment does not satisfy; the incumbent LEC's basis for concluding that the requesting carrier's equipment does not meet this safety requirement; and the incumbent LEC's basis for concluding why collocation of equipment not meeting this safety requirement would compromise network safety.

2. Access to Collocation Space

58. In the *Advanced Services First Report and Order*, we required that a requesting telecommunications carrier must have access to its collocated equipment 24 hours a day, seven days a week. We reasoned that this access would enable the collocator to service and maintain equipment, and respond to customer outages in a timely manner.[148]

59. We conclude that a requesting telecommunications carrier also must have reasonable access to its designated collocation space while the incumbent LEC prepares that space for collocation.[149] Access to the collocation space will help the requesting carrier promptly identify

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[144] *Advanced Services First Report and Order*, 14 FCC Rcd at 4781, ¶ 35.

[145] *Id.* at 4781-82, ¶ 36.

[146] 47 U.S.C. § 251(c)(6).

[147] *Advanced Services First Report and Order*, 14 FCC Rcd at 4781-82, ¶ 36; 47 C.F.R. § 51.323(b).

[148] *Advanced Services First Report and Order*, 14 FCC Rcd at 4789-90, ¶ 49.

[149] Letter from Eric J. Branfman, Counsel for CoreComm, to Magalie Roman Salas, Secretary, FCC, at att., p. 1 (filed Dec. 13, 1999) (*CoreComm Dec. 13, 1999 Letter*).

any defects in the incumbent LEC's work and thus reduce collocation delays. We are amending our rules to require that incumbent LECs allow such access.

60. Bell Atlantic asserts that it has adopted "safe-time" work practices that limit the times during which its technicians and contractors ordinarily perform non-critical work on central office equipment located in close proximity to operational equipment.[150] We do not preclude an incumbent LEC from applying reasonable and nondiscriminatory "safe-time" work practices to itself and collocators.[151] To be "reasonable," a safe-time work practice must apply only to activities that pose a substantial risk of significant harm to the incumbent's or other collocators' equipment or services.[152] To be nondiscriminatory, a practice must apply equally, both on its face and in actual execution, to the incumbent's own technicians and contractors and to each collocator's technicians and contractors. Safe-time work practices that the incumbent may waive to keep from competitively disadvantaging its or an affiliate's operations or that prevent a collocator from restoring service in the event of an outage are inherently suspect and must receive explicit state commission approval.[153]

3. Floor Plans

61. In the *Local Competition First Report and Order*, the Commission required any incumbent LEC that denies a request for physical collocation to provide the state commission with detailed floor plans or diagrams of its premises. The Commission reasoned that these plans or diagrams would help the state commission evaluate claims of space exhaustion.[154] To ensure that each state commission has sufficient information to evaluate space exhaustion claims, we require that each incumbent LEC provide the state commission with all information necessary for the state commission to evaluate the reasonableness of the incumbent LEC's and its affiliates' reservations of space for future growth. This information shall include any information the state commission may require to implement its specific space reservation policies, including which space, if any, the incumbent or any of its affiliates have reserved for future use. The incumbent shall also provide the state commission with a detailed description of the specific future uses for which the space has been reserved.[155]

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[150] Bell Atlantic Comments at att. A, p. 3-4.

[151] *See Advanced Services First Report and Order*, 13 FCC Rcd at 4787, ¶ 47 (permitting incumbent LECs to impose reasonable and nondiscriminatory security measures).

[152] *See* Letter from William Bailey, NorthPoint, & Jason Oxman, Covad, to Magalie Roman Salas, Secretary, FCC, at 2-4 (filed June 29, 2000) (*NorthPoint June 29, 2000 Letter*); *compare* Letter from Thomas R. Parker, *et al.* Verizon Communications, to Magalie Roman Salas, Secretary, FCC, at 1-4 (filed July 18, 2000) (*Verizon July 18, , 2000 Letter*) (arguing that safe-time work practices are reasonable security measures).

[153] *See id.* at 3.

[154] *Local Competition First Report and Order*, 11 FCC Rcd at 15805, ¶ 602.

[155] Sprint Petition at 7.

62. An incumbent LEC shall permit any requesting telecommunications carrier to inspect any floor plans or diagrams that the incumbent LEC provides a state commission, subject to any nondisclosure protections the state commission deems appropriate.[156]

4. Nonstandard Equipment

63. CoreComm requests that we clarify that an incumbent LEC must not impose a single "standard" bay size that forces competitive LECs using wider industry standard equipment to make requests for "nonstandard" collocation that impose needless delay.[157] Each incumbent LEC must implement internal controls, methods, and procedures that ensure timely and full compliance with section 251(c)(6) and our implementing rules, including the time limits set forth in part IV.D, above. In view of those time limits, we see no need to delve into the details of the collocation application process at this time. We therefore decline to issue the requested clarification.

5. Space Availability Reports

64. In the *Advanced Services First Report and Order*, we required that an incumbent LEC must provide a requesting telecommunications carrier with a report indicating the space available for collocation within a particular premises.[158] In response to the Indiana Commission's request, we make clear that the incumbent LEC must provide this report within ten calendar days, as opposed to ten business days, after it is requested by a telecommunications carrier.[159]

6. Spectrum Management Disputes

65. In the *Advanced Services First Report and Order*, we adopted spectrum management rules designed to help telecommunications carriers deploy advanced services without significantly degrading the quality of other advanced services or traditional voice band services.[160] We required, among other items, that a carrier that claims its services are being

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[156] *CoreComm Dec. 13, 1999 Letter*, *supra* note 149, at att., p. 1.

[157] *Id.*

[158] *Advanced Services First Report and Order*, 14 FCC Rcd at 4793, ¶ 58.

[159] Letter from Sandra Ibaugh, Director of Telecommunications, Indiana Commission, to Magalie Roman Salas, Secretary, FCC, at att. B, p. 1-2 (filed Jan. 24, 2000) (*Indiana Commission Jan. 24, 2000 Letter*); *see Advanced Services First Report and Order*, 14 FCC Rcd at 4793, ¶ 58 (requiring submission of this report "within ten days" of the request).

[160] *Advanced Services First Report and Order*, 14 FCC Rcd at 4798-801, ¶¶ 70-77. Spectrum management refers to loop plant administration and other deployment practices that are designed to prevent harmful interference between services and technologies that use the same cable. *Advanced Services First Report and Order*, 14 FCC Rcd at 4799, ¶ 71. It includes choices concerning which technologies are deployed over which pairs of copper wire that are bundled together within a binder group of 25, 50, or 100 copper pairs. *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, CC Docket No. 98-147, Third Report and Order in CC Docket No. 98-147 and Fourth Report and Order in CC Docket No. 96-98, 14 FCC Rcd 20912, 20989, n.378 (1999) (*Line Sharing Order*).

significantly degraded by another carrier's services "must notify the causing carrier and allow that carrier a reasonable opportunity to correct the problem."[161] Sprint requests that we clarify that incumbent LECs are in all instances the initial point of contact for service degradation disputes among competitive LECs.[162] Ameritech, Bell Atlantic, BellSouth, and SBC contend that incumbent LECs should not have to act as clearinghouses for those disputes.[163]

66. In our *Advanced Services Third Report and Order*,[164] we confirmed that an incumbent LEC need not act as the initial point of contact in all service degradation disputes and adopted procedures to be followed in the event a competitive LEC does not know with certainty the identity of the carrier causing the degradation. Because we addressed this area fully in that *Order*, we find that no further action on this Sprint request is warranted.

7. Takings

67. US WEST maintains that much of Sprint's petition is predicated on an incorrect notion of private property. U S WEST argues that the fifth amendment fully protects its private property and that Sprint's dissatisfaction with incumbent LECs' collocation policies cannot justify more intrusive governmental occupation of the incumbent's premises. U S WEST maintains that collocation constitutes a physical taking of property for which the incumbent LEC is entitled to just compensation and for which the United States may be liable.[165]

68. To a large extent, US WEST's concerns regarding possible infringement of its fifth amendment rights arise from actions in the *Advanced Services First Report and Order* that the D.C. Circuit has affirmed,[166] Sprint proposals that we reject,[167] or Sprint proposals that, as a consequence of the D.C. Circuit's decision, we could only act on after further deliberation.[168] We note that we believe that our actions in this *Order* are well within the limits of "the ordinary and fair meaning" of section 251(c)(6) as well as the Congressional intent behind that provision.[169]

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[161] *Advanced Services First Report and Order*, 14 FCC Rcd at 4800, ¶ 75.

[162] Sprint Petition at 6-7; *see* AT&T Comments at 2-3.

[163] Ameritech Comments at 7; Bell Atlantic Comments at 7-10; BellSouth Comments at 12; SBC Comments at 13-14.

[164] *Line Sharing Order*, 14 FCC Rcd at 21005, ¶ 205.

[165] U S WEST Comments at 1-3.

[166] *See* parts IV.A, *supra* (adjacent collocation).

[167] *See* part IV.B, *supra*, & V.E, *infra* (reserving space for future use).

[168] *See* part V.C, *infra* (inviting comment on physical collocation issues).

[169] *AT&T v. Iowa Util. Bd.*, 525 U.S. at 390 (*quoted in GTE v. FCC*, 205 F.3d at 423).

69. Moreover, U S WEST fails to provide evidence that our collocation rules are facially unconstitutional. In *Gulf Power v. United States*,[170] the United States Court of Appeals for the Eleventh Circuit held that although the 1996 Act's mandatory access provisions with regard to utility poles effect a *per se* taking of property under the fifth amendment, those provisions are not facially unconstitutional because they provide a constitutionally adequate process to ensure just compensation.[171] Even if requiring incumbent LECs to provide collocation in accordance with our rules constitutes a taking under the fifth amendment, U S WEST has failed to show that it is unjustly compensated for this taking. Thus, we conclude that U S WEST has failed to show that our collocation rules effect an unconstitutional taking under the fifth amendment.

V. SECOND FURTHER NOTICE OF PROPOSED RULEMAKING IN CC DOCKET NO. 98-147

A. Overview

70. As stated above, in *GTE v. FCC*, the D.C. Circuit vacated and remanded certain of the collocation rules we had adopted in the *Advanced Services First Report and Order*.[172] In this *Second Further Notice*, we invite comment on what actions we should take in response to that judicial decision. We also invite comment on changing the minimum space requirements for physical collocation, on issues relating to collocation at remote incumbent LEC premises, and on whether we should modify our collocation rules to facilitate line sharing and subloop unbundling. We invite comment, in addition, on adopting provisioning intervals shorter than 90 calendar days and on adopting a national policy limiting the period for which potential collocation space can be reserved for future use.

B. Meaning of "Necessary" under Section 251(c)(6)

1. Equipment

a) Background

71. Section 251(c)(6) of the Communications Act requires incumbent LECs to permit physical collocation of equipment "necessary for interconnection or access to unbundled network elements."[173] In the *Local Competition First Report and Order*, the Commission interpreted section 251(c)(6) as requiring incumbent LECs to permit competitors to collocate equipment that

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[170] *Gulf Power Co. v. United States*, 187 F.3d 1324 (11th Cir. 1999) (*Gulf Power*), *aff'g* 998 F. Supp. 1386 (N.D. Fla. 1998), *petition for rehearing pending on other grounds*.

[171] The plaintiff utilities companies brought suit against the United States and the Federal Communications Commission, claiming that the 1996 Act's amendment to the Pole Attachments Act was facially unconstitutional because it took the utilities' property without adequate process for securing just compensation. *Gulf Power*, 187 F.3d at 1324-27, 1339; *see also* 47 U.S.C. § 224(f).

[172] *GTE v. FCC*, 205 F.3d at 422-24.

[173] 47 U.S.C. § 251(c)(6).

is "used" or "useful" for either interconnection or access to unbundled network elements.[174] Consistent with this interpretation, the Commission concluded that competitive LECs may collocate transmission equipment, including optical terminating equipment and multiplexers, on incumbent LEC premises.[175] The Commission also concluded that section 251(c)(6) does not require that an incumbent LEC permit the collocation of switching equipment or equipment used to provide enhanced services.[176]

72. In the *Advanced Services First Report and Order*, we interpreted the rules we had adopted in the *Local Competition Proceeding* as requiring incumbent LECs to permit collocation of any equipment that is "used or useful" for either interconnection or access to unbundled network elements, regardless of whether such equipment includes a switching functionality, provides enhanced services capabilities, or offers other functionalities.[177] We concluded that those rules required incumbent LECs to permit collocation of such equipment as DSLAMs, routers, asynchronous transfer mode (ATM) multiplexers, and remote switching modules.[178] We also concluded that an incumbent LEC must not limit a competitor's ability to use all the features, functions, and capabilities of collocated equipment, including, but not limited to, switching and routing features and functions.[179]

73. In *GTE v. FCC*, the D.C. Circuit determined that our interpretation of "necessary" under section 251(c)(6) "seem[ed] overly broad and disconnected from [that provision's] statutory purpose."[180] The court vacated and remanded the *Advanced Services First Report and Order* to the extent it required that an incumbent LEC permit physical collocation of equipment that is not "directly related to and thus necessary, required, or indispensable to 'interconnection or access to unbundled network elements.'"[181] The court made clear that we would have the opportunity to refine our collocation equipment requirements on remand as long as we stayed "within the limits of 'the ordinary and fair meaning'" of section 251(c)(6).[182]

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[174] *Local Competition First Report and Order*, 11 FCC Rcd at 15794-95, ¶¶ 579-81.

[175] *Id.* at 15794, ¶ 580.

[176] *Id.* at 15794, ¶ 581.

[177] *Advanced Services First Report and Order*, 14 FCC Rcd at 4776, ¶ 28.

[178] *Id.*

[179] *Id.*

[180] *GTE v. FCC*, 205 F.3d at 422.

[181] *Id.* at 424.

[182] *Id.* (*quoting AT&T v. Iowa Util. Bd.*, 525 U.S. at 366).

b) Discussion

74. We invite comment on the meaning of "necessary," as section 251(c)(6) uses that term. The D.C. Circuit specifically stated that it did not vacate the *Advanced Services First Report and Order* to the extent it requires that an incumbent LEC permit physical collocation of equipment "that is directly related to and thus necessary, required, or indispensable to 'interconnection or access to unbundled network elements.'"[183] We note that this definition arguably excludes much of the equipment that incumbent LECs and their competitors use to serve their customers. We therefore invite comment on whether this definition is adequate to allow physical collocation as required by the Act. We ask whether the definition of "necessary" under section 251(c)(6) should instead require that an incumbent LEC permit physical collocation of equipment having additional capabilities, such as the multi-functional equipment incumbent LECs deploy in central offices and remote terminals. We also ask whether each proposed definition would be consistent with the statutory language and serve the statutory purpose of "seek[ing] to ensure competition in areas of advanced technology in telecommunications."[184]

75. We note that in the *UNE Remand Proceeding*, we concluded that a proprietary network element is "necessary" within the meaning of section 251(d)(2)(A) of the Communications Act "if, taking into consideration the availability of alternative elements outside the incumbent's network, including self-provisioning by a requesting carrier or acquiring an alternative from a third-party supplier, lack of access to that element would, as a practical, economic, and operational matter, *preclude* a requesting carrier from providing the services it seeks to offer."[185] We invite comment on whether we must adopt a similar definition of "necessary" for purposes of section 251(c)(6), given that "'[i]dentical words may have different meanings where the subject-matter to which the words refer is not the same in the several places where they are used, or the conditions are different.'"[186] We ask the commenters to propose alternative definitions of "necessary," and to explain why each proposed definition would be consistent with the statutory language and the purpose behind section 251(c)(6).

76. We also invite comment on the relationship between the phrase "necessary for interconnection or access to unbundled network elements" and the remaining language in section 251(c)(6). We note that section 251(c)(6) specifies that an incumbent LEC must provide any required physical collocation "on rates, terms, and conditions that are just, reasonable, and nondiscriminatory." Section 251(c)(6) also specifies that an incumbent LEC need not provide physical collocation where it is "not practical for technical reasons or because of space limitations." We ask the parties to address how, if at all, these statutory phrases should influence

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[183] *Id.*

[184] *Id.* at 421.

[185] *UNE Remand Order*, 15 FCC Rcd at 3721, ¶ 44 (emphasis in original).

[186] *U S WEST Communications, Inc. v. FCC*, 177 F.3d 1057, 1060 (D.C. Cir. 1999), *cert. denied*, 120 S.Ct. 1240 (2000) (*quoting Weaver v. USIA*, 87 F.3d 1429, 1437 (D.C. Cir. 1996)).

our interpretation of when physical collocation is necessary for interconnection or access to unbundled network elements.

77. In its opinion, the D.C. Circuit stated that section 251(c)(6) "seeks to ensure competition in areas of advanced technology in telecommunications."[187] We ask the parties to address whether Congress intended to restrict collocators to deployment of equipment that can only be used for interconnection or access to unbundled network elements even if that equipment is not the most efficient for providing telecommunications services. We seek comment on whether deployment of equipment that can only be used for interconnection or access to unbundled network elements will necessarily require competitors to provide service of a significantly lower quality than that which could be provided using equipment that incorporates other functions. We note that section 51.321(i) of our rules requires incumbent LECs to remove obsolete unused equipment from their premises in certain circumstances in order to increase the space available for collocation.[188] We invite comment on whether we must preclude collocators, including incumbent LEC affiliates, from deploying state-of-the-art equipment in the space made available through the operation of this rule.

78. We invite manufacturers to describe their telecommunications equipment offerings that are intended to be used for interconnection or access to unbundled network elements, the various features, functions, and capabilities of such equipment, and any advantages of including these features, functions, and capabilities in collocated equipment. We seek comment on whether or the extent to which we should consider whether it might be more efficient for manufacturers to design equipment with functions in addition to those needed for interconnection and access to unbundled network elements. We ask, in particular, whether section 251(c)(6) permits us to require that an incumbent LEC allow the collocation of such multi-functional equipment even though aspects of that equipment are not, as the statute mandates, necessary for interconnection or access to unbundled network elements.

79. Assuming that section 251(c)(6) permits such a requirement, we invite commenters to suggest "limiting standard[s]" we might employ to determine which functions are "unnecessary" and, therefore, should not be permitted in collocated equipment.[189] We ask whether any standard we might adopt in this area should distinguish between telecommunications and non-telecommunications functions.[190] We seek comment on whether any standard we adopt in this area should evolve as manufacturers develop equipment having additional capabilities. We ask the commenters to address how each proposed standard would affect manufacturers' incentives to develop equipment having features, functions, and capabilities that increase network

[187] *GTE v. FCC*, 205 F.3d at 421.

[188] 47 C.F.R. § 51.321(i); *Advanced Services First Report and Order*, 14 FCC Rcd at 4793-94, ¶ 60.

[189] *See AT&T v. Iowa Util. Bd.*, 525 U.S. at 388.

[190] *See GTE v. FCC*, 205 F.3d at 425 (suggesting that equipment enhancements that might facilitate payroll processing or data collection are not necessary for interconnection or access to unbundled network elements).

efficiency, lower consumer rates, or otherwise advance important statutory objectives.[191] We also ask manufacturers to discuss the effect each proposed standard would have on their research and development efforts and, in particular, whether any particular standard would reduce the funds available for developing equipment that incumbent LECs might deploy at their premises.

80. We seek comment on whether the deployment of equipment that provides no functionalities other than those directly related to, required for, or indispensable to interconnection or access to unbundled network elements would consume more or less space in the incumbent's premises than would equipment that has multiple functions. We also seek comment on the technical differences between such equipment and state-of-the-art multi-functional equipment. We ask, in particular, whether limiting collocators to less than state-of-the-art equipment would mean that incumbent LECs would have to reconfigure any part of their networks.

81. We request that competitive LECs describe the particular functionalities of the equipment they seek to collocate and explain how each functionality is necessary for interconnection, access to unbundled network elements, or both. We ask that incumbent LECs describe the functionalities of the equipment they or their affiliates plan to deploy at incumbent LEC premises, including remote premises, to provide services similar to those competitive LECs provide. We invite incumbent LECs to specify whether each of these functionalities should be permissible in competitors' physically collocated equipment and, if not, to explain in detail why excluding those functionalities from collocated equipment would be consistent with the language and purpose of section 251(c)(6). We ask, in addition, why excluding those functionalities from collocated equipment would be just, reasonable, and nondiscriminatory and, therefore, satisfy the requirements of sections 251(c)(2) and (3).

82. We recognize that carriers often provide service from remote terminals through digital loop carrier systems.[192] Indeed, providing advanced services through digital loop carrier systems is considered a typical method for deploying a next generation network, so we may find more carriers relying on digital loop carrier systems, specifically "next generation" digital loop carrier systems, in the future.[193] These "next generation" digital loop carrier systems contain, among other things, integrated line cards (often referred to as "plug-in cards") that are used to provide specific advanced services and other telecommunications services to consumers. Manufacturers recently have developed plug-in line cards that perform functions such as spectrum splitting and

[191] *See, e.g.*, 47 U.S.C. § 151 (establishing statutory purpose of "mak[ing] available, so far as possible, . . . a rapid, efficient, Nation-wide . . . wire and radio communication service . . .").

[192] Digital loop carrier (DLC) systems digitally encode an individual voice channel into a digital signal, and aggregate, or "multiplex," the traffic from several subscriber lines into DS1 or higher signals to improve transmission efficiency and range. *See Line Sharing Order*, 14 FCC Rcd at 20945-46, ¶ 69 n.152.

[193] *See* Walter Goralski, ADSL AND DSL TECHNOLOGIES 282-83, 288-89 (1998) (describing how carriers could use digital loop carrier systems to deploy advanced services); *see also* Letter from Paul K. Mancini, Vice President and Assistant General Counsel, SBC Communications, Inc., to Lawrence E. Strickling, Chief, Common Carrier Bureau, (filed Feb. 15, 2000) (*SBC Feb. 15, 2000 Letter*) (describing SBC's plans for using cards plugged into digital loop carrier systems).