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Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers; Implementation of the Local Competition Provisions of the Telecommunications Act of 1996; Deployment of Wireline Services Offering Advanced Telecommunications Capability; Final Rule and Proposed Rule

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 51

[CC Docket Nos. 01–338; CC Docket No. 96–98; CC Docket No. 98–147; FCC 03–36]

Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers; Implementation of the Local Competition Provisions of the Telecommunications Act of 1996; Deployment of Wireline Services Offering Advanced Telecommunications Capability

AGENCY: Federal Communications Commission.

ACTION: Final rule.

SUMMARY: In this document, the Federal Communications Commission (Commission) adopts rules which establish a new standard for determining the existence of impairment under section 251(d)(2) of the Act, sets forth a new list of unbundled network elements (UNEs), and creates a specifically defined role for the states in the unbundling inquiry. The new interpretation of the ''impair'' standard in section 251(d)(2) finds a requesting carrier to be impaired when lack of access to a facility in the incumbent LEC's network poses a barrier or barriers to entry, including operational and economic barriers, that are likely to make entry into a market uneconomic. The Commission reaffirms that the ''at a minimum'' language of section 251(d)(2) permits the Commission to take into account factors other than the ''impair'' and ''necessary'' standards, particularly important goals of the 1996 Act, when making unbundling determinations. The Commission applies its unbundling analysis to individual elements in a more granular manner than before. Under this more granular approach, the Commission determines whether impairment varies by geographic location, customer class, and service, including a consideration of the type and capacity of the facilities to be used.

DATES: Effective October 2, 2003.

FOR FURTHER INFORMATION CONTACT: Jeremy Miller, Attorney-Advisor, Wireline Competition Bureau, at (202) 418–1580 or via the Internet at *jmiller@fcc.gov.* The complete text of this Report and Order and Order on Remand is available for inspection and copying during normal business hours in the FCC Reference Information Center, Portals II, 445 12th Street, SW., Room CY–A257, Washington, DC 20554. Further information may also be obtained by calling the Wireline Competition Bureau's TTY number: (202) 418–0484.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's Report and Order and Order on Remand in CC Docket No. 01–338, CC Docket No. 96–98, and CC Docket No. 98–147; FCC 03–36, adopted February 20, 2003, and released August 21, 2003. The full text of this document may be purchased from the Commission's duplicating contractor, Qualex International, Portals II, 445 12th Street, SW., Room CY–B402, Washington, DC 20554, telephone (202) 863–2893, facsimile (202) 863–2898, or via e-mail *qualexint@aol.com.* It is also available on the Commission's Web site at *http://www.fcc.gov/Bureaus/Wireline_Competition/in-region_applications.*

Synopsis of the Report and Order and Order on Remand

1. *Background.* In the *Notice of Proposed Rulemaking (NPRM)* (67 FR 1947, Jan. 15, 2002), the Commission sought comment on many issues concerning the unbundling obligations of incumbent local exchange carriers (LECs) under section 251(c)(3) of the Communications Act of 1934, as amended by the Telecommunications Act of 1996 (the Act). After the Commission issued the *NPRM,* the United States Court of Appeals for the District of Columbia Circuit issued its opinion in *United States Telecom Association* v. *FCC (USTA),* in which it vacated and remanded the Commission's prior unbundling rules. The Commission issues this *Report and Order and Order on Remand* (Order) to complete the rulemaking it began with the *NPRM* and respond to the D.C. Circuit's concerns regarding the prior rules.

2. Section 251(c)(3) of the Act requires that incumbent LECs provide UNEs to other telecommunications carriers. Section 153(29) of the Act defines ''network element'' as ''a facility or equipment used in the provision of a telecommunications service,'' specifying that ''[s]uch term also includes features, functions, and capabilities that are provided by means of such facility or equipment, including subscriber numbers, databases, signaling systems, and information sufficient for billing and collection or used in the transmission, routing, or other provisions of a telecommunications service.'' Section 251(d)(2) of the Act establishes a general federal standard for use in determining the UNEs that must be made available by the incumbent LECs pursuant to section 251. Section 251(d)(2) provides that ''[i]n determining what network elements should be made available for purposes of section (c)(3), the Commission shall consider, at a minimum, whether ''(A) access to such network elements as are proprietary in nature is necessary; and (B) the failure to provide access to such network elements would impair the ability of the telecommunications carrier seeking access to provide the services that it seeks to offer.''

3. In addition, the Act preserves a state role in addressing unbundling issues. First, section 252 authorizes states to review and to arbitrate interconnection agreements for compliance with the requirements of sections 251 and 252 and this Commission's implementing rules. Second, section 251(d)(3) also preserves states' independent state law authority to address unbundling issues to the extent that the exercise of that authority does not conflict with federal law.

4. *Definition of Network Element.* The Commission interprets the definition of ''network element'' in section 153(29) to refer to an element of the incumbent's network that is capable of being used to provide a telecommunications service.

5. *Impair Standard.* The Commission finds a requesting carrier to be ''impaired'' under section 251(d)(2) when lack of access to an incumbent LEC network element poses a barrier or barriers to entry, including operational and economic barriers, that are likely to make entry into a market uneconomic. This granular analysis is informed by consideration of the relevant barriers to entry, as well as a careful examination of the evidence, especially marketplace evidence showing whether entry has already occurred in particular markets without reliance on the incumbent LEC's networks but instead through self-provisioning or reliance on third-party sources.

6. Several types of barriers to entry inform the ''impair'' analysis. Scale economies, particularly when combined with sunk costs and first mover advantages, can pose a powerful barrier to entry. The Commission will consider the pervasiveness of scale economies to determine whether, in combination with other factors, they are likely to make entry uneconomic. For similar reasons, the Commission also examines scope economies to determine whether they, too, could contribute to a barrier to entry. Sunk costs, particularly when combined with scale economies, can pose a formidable barrier to entry. First mover advantages can contribute to the factors described above. First mover advantages can include preferential access to buildings, access to rights of way, the higher risk of a new entrants'

failure (often exacerbated by high sunk costs), the fact that the incumbent LEC has substantial sunk capacity, operational difficulties faced by an entrant that have already been worked out by the incumbent LEC when it built out its network as a monopolist, consumers' reluctance to switch carriers, and advertising and brand name preference. The Commission also examines those barriers to entry that are solely or primarily within the control of the incumbent LEC. The Commission looks to these barriers because it is within the control of the incumbent LEC to eliminate them or mitigate their effects, which could eliminate the need to unbundle network elements to overcome them.

7. *Evidence of Impairment.* Actual marketplace evidence is the most persuasive and useful kind of evidence submitted to show that impairment does not exist, in particular granular evidence that new entrants are providing retail services in the relevant market using non-incumbent LEC facilities. The Commission gives substantial weight to evidence of alternative deployment, but will not find it conclusive or presumptive of no impairment without additional information. On the other hand, if the marketplace evidence shows that new entrants have not widely deployed a particular kind of facility, the Commission will consider the facts as some evidence that barriers to entry in that market for that element are preventing the deployment, but will not presume from lack of entry or lack of deployment, however, that there are barriers to entry in the relevant market, or that any barriers cannot be overcome through means other than unbundling without further analysis. The Commission also gives weight to evidence that intermodal alternatives can be used to provide telecommunications service.

8. The application of the ''impair'' standard does not change depending on whether a new entrant is providing retail or wholesale services. The Commission also reaffirms its prior conclusion in the *UNE Remand Order,* 65 FR 2367 (Jan. 14, 2000) to afford little weight to evidence that requesting carriers are using incumbent LEC tariffed services.

9. *Granularity of the Impairment Analysis.* In the *NPRM,* the Commission asked many questions about whether and how to make the unbundling analysis more granular by considering such factors as specific services, specific geographic locations, the different types and capacities of facilities, and customer and business considerations. Subsequently, the *USTA* decision directed the Commission to approach the section 251(d)(2) impairment analysis by considering market-specific variations in impairment. The Commission applies several types of granularity in the unbundling analysis, including considerations of customer class, geography, and service. In addition, within discussions of specific network elements, the Commission injects granularity into the analysis by considering types and capacities of facilities.

10. In particular, with regard to customer class, the Commission finds that the economic characteristics of the mass market and enterprise market can be sufficiently different that they constitute major market segments. With regard to geographic granularity, the Commission considers whether impairment varies geographically throughout the country. In those instances where the record permits the Commission to create unbundling rules that apply nationally, it does so. In other instances, the Commission may delegate authority to state commissions to ensure that the unbundling rules are implemented on the most accurate level possible while still preserving administrative practicality.

11. Finally, with regard to the different services that competitors may wish to offer using UNEs, the Commission adopts an approach that obligates incumbent LECs to provide access to UNEs only when requesting carriers seek to use those elements to compete against those services that traditionally have been the exclusive domain of incumbent LECs, or ''qualifying services.'' ''Qualifying services'' include, for example, local exchange service, such as POTS, and access services, such as special access using high-capacity circuits. Once a requesting carrier has obtained access to a UNE to provide a ''qualifying service,'' the carrier may use that UNE to provide any additional services, including non-qualifying telecommunications and information services. In order to gain access to a UNE under section 251(c)(3), a requesting carrier must provide a ''telecommunications service,'' and specifically a qualifying telecommunications service, over that UNE. The Commission has interpreted ''telecommunications services'' to mean services offered on a common carrier basis.

12. *Implicit Support Flows.* In the *USTA* decision, the D.C. Circuit addressed the question of implicit support flows and their relationship to the Commission's decision making under section 251. The court concluded, among other things, that the Commission had not adequately explained its decision to adopt nationwide unbundling requirements in light of the implicit support flows found in telecommunications rates. In reaching this conclusion, the court expressed concerns about the Commission's approach to unbundling both in areas where the incumbent LEC's retail rates may exceed its costs (presumably referring to historic costs) and in areas where incumbent LEC retail rates may be below cost. By focusing on the economic and operational viability of entry in different market segments, the revised impairment standard addresses the issue of implicit support flows in a manner that is responsive to the concerns raised by the D.C. Circuit. At the same time, the Commission concludes that the statute is best interpreted as giving it considerable discretion to address the relationship between implicit support flows and its impairment analysis. In general terms, the new impairment standard provides that a requesting carrier is deemed to be impaired when lack of access to an incumbent LEC network element poses a barrier or barriers to entry, including operational and economic barriers, that are likely to make entry into a market uneconomic. The impairment standard is unlikely to result in unwarranted unbundling in the case of areas and services for which local exchange rates generally exceed the incumbent LEC's costs. In addition, were the impairment standard to require unbundling for services and areas with ''below cost'' rates where actual competitive entry does not take place, little harm would result. The statute contains an exemption from the unbundling requirements for rural carriers and provides for state modification or suspension of the unbundling requirements for incumbent carriers serving, in the aggregate, less than two percent of the nation's access lines. This allows the states to prevent any problems that they believe might result from unbundling requirements in these circumstances.

13. *The ''Necessary'' Standard.* Section 251(d)(2) requires the Commission, in making its unbundling determination, to consider whether ''access to such network elements as are proprietary in nature is necessary.'' The Commission determines to readopt the interpretation of ''necessary'' that it gave in the *UNE Remand Order:* a proprietary network element is ''necessary'' 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.

14. *''At a Minimum''.* Section 251(d)(2) provides that ''the Commission shall consider, *at a minimum,* whether * * * the failure to provide access to such network elements would impair the ability of the telecommunications carrier seeking access to provide the services that it seeks to offer.'' While this phrase permits the Commission to take factors other than ''necessary'' and ''impair'' into account in making the unbundling determination, the Commission applies ''at a minimum'' with restraint. In this Order, the Commission has not required the unbundling of any network element in the absence of impairment. But it has used this authority to inform its consideration of unbundling in contexts where some level of impairment may exist, but unbundling appeared likely to undermine important goals of the 1996 Act, such as in the analyses of fiber-to-the-home and hybrid loops.

15. *Role of the States.* The 1996 Act—specifically sections 251(d)(3) and 252(e)(3)—preserves the states' authority to establish unbundling regulations pursuant to state law as long as the exercise of state authority does not conflict with the Act and its purposes or substantially prevent the Commission's implementation. In addition, sections 261(b) and (c) generally preserve state authority to take action pursuant to state law, provided that such action is consistent with the Act and the federal framework. The Communications Act assigns the Commission the responsibility for establishing a framework to implement the unbundling requirements of section 251(d)(2). In this Order, the Commission creates rules for UNEs based on the impairment standard and marketplace developments over the past three years. The Commission recognizes that competition has evolved at a different pace in different geographic markets and for different market segments. Thus, to ensure that the proper degree of unbundling occurs, the Commission relies, in certain instances when such analysis is necessary, on market-by-market fact-finding determinations made by the states.

16. While the Commission delegates to the states a role in the implementation of the federal unbundling requirements for certain network elements that require this more granular approach, the Commission makes clear that any action taken by the states pursuant to this delegated authority must be in conformance with the Act and the regulations set forth herein. The Commission also finds that the 1996 Act preserved the states' authority to prescribe access obligations pursuant to state law in section 251(d)(3), but only to the extent that state laws or regulations do not conflict with or frustrate the Act and its purposes or substantially prevent the federal implementation regime.

17. If a state commission fails to perform the granular inquiry this Commission delegates to it, any aggrieved party may petition this Commission to step into the state's role. Any carrier seeking Commission review of a state commission's failure to act shall file a petition with this Commission that explains with specificity the bases for the petition and information that supports the claim that the state has failed to act. The Commission will issue a public notice seeking comment on the petition and rule on the petition within ninety days from this public notice. If the Commission agrees that the state has failed to act, it will assume responsibility for the proceeding and make any findings in accordance with the rules set forth herein. These findings will be made nine months from the time the Commission has assumed responsibility for the proceeding.

18. Parties that believe that a particular state unbundling obligation (imposed pursuant to state law) is inconsistent with the limits of section 251(d)(3)(B) and (C) may seek a declaratory ruling from this Commission. If a decision pursuant to state law were to require the unbundling of a network element for which the Commission has either found no impairment—and thus has found that unbundling that element would conflict with the limits in section 251(d)(2)—or otherwise declined to require unbundling on a national basis, it is unlikely that such decision would fail to conflict with, and thus would ''substantially prevent'' implementation of the federal regime, in violation of section 251(d)(3)(C).

19. *Mass Market Loops.* The Commission finds that requesting carriers are impaired on a national basis without unbundled access to an incumbent LEC's local loops used to provide narrowband services to the mass market. The Commission thus requires that incumbent LECs provide unbundled access to the complete transmission path comprised of a copper local loop between the central office and the customer's premises, including all intermediate devices (*e.g.*, repeaters, load coils) used to establish the transmission path. This network element includes all local loops comprised of copper cable, whether in active service or deployed as spares. Incumbent LECs also must provide the requesting carriers with nondiscriminatory access to the same detailed loop information that is available to the incumbent LEC in the same time intervals it is provided to the incumbent LEC's retail operations.

20. The Commission reaffirms the existing rules that require incumbent LECs to permit competing carriers to engage in line splitting where a competing carrier purchases the whole loop and provides its own splitter. For purposes of clarity and regulatory certainty, however, the Commission also adopts line splitting-specific rules, including the requirement that incumbent LECs modify their OSS to facilitate line splitting.

21. The Commission requires incumbent LECs to provide unbundled access to their copper subloops, *i.e.*, the distribution plant consisting of the copper transmission facility between a remote terminal and the customer's premises, including inside wire. To facilitate competitive LEC access to the copper subloop UNE, the Commission requires incumbent LECs to provide, upon a site-specific request, access to the copper subloop at a splice near their remote terminals. Unlike the Commission's previous subloop unbundling rules, the Commission does not require incumbent LECs to provide unbundled access to their feeder loop plant as stand-alone UNEs. The Commission expects, however, that incumbent LECs will develop wholesale service offerings for access to their fiber feeder, which would be subject to sections 201 and 202 of the Act.

22. The Commission finds that unbundled access to conditioned, stand-alone copper loops is sufficient to overcome impairment for the provision of broadband services. Consequently, the Commission finds that, subject to the grandfather provision and transition period, incumbent LECs do not have to unbundle the high-frequency portion of the local loop (HFPL) for requesting telecommunications carriers.

23. The Commission adopts an interim grandfathering rule to help alleviate the impact of the elimination of the HFPL UNE on competitive LECs and end user customers. Until the next biennial review, the Commission grandfathers all existing line sharing arrangements unless the respective competitive LEC discontinues providing

xDSL service to the particular end user customer. During this interim period, the Commission directs incumbent LECs to charge the same price for access to the HFPL for those grandfathered customers as the incumbent LECs charged prior to the effective date of this Order.

24. The Commission also adopts a three-year transition period for new line sharing arrangements of requesting carriers. During the first year, which begins on the effective date of this Order, competitive LECs may obtain new line sharing customers using the HFPL at recurring charge equal to 25 percent of the state-approved rates or the agreed-upon rates in existing interconnection agreements for stand-alone copper loops for that location. During the second year, the recurring charge for access to the HFPL for customers acquired after the effective date of this Order will increase to 50 percent of the state-approved rate or the agreed-upon rate in existing interconnection agreements for a stand-alone copper loop for that location. In the last year of the transition period, the recurring charge for access to the HFPL for those customers obtained after the effective date of this Order will increase to 75 percent of the state-approved rate or the agreed-upon rate for a stand-alone loop for that location. After the transition period, any new customer must be served through a line splitting arrangement, through use of a stand-alone copper loop, or through an arrangement that a competitive LEC has negotiated with the incumbent LEC to replace line sharing. If line sharing obligations are imposed by a state law decision after the effective date of this Order, any party that believes such decision is inconsistent with the limits of sections 251(d)(3)(B) and (C) may seek a declaratory ruling from this Commission.

25. In addition, incumbent LECs are only required to provide access to the HFPL if the incumbent LEC is providing, and continues to provide, analog circuit-switched voiceband services on the loop over which the requesting carriers seeks access to provide ADSL service. In the event that the customer ceases purchasing voice service from the incumbent LEC, either the new voice provider or the xDSL provider, or both, must purchase the full stand-alone loop to continue providing xDSL service. Incumbent LECs may also maintain control over the loop and splitter equipment and functions.

26. The Commission concludes that the level of impairment without access to fiber to the home (FTTH) loops varies depending on whether such loops are new loops or replacements of a pre-existing copper loops. The Commission does not require incumbent LECs to provide unbundled access to new FTTH loops for either narrowband or broadband services. Regarding ''overbuild'' deployment in which an incumbent LEC constructs fiber transmission facilities parallel to or in replacement of its existing copper plant, the Commission must ensure continued access to an unbundled transmission path suitable for providing narrowband services to customers served by FTTH loops. In this situation, incumbent LECs have the option to either (1) keep the existing copper loop connected to a particular customer location after deploying FTTH; or (2) provide unbundled access to a 64 kbps transmission path over its FTTH loop. Incumbent LECs do not have to offer unbundled access to overbuilt fiber loops for competing carriers to provide broadband services.

27. The Commission finds that a blanket prohibition on the ability of incumbent LECs to retire any copper loops or subloops they have replaced with FTTH loops is unnecessary at this time because existing rules, with minor modifications, serve as adequate safeguards. Because the retirement of copper loop plant is a network modification that affects the ability of competitive LECs to provide service, the Commission clarifies that incumbent LECs must provide notice of such retirement in accordance with our rules. The Commission revises its network modification rules with respect to the retirement of copper loops to allow parties to file objections to the incumbent LEC's notice of such retirement on the basis that competitors will be denied access to the loop facilities required under our rules. This process does not preempt the ability of any state commission to evaluate an incumbent LEC's retirement of its copper loops to ensure that such retirement complies with any applicable state requirements.

28. In making our unbundling determination for hybrid loops, the Commission considers both impairment and, through our section 251(d)(2) ''at a minimum'' authority, additional factors. The Commission declines to require incumbent LECs to unbundle the next-generation network, packetized capabilities of their hybrid loops to enable requesting carriers to provide broadband services to the mass market. The Commission concludes that applying section 251(c) unbundling obligations to these next-generation network elements would blunt the deployment of advanced telecommunications infrastructure in direct opposition to the express statutory goals authorized in section 706 of the Telecommunications Act of 1996. Further, a primary benefit of unbundling hybrid loops—to spur competitive deployment of broadband services to the mass market—appears to be obviated to some degree by the existence of cable broadband service competitors, which have a leading position in the marketplace. The Commission thus does not require incumbent LECs to unbundle any transmission path over a fiber transmission facility between the central office and the customer's premises (including fiber feeder plant) that is used to transmit packetized information. Moreover, the Commission does not require incumbent LECs to provide unbundled access to any electronics or other equipment used to transmit packetized information over hybrid loops, such as the xDSL-capable line cards installed in DLC systems or equipment used to provide passive optical networking (PON) capabilities to the mass market.

29. The Commission requires incumbent LECs to provide unbundled access to the entire non-packetized transmission path capable of voice-grade service between the central office and customer's premises. This unbundling obligation for narrowband services is limited to the TDM-based features, functions, and capabilities of these hybrid loops. Incumbent LECs may elect, instead, to provide homerun copper loops rather than a TDM-based narrowband pathway over their hybrid loop facilities if the incumbent LEC has not removed such loop facilities. The Commission further requires incumbent LECs to provide requesting carriers access to a transmission path over hybrid loops served by Integrated DLC systems.

30. The Commission retains competitive LECs' existing right to obtain unbundled access to hybrid loops capable of providing DS1 and DS3 service. Incumbent LECs remain obligated to comply with the nondiscrimination requirements of section 251(c)(3) in their provision of loops to requesting carriers, including stand-alone spare copper loops, copper subloops, and the features, functions, and capabilities for TDM-based services over their hybrid loops. The Commission prohibits incumbent LECs from engineering the transmission capabilities of their loops in a way that would disrupt or degrade the local loop UNEs (either hybrid loops or stand-alone copper loops) provided to competitive LECs.

31. *Enterprise Market Loops.* The Commission concludes that different economic characteristics affect alternative loop deployment according to whether the loop facility is dark fiber or ''lit'' fiber, as well as the loop capacity level. The Commission finds that incumbent LECs are no longer required to unbundle OCn loops, nationwide. Incumbent LECs must continue to offer, on a nationwide basis, unbundled access to dark fiber loops, DS3 loops (limited to two DS3 loops per requesting carrier per customer location) and DS1 loops, except at specified customer locations where state commissions have found no impairment based on federally-defined triggers within nine months of the effective date of this Order.

32. Specifically, a state commission must determine that unbundling is no longer required at a specific customer location for dark fiber or DS3 loops when two or more unaffiliated competitive LECs have self-provisioned their own transmission facilities at the same loop capacity level to that customer location. A state commission must determine that unbundling is no longer required at a specific customer location for DS3 loops or DS1 loops when two or more unaffiliated competitive providers offer wholesale loops at the same capacity level to competitive LECs at that customer location. State commissions have a continuing responsibility to conduct periodic granular reviews of impairment, which must be completed within six months of a petition to initiate each subsequent review.

33. *Subloops for Multiunit Premises Access.* The Commission concludes that competitive carriers are impaired on a nationwide basis without access to unbundled subloops used to access customers in multiunit premises. Based on evidence in the record, the barriers faced by requesting carriers in accessing customers in multiunit premises are not unique to customers typically associated with the enterprise market residing in such premises but extend to all customers residing therein, including residential or other tenants typically associated with the mass market. Similarly, impairment is also not limited by the type or capacity of the loop the requesting carrier will provide. The Commission finds that incumbent LECs must offer unbundled access to subloops necessary to access wiring at or near multiunit customer premises, including the Inside Wire Subloop, *i.e.*, all incumbent LEC loop plant between the minimum point of entry (MPOE) at a multiunit premise and the point of demarcation, regardless of the capacity level or type of loop the requesting carrier will provision to its customer. Unbundled access must be provided at any technically feasible accessible terminal at or near the multiunit premise, including but not limited to, a pole or pedestal, a network interface device (NID), the MPOE, the single point of interconnection (SPOI) or a feeder distribution interface. Upon notification by a requesting carrier that interconnection at a multiunit premise is required through a SPOI, an incumbent LEC is required to provide a SPOI at that multiunit premise if the incumbent LEC owns, controls or leases the wiring at such premise. A requesting carrier accessing a subloop on the incumbent LEC's network side of the NID obtains the NID functionality as part of that subloop.

34. *Network Interface Device (NID).* The Commission concludes that the NID must remain available as a stand-alone unbundled network element as the means to enable a competitive LEC to connect its loop to customer premise inside wiring. The NID is the gateway to the consumer and thus a key element to local competition. The record shows that the NID may often be the only means through which a competitive LEC can provide facilities-based service to customers, particularly those located in multiunit premises. The NID is defined as any means of interconnecting the incumbent LEC's loop distribution plant to wiring at a customer premises location. Incumbent LECs must offer unbundled access to the NID on a stand alone basis to carriers requesting only stand-alone NID access. An incumbent LEC shall permit a requesting carrier to connect its loop facilities through the incumbent LEC's NID.

35. *Dedicated Transport.* Pursuant to the approach of the *NPRM*, the Commission adopts in this Order a more granular unbundling analysis for transport facilities. *See Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, 67 FR 1947 (2002) (proposed Jan. 15, 2002). As an initial matter, the Commission limits its definition of the dedicated transport network element to only those transmission facilities connecting incumbent LEC switches or wire centers as this provides a reasonable interpretation of an incumbent LEC's unbundling obligations. The Commission makes findings regarding impairment by evaluating the attributes of each capacity of transport and the effect of barriers to entry on each. It believes that its analysis of transport will create market certainty and provide incentives for competitive LECs to deploy and utilize alternate facilities. Specifically, based on the evidence in the record, the Commission makes the following determinations. First, due to the ability to self-deploy or utilize unbundled dark fiber or multiple unbundled DS3 circuits, the Commission finds on a national level that requesting carriers are not impaired without access to unbundled OCn transport facilities. Second, due to barriers to entry, including high sunk costs, and the general lack of alternatives in most areas, it finds on a national level that requesting carriers are impaired without access to unbundled dark fiber, DS3, and DS1 transport facilities. However, the record indicates that competitive dark fiber, DS3, and DS1 transport facilities are available on a wholesale basis in some areas, and that competing carriers have deployed their own transport networks in some areas. Because the record is not sufficiently detailed concerning exactly where these facilities have been deployed, and because the nature of transport facilities requires a highly granular impairment analysis, the Commission establishes specific triggers for states to apply in conducting such an analysis. It establishes two ways for states to identify where requesting carriers are not impaired without unbundled transport: (1) By identifying specific point-to-point routes where carriers have the ability to use two or more alternatives to the incumbent's network, or (2) by identifying specific point-to-point routes where three or more competing carriers have self-deployed transport facilities. The Commission delegates to state regulators the authority to make findings of fact within the scope of these triggers to identify on a more granular scale where carriers are not impaired without access to incumbent LEC unbundled transport. In addition to allowing a more precise finding of impairment, the Commission's analysis provides a roadmap for deregulation where regulation does not serve the goals of the Act.

36. *Local Circuit Switching.* The Commission finds that, on the national level, competitive LECs are not impaired without access to unbundled local circuit switching when serving DS1 enterprise customers. DS1 enterprise customers are served using DS1 and above capacity facilities, or served by a sufficient number of DS0 lines that state commissions have determined they could be served using DS1 and above capacity facilities. The record reveals widespread switch deployment by competing carriers to serve the DS1 enterprise market and

establishes that, in most areas, competitive LECs can overcome barriers to serving enterprise customers in an economic manner using their own switching facilities in combination with unbundled loops. The Commission recognizes, however, that in particular markets special circumstances might give rise to impairment without access to unbundled local circuit switching for carriers serving DS1 enterprise customers. The Commission thus allows states 90 days from the effective date of this Order to petition the Commission to waive the finding of no impairment in individual markets based on specific operational and economic factors. State commissions have a continuing responsibility to conduct periodic reviews of impairment for carriers serving the DS1 enterprise market.

37. The Commission further concludes that, on the national level, competitive LECs are impaired without access to unbundled local circuit switching when serving mass market customers. The record indicates that there has been only minimal deployment of competitive LEC-owned switches to serve mass market customers, and that the characteristics of the mass market give rise to significant barriers to competitive LECs' use of self-provisioned switching to serve mass market customers. In particular, inherent difficulties arise from the incumbent LEC hot cut process for transferring DS0 loops, typically used to serve mass market customers, to competing carriers' switches. This national finding of impairment is subject to a more granular review by state commissions within nine months of the effective date of this Order. The state commission must find that competing LECs are not impaired in a particular market if either of two triggers are met: (1) Three or more competing carriers, unaffiliated with the incumbent carrier, each are using their own switches to serve mass market customers in the market or (2) two or more competing carriers, unaffiliated with the incumbent carrier, offer wholesale local circuit switching to carriers serving mass market customers in the market. If the triggers are not satisfied, the state commissions shall examine evidence of the potential for switch self-provisioning in the particular market, taking into account current switch deployment, revenues, costs, processes, network architecture, and the other factors that the Commission identified as potentially giving rise to impairment. If a state commission makes a finding of impairment in a particular market as a result of such a review, it must consider whether this impairment could be addressed by a narrower rule making unbundled switching temporarily available for a minimum of 90 days for customer acquisition purposes, rather than making unbundled switching available for an indefinite period of time. State commissions have a continuing responsibility to conduct periodic reviews of impairment for carriers serving the mass market.

38. The Commission also requires state commissions to take steps to help mitigate the causes of impairment with respect to the mass market. Specifically, within nine months of the effective date of this Order, state commissions must approve and implement a seamless, low-cost process for transferring large volumes of mass market customers or issue detailed findings that such a ''batch cut'' process is unnecessary in a particular market.

39. On an interim basis, pending state commission determinations pursuant to the framework described above, the Commission retains the rule that incumbent LECs are not obligated to provide unbundled local circuit switching to requesting carriers for serving customers with four or more DS0 loops in density zone one of the top fifty MSAs. Retaining this rule on a temporary basis minimizes the potential service disruptions that could occur from the changes adopted regarding local circuit switching if carriers were free to accumulate more DS0 customers while states pursued their inquiries, only to risk losing those customers after the states had made their determinations.

40. The Commission also establishes a transition plan to migrate the embedded customer base served using unbundled switching to an alternative service arrangement when unbundled local circuit switching is no longer made available. Competitive carriers must transfer their embedded base of enterprise customers to an alternative service arrangement within 90 days from the end of the 90-day state commission consideration period, unless a longer period is necessary to comply with a ''change of law'' provision in an applicable interconnection agreement.

41. To the extent a state commission finds that competing LECs are not impaired without unbundled local circuit switching in serving mass market customers in a particular market, the Commission requires mass market carriers to commit to an implementation plan with the incumbent LEC within 2 months from the finding of no impairment. Within 5 months after a finding of no impairment, competitive LECs may no longer request access to unbundled local circuit switching. Competitive LECs are required to submit the necessary orders to transition their embedded base of unbundled local circuit switching customers, except rolling use customers, in accordance with the following schedule: (1) 13 months after a finding of no impairment: Each competitive LEC must submit orders for one-third of all its unbundled local circuit switching end users; (2) 20 months after a finding of no impairment: Each competitive LEC must submit orders for half of its remaining unbundled local circuit switching end users; and (3) 27 months after a finding of no impairment: Each competitive LEC must submit orders for its remaining unbundled local circuit switching end users.

42. *Shared Transport.* The Commission finds that shared transport and switching are inextricably linked. Therefore, the Commission finds that requesting carriers are impaired without access to unbundled shared transport to the extent that they are impaired without access to unbundled local circuit switching. Thus, state commissions in identifying impairment for unbundled circuit switching should also incorporate into their analyses the economic characteristics of shared transport.

43. *Packet Switching.* Incumbent LECs are not required to unbundle packet switching, including routers and DSLAMs, as a stand-alone network element. The Order eliminates the current limited requirement for unbundling of packet switching.

44. *Signaling Networks.* The Commission finds that, in the instances in which incumbent LECs will be required to provide access to switching as a UNE, carriers purchasing the switching UNE must also gain access to incumbent LEC signaling. In all other cases, however, the Commission determines that there are sufficient alternatives in the market available and competitive LECs are no longer impaired without access to signaling networks as UNEs for all markets. The Commission concludes that, in the last several years, the market for signaling networks has matured. The Commission explains that multiple alternative providers are available to provide rival signaling services to competitive LECs, and that several competitive carriers are building their own signaling network capabilities. Accordingly, the Commission finds that, for competitive carriers deploying their own switches, there are no barriers to obtaining signaling or self-provisioning signaling

capabilities. The Commission further finds that the appropriate level of granularity for its analysis to be at the national level and its conclusions apply equally to the mass market and the enterprise market.

45. *Call-Related Databases.* The Commission finds that, competitive carriers deploying their own switches are not impaired in any market without access to incumbent LEC call-related databases, with the exception of the 911 and E911 databases. The Commission concludes that, for carriers deploying their own switches, there is evidence in the record of substantial numbers of competitive suppliers that competitive LECs can reliably utilize as an alternative to the incumbent LECs' services. In such instances where switching remains a UNE, however, the Commission finds that competitive carriers purchasing the switching UNE must be able to have access to signaling and the call-related databases that the signaling networks permit carriers to access, and if the incumbent LEC does not provide customized routing, to operator service and directory assistance. As with signaling, the Commission finds that the appropriate level of granularity for its analysis to be at the national level. The alternative call-related database networks are national and regional networks that competitive LECs will be able to use throughout the country. In addition, the Commission states that its conclusions apply equally to the mass market and the enterprise market.

46. With regard to the specific call-related databases, the Commission finds that carriers deploying their own switches are not impaired without access to the incumbent LECs' CNAM and LIDB databases. The Commission concludes that carriers can either self provision or use alternative providers to obtain CNAM and LIDB database services. The Commission similarly concludes that carriers deploying their own switches are not impaired without access to the Toll-Free and LNP databases. Like CNAM and LIDB, the Commission determines that there are third-party vendors available to provide competitive carriers access to Toll-Free and LNP databases. With regard to AIN databases, the Commission also concludes that competitive carriers are no longer impaired without unbundled access to those databases if the carrier deploys its own switches. However, the Commission determines that all competitive carriers continue to be impaired on a national basis without access to the 911 and E911 databases and, therefore, the Commission requires that access to those databases continue to be unbundled.

47. *OSS Functions.* The Commission finds that competitive LECs providing qualifying services continue to be impaired on a national basis without access to OSS functions, including: pre-ordering, ordering, provisioning, maintenance and repair, and billing functions supported by an incumbent LEC's databases and information. Accordingly, the Commission requires incumbent LECs to continue to provide unbundled access to OSS. The Commission states that this requirement includes an ongoing obligation on the incumbent LECs to make modifications to existing OSS as necessary to offer competitive carriers nondiscriminatory access and to ensure that the incumbent LEC complies with all of its network element, resale and interconnection obligations in a nondiscriminatory manner. In reaching this conclusion, the Commission finds that the systems, databases, and personnel that the incumbent LEC uses to provide OSS functions represent an extensive infrastructure that would be difficult, if not impossible, for competitors to duplicate. Accordingly, the Commission finds that competitive LECs are impaired without access to incumbent LECs' OSS. The Commission adopts an unbundling requirement for OSS functions on a national basis that applies equally to the mass market and the enterprise market.

48. *Combinations of Network Elements.* The Commission reaffirms its existing rules requiring incumbent LECs to provide UNE combinations upon request where such combinations are technically feasible and do not undermine the ability of other carriers to access UNEs or interconnect with the incumbent LEC's network, and prohibiting incumbent LECs from separating UNE combinations that are ordinarily combined except upon request. The Commission concludes that incumbent LECs shall make UNE combinations, including unbundled loop-transport combinations, available in all areas where the underlying UNEs are available and in all instances where the requesting carrier meets the applicable eligibility requirements. Apart from the applicable service eligibility criteria for high-capacity circuits, incumbent LECs may not impose additional conditions or limitations, such as pre-audits or a requirement to purchase special access services which are subsequently converted to UNE combinations, to obtaining access to EELs and other UNE combinations.

49. The Commission concludes that requesting carriers are permitted to commingle UNEs and combinations of UNEs with other wholesale facilities and services obtained from an incumbent LEC. Incumbent LECs, however, are not required to implement any changes to their systems to bill a single circuit at multiple rates in order to charge competitive LECs a single, blended rate.

50. The Commission concludes that competitive LECs may both convert UNEs and UNE combinations to wholesale services and convert wholesale services to UNEs and UNE combinations, so long as the competitive LEC meets the applicable eligibility criteria. To the extent a competitive LEC fails to meet the eligibility criteria for serving a particular customer, the incumbent LEC may convert the UNE or UNE combination to the equivalent wholesale service in accordance with the procedures established between the parties.

51. The Commission declines to require incumbent LECs to provide requesting carriers an opportunity to supersede or dissolve existing contractual arrangements governing loop-transport combinations. The Commission concludes, however, that incumbent LECs may not assess termination charges, re-connect and disconnect fees, or non-recurring charges associated with establishing a service for the first time because such charges deter legitimate conversions from wholesale services to UNEs or UNE combinations and unjustly enrich an incumbent LEC. Further, because incumbent LECs are never required to perform a conversion in order to continue serving their own customers, the Commission concludes that such charges are inconsistent with an incumbent LEC's duty to provide nondiscriminatory access to UNEs and UNE combinations on just, reasonable, and nondiscriminatory rates, terms, and conditions, and that such charges unlawfully subject competitive LECs purchasing UNEs or UNE combinations to undue or unreasonable prejudice or disadvantage.

52. *Service Eligibility Criteria to Access UNEs.* The Order concludes that a carrier seeking access to an unbundled element of the incumbent LEC's network must provide qualifying service to a customer in order to obtain access to that facility pursuant to the Commission's section 251 unbundling rules. With respect to combinations of high-capacity (DS1 and DS3) loops and interoffice transport only, the Commission adopts additional

eligibility criteria due to the potential for a provider of exclusively non-qualifying service to obtain access to these combinations at UNE prices.

53. The Commission does not, however, impose these additional requirements on access to UNEs other than high-capacity EELs. To ensure that the Commission's rules on service eligibility are not gamed in whole or in part, the Commission makes clear that the service eligibility criteria must be satisfied (1) to convert a special access circuit to a high-capacity EEL; (2) to obtain a new high-capacity EEL; or (3) to obtain at UNE pricing part of a high-capacity loop-transport combination (commingled EEL).

54. *Service Eligibility Criteria for High-Capacity EELs.* The Order concludes that where a requesting carrier satisfies the following three categories of criteria, it is a bona fide provider of qualifying services and thus is entitled to order high-capacity EELs. Requesting carriers must certify to meeting all three criteria (authorization, local number and E911 assignment, and architectural safeguards) to qualify for the high-capacity circuit, subject to the separate certification and auditing requirements.

55. First, the Commission finds that each requesting carrier must have a state certification of authority to provide local voice service. Second, to demonstrate that it actually provides a local voice service to the customer over every DS1 circuit, the Commission finds that the requesting carrier must have at least one local number assigned to each circuit and must provide 911 or E911 capability to each circuit. To ensure the legitimacy of these assignments, the origination and termination of local voice traffic should not include a toll charge, and should not require dialing special digits beyond those normally required for a local voice call. Further, the Commission also clarifies that each DS1-equivalent circuit of a DS3 EEL must have its own local number assignment, so that each DS3 must have at least 28 local voice numbers assigned to it.

56. Third, the Commission finds additional circuit-specific architectural safeguards to prevent gaming are necessary. Each circuit must terminate into a collocation governed by section 251(c)(6) at an incumbent LEC central office within the same LATA as the customer premises. In particular, for this collocation safeguard, the Order finds that termination of a circuit into a section 251(c)(6) collocation arrangement in an incumbent LEC central office is an effective tool to prevent arbitrage, because collocation is a necessary building block for providing local voice services and is traditionally not used by interexchange carriers. More specifically, because traditional interexchange configurations route long-distance traffic from a customer premises over tariffed channel termination and transport facilities directly to an interexchange point-of-presence, a section 251(c)(6) collocation requirement ensures that a carrier has set up an architecture that ensures that traffic can leave the incumbent network prior to hitting the POP. As further evidence that a carrier provides qualifying voice service, the collocation arrangement must be within the same LATA as the customer premises. The Commission determines that a requesting carrier can satisfy this prong through reverse collocation, and that any non-incumbent LEC collocation arrangement pursuant to section 251(c)(6) meets this test.

57. As an additional indicator of providing local voice service, the Commission concludes that each EEL circuit must be served by an interconnection trunk in the same LATA as the customer premises served by the EEL, and that for every 24 DS1 EELs or the equivalent, the requesting carrier must maintain at least one active DS1 interconnection trunk for the exchange of local voice traffic. As a further safeguard against gaming, where a requesting carrier strips off the calling party number on calls exchanged over the interconnection trunk, that trunk shall not be counted towards meeting the trunk/EEL ratio. The costs and difficulties of network configuration necessary to satisfy the interconnection and collocation requirements minimize the potential for these safeguards to be gamed; only a bona fide provider of qualifying local services would undertake these measures, all of which are a necessary precondition to compete directly against the incumbent LEC's voice service. The 24-to-1 EEL to interconnection trunk ratio provides a reliable gauge that the competitive LEC exchanges local traffic with the incumbent LEC in a manner that indicates that it is a bona fide provider of local voice service. The Commission finds that this ratio therefore provides a reasonable proxy for the capacity of interconnection that a bona fide provider of local voice service competing against the incumbent LEC would require.

58. In addition, the Commission finds that each EEL circuit must be served by a Class 5 switch or other switch capable of providing local voice traffic. To ensure that the traffic carried over each EEL is not exclusively non-local, a requesting carrier must certify that the switching equipment is either registered as Class 5 or that it can switch local voice traffic.

59. The Commission applies the service eligibility requirements on a circuit-by-circuit basis, so each DS1 EEL (or combination of DS1 loop with DS3 transport) must satisfy the service eligibility criteria. For a requesting carrier to obtain a DS3 EEL as a UNE, the requesting carrier must satisfy the criteria for service eligibility for the DS1-equivalent circuit capacity of that DS3 EEL. The Commission is persuaded that while no single requirement can prevent gaming, the criteria the Commission adopts are collectively sufficient to restrict the availability of these UNE combinations to legitimate providers of local voice service.

60. *Certification and Auditing.* The Commission concludes that requesting carriers may self-certify to satisfying the qualifying service eligibility criteria for high-capacity EELs. The Order does not specify the form for such a self-certification, but re-adopts the Commission's prior findings that a letter sent to the incumbent LEC by a requesting carrier is a practical method. The Order concludes that incumbent LECs may obtain and pay for an independent auditor to audit, on an annual basis, compliance with the qualifying service eligibility criteria. The independent auditor must perform its evaluation in accordance with the standards established by the American Institute for Certified Public Accountants (AICPA), which will require the auditor to perform an ''examination engagement'' and issue an opinion regarding the requesting carrier's compliance with the qualifying service eligibility criteria. To the extent the independent auditor's report concludes that the competitive LEC failed to comply with the service eligibility criteria, that carrier must true-up any difference in payments, convert all noncompliant circuits to the appropriate service, and make the correct payments on a going-forward basis.

61. In addition, to the extent the independent auditor's report concludes that the competitive LEC failed to comply in all material respects with the service eligibility criteria, the competitive LEC must reimburse the incumbent LEC for the cost of the independent auditor. Similarly, to the extent the independent auditor's report concludes that the requesting carrier complied in all material respects with the eligibility criteria, the incumbent LEC must reimburse the audited carrier for its costs associated with the audit.

The Commission also expects that requesting carriers will maintain the appropriate documentation to support their certifications.

62. *Modification of Existing Network.* The Commission concludes that incumbent LECs must make routine network modifications to unbundled transmission facilities used by requesting carriers where the requested transmission facility has already been constructed, meaning that incumbent LECs must perform those activities that incumbent LECs regularly undertake for their own customers. Routine modifications, however, do not include the construction of new wires for a requesting carrier. The Commission finds that loop modification functions that the incumbent LECs routinely perform for their own customers, and therefore must perform for competitors, include rearrangement or splicing of cable, and deploying a new multiplexer or reconfiguring an existing multiplexer. The Commission also concludes that incumbent LECs must provide access, on an unbundled basis, to xDSL-capable stand-alone copper loops because competitive LECs are impaired without such loops. Such access may require incumbent LECs to condition the local loop for the provision of xDSL-capable services by removing bridge taps and similar devices as part of this obligation. The Commission concludes that incumbent LECs are not obligated to construct transmission facilities so that requesting carriers can access them as UNEs at cost-based rates. However, the Commission also clarifies that an incumbent LEC's unbundling obligation includes all deployed transmission facilities in its network, unless specifically exempted in the Order. To ensure that no incumbent LEC is obligated to build out facilities at TELRIC pricing, the Commission clarifies that the tariffed termination liabilities for special construction apply to the conversion of special access circuits built to customer specification.

63. *Section 271 Issues.* The Commission concludes that BOCs have an independent obligation, under section 271(c)(2)(B), to provide access to each network element on section 271's ''competitive checklist'' even where that element is no longer required to be unbundled under section 251(c)(3). This conclusion follows from the plain language and structure of section 271(c)(2)(B) and is a reasonable interpretation of the Act. Sections 251, 252 and 271 do not establish standards for the rates, terms and conditions of offerings pursuant to section 271(c)(2)(B) alone. Rather, the offering of such network elements is governed by the just, reasonable and nondiscriminatory rate standards of sections 201 and 202. The Commission further concludes that following a grant of section 271 authorization, the BOC must continue to comply with any conditions required for approval, subject to changes in the law. It would be inconsistent with public policy to impose different—and potentially out-of-date or vacated—rules on BOCs based solely on the date of section 271 entry.

64. *Clarification of TELRIC Rules.* The Order clarifies two key components of its TELRIC pricing rules to ensure that UNE prices send appropriate economic signals to incumbent LECs and competitive LECs. First, the Order clarifies that the risk-adjusted cost of capital used in calculating UNE prices should reflect the risks associated with a competitive market. The Order also reiterates the Commission's finding from the *Local Competition Order* that the cost of capital may be different for different UNEs. Second, the Order declines to mandate the use of any particular set of asset lives for depreciation, but clarifies that the use of an accelerated depreciation mechanism may present a more accurate method of calculating economic depreciation. In addition to these clarifications, the Order notes that the Commission plans to open a proceeding to consider issues related to its TELRIC pricing rules.

65. *Fresh Look.* The Commission retains the determination made in the *UNE Remand Order* that it will not permit competitive LECs to avoid any liability under contractual early termination clauses in the event that it converts a special access circuit to a UNE. Although ''fresh look'' has occurred in the past, this rare exercise of Commission discretion is not appropriate here because it would be unfair to both incumbent LECs and other competitors, disruptive to the market place, and ultimately inconsistent with the public interest.

66. *Transition Period.* The Commission will not intervene in the contract modification process to establish a specific transition period for each of the rules established in this Order. Instead, as contemplated in the Act, individual carriers will have the opportunity to negotiate specific terms and conditions necessary to translate our rules into the commercial environment, and to resolve disputes over any new contract language arising from differing interpretations of our rules.

67. *Periodic Review of National Unbundling Rules.* The Commission will evaluate these rules consistent with the biennial review mechanism established in section 11 of the Act. These reviews, however, will not be performed *de novo* but according to the standards of the biennial review process.

68. *Duty to Negotiate in Good Faith.* The Commission amends its duty-to-negotiate rule 51.301(c)(8)(ii) to make the rule conform to the text of the *Local Competition Order.*

Final Regulatory Flexibility Analysis

69. As required by the Regulatory Flexibility Act of 1980, as amended (RFA), an Initial Regulatory Flexibility Analysis (IRFA) was incorporated in the **Federal Register** summary of the *NPRM.* The Commission sought written public comments on the proposals in the *NPRM,* including comments on the IRFA. Comments addressed the proposals contained in the *NPRM,* as well as the IRFA. This present Final Regulatory Flexibility Analysis (FRFA) addresses comments on the IRFA and conforms to the RFA.

Need for, and Objectives of, the Rules

70. This Order fulfills the commitment the Commission undertook in its 1999 *UNE Remand Order* to reexamine, in three years, the list of network elements that incumbent LECs must offer to competitors on an unbundled basis, and responds to several significant judicial rulings that have been issued since the Commission last conducted a comprehensive review of its unbundling rules. More specifically, this Order refines the ''impair'' standard set forth in section 251(d)(2) of the Act, and applies the revised standard to an array of ''transmission'' and ''intelligence'' network elements. The revised ''impair'' standard is designed to reflect both the experience of the local service market during the seven years since the Act's market-opening provisions took effect and the legal guidance mentioned above. Applying this standard, which pays special attention to the requesting carrier's ability to self-provision the element or to obtain it from a source other than the incumbent LEC, this Order adopts a list of network elements that must be unbundled and sets forth the particular circumstances in which unbundling will be required. The approach adopted is substantially more granular than our earlier formulations of the ''impair'' standard, accounting for considerations of customer class, geography, and service. This Order also reaffirms a state commission's authority to establish unbundling requirements, as long as the unbundling obligations are consistent with the requirements of section 251(d)(3) and do not

substantially prevent implementation of the requirements of that section and the purposes of the Act, and authorizes state commissions to make certain factual determinations necessary to implementation of the granular analysis we adopt here.

Summary of Significant Issues Raised by the Public Comments in Response to the IRFA

71. In this section, the Commission responds to various arguments raised by TeleTruth, the National Federation of Independent Businesses (NFIB), and the Office of Advocacy of the Small Business Administration (SBA Advocacy) relating to the IRFA presented in the *NPRM.* It also addresses concerns raised by Senator (then-Representative) James Talent in a letter submitted in response to the *UNE Remand Order,* which was later incorporated into this proceeding. To the extent the Commission received comments raising general small business concerns during this proceeding, those comments are discussed throughout the Order and are summarized in Part X.A.5, below.

72. As an initial matter, the Commission rejects the contention that it failed to consider the needs of small business customers of competitive LECs in fashioning the analysis set forth in this Order. It has grappled, throughout this proceeding and throughout this Order, with the consequences our determinations will have on all market participants, including small business providers and the small business end users about which TeleTruth, NFIB, SBA Advocacy, and Senator Talent express concern. The Commission has also considered various alternatives to the rules it adopts, and has stated the reasons for rejecting these alternative rules, as commenters have urged. A summary of our analysis regarding small business concerns, and of alternative rules that we considered in light of those concerns, is presented in subsection 5 of the FRFA, *infra*.

73. Many of the complaints raised regarding the Commission's IRFA hinge on the argument that in performing the analysis mandated by the RFA, an agency must analyze the effects its proposed rules will have on ''customers'' of the entities it regulates. But as the courts have made clear time and again, this is not the case. Indeed, the D.C. Circuit ''has consistently held that the RFA imposes no obligation to conduct a small entity impact analysis of effects on entities which [the agency conducting the analysis] does not regulate.'' Thus, the RFA imposes no independent obligation to examine the effects an agency's action will have on the customers of the companies it regulates unless those customers are, themselves, subject to regulation by the agency. In any event, as noted above, we have considered the needs of small business customers of competitive (and incumbent) LECs throughout this Order. Our analysis of small business concerns is summarized in Part X.A.5, below.

74. TeleTruth argues that the Commission has taken inadequate steps to notify small businesses of this and other proceedings, in violation of the RFA. The Commission disagrees. The RFA requires the Commission to ''assure that small entities have been given an opportunity to participate in the rulemaking,'' and proposes as example five ''reasonable techniques'' that an agency might employ to do so. In this proceeding, the Commission has employed several of these techniques: it has published a ''notice of proposed rulemaking in publications likely to be obtained by small entities''; has ''inclu[ded] * * * a statement that the proposed rule may have a significant economic effect on a substantial number of small entities'' in the *NPRM;* has solicited comments over its computer network; and has acted ''to reduce the cost or complexity of participation in the rulemaking by small entities'' by, among other things, facilitating electronic submission of comments. The Commission thus concludes that it has satisfied its RFA obligation to assure that small companies were able to participate in this proceeding.

75. TeleTruth further contends that the Commission's IRFA was flawed by its use of ''boilerplate'' language that differed little from the language used in the IRFAs prepared for other proceedings. However, the only language it cites does not even appear in the IRFA prepared for this proceeding. Moreover, TeleTruth has suggested no reason why the use of similar language in several proceedings is at all problematic. Indeed, the particular language about which it complains merely describes the ''number of telephone companies affected'' by a given proceeding— a class that is likely to differ little, if at all, among industry-wide rulemakings such as this.

76. TeleTruth next complains that the IRFA used outdated census data from 1992 in estimating the number of small businesses that might be affected by the Commission's decisions here. While certain 1997 census data became available in late 2000 and were not incorporated into the previous *NPRM,* this updating would not, we believe, have affected a small entity's decisions concerning IRFA. This more recent data are reflected in subsection 3 of the FRFA, *infra.*

77. TeleTruth also contends that ''[a] true IRFA analysis about small business telecom competitors would conclude that the current FCC is in violation of the Telecom Act and all of its provisions'' because the Commission purportedly has failed to enforce its local competition rules. Such an assertion falls outside the scope of this rulemaking proceeding and our analysis herein. Complaints regarding carriers' compliance with the Commission's Rules are properly addressed in other venues. For example, section 208 of the Communications Act specifically permits small businesses and other entities to lodge complaints regarding other carriers' activities, and to seek enforcement of Commission regulations. Also, to the extent an incumbent LEC's obligations under section 251 are implemented through interconnection agreements, those obligations are enforceable as a matter of contract law through the courts.

78. TeleTruth next argues the RFA requires ''an impact study on how [an agency's regulations] will harm small businesses,'' and that ''the FCC has not done anything of the sort for this proceeding.'' The Commission disagrees: the RFA requires us to provide precisely the information contained in this FRFA, but does not mandate a separate ''impact study.'' The Commission has therefore satisfied its RFA obligations.

79. In a letter challenging the *UNE Remand Order,* Senator Talent argued that that Order violated section 3(a)(2)(C) of the Small Business Act. Specifically, Senator Talent noted that the *UNE Remand Order* differentiated between businesses that used fewer than four access lines and those that used four or more lines, in contravention of the Small Business Act's directive that ''unless specifically authorized by statute, no Federal department or agency may prescribe a size standard for categorizing a business concern as a small business concern,'' unless certain procedural requirements are satisfied. In the present Order, our action does not establish any special small business size standard.

80. TeleTruth and Senator Talent suggest that section 257 of the Act dictates a particular substantive result in this matter. Specifically, TeleTruth claims that this ''Triennial Review is mandated in Section [257(c)],'' and requires an outcome favorable to entrepreneurs and small businesses. Senator Talent argued that in limiting the class of elements subject to section

251(c), the *UNE Remand Order* ''erected a new barrier to entry'' by small business carriers, and consequently violated section 257 of the Communications Act. Section 257, however, did not mandate this proceeding and in no way cabins this Commission's exercise of its authority to adopt rules implementing the Act. Section 257 required the Commission to conduct a proceeding designed to identify and eliminate ''market entry barriers for entrepreneurs and other small businesses in the provision and ownership of telecommunications services and information services'' within 15 months of the enactment of the 1996 Act, and periodically to review its regulations and report to Congress on any such barriers. The Commission concluded the requisite proceeding in 1997 and issued its first subsequent section 257 Report to Congress in 2000. Thus, this proceeding is *not* mandated (or in any way governed) by section 257. Rather, as described above, this Order fulfills the Commission's commitment—set forth in the *UNE Remand Order*—to reevaluate unbundling requirements, and responds to various judicial rulings regarding those requirements.

81. TeleTruth, the NFIB, and SBA Advocacy caution that this Order may stand in violation of Executive Order 13272. Setting aside the question of whether a multi-member independent agency such as the FCC must comply with that Executive Order, it notes that affected agencies must: (1) Comply with the RFA, (2) give SBA Advocacy advanced notice of any proposed rules that might substantially impact small businesses, and (3) give ''appropriate consideration to'' and provide a written response to ''any comments provided by'' SBA Advocacy. Here, the Commission did send SBA Advocacy a copy of the published *NPRM* (which pre-dated the Executive Order). Moreover, in this FRFA, we fully satisfy our obligations under the RFA. Finally, we address SBA Advocacy's other comments below. Therefore, this proceeding stands in compliance with Executive Order 13272.

82. SBA Advocacy argues that the Commission's IRFA ''did not consider the impact of delisting unbundled network elements * * * on small competitive local exchange carriers.'' While SBA Advocacy recommends that we issue a revised IRFA to account more fully for the impact our rules might have on competitive LECs, it recognizes that we might appropriately address any such impact in this FRFA instead. The Commission has adopted the latter course. It notes that we have considered the concerns of competitive LECs throughout this Order, and those considerations are summarized in Part X.A.5, below. Moreover, in Part X.A.3, we attempt to estimate the number of competitive LECs that will be affected by the rules we adopt herein.

83. SBA Advocacy also claims that the proposals contained in the *NPRM* were not sufficiently specific to allow small businesses the opportunity to comment meaningfully. The Commission disagrees. This proceeding has elicited well over one thousand filings, submitted by scores of parties. These parties—which include numerous small businesses—found in the NPRM sufficient specificity to permit meaningful comment. SBA Advocacy notes its ''particular concern'' that the Commission ''is considering removing elements from the list'' of incumbent LECs' unbundling obligations, whereas the *NPRM* purportedly gave no indication of this eventuality. The *NPRM* clearly explained that the Commission was considering ''an unbundling analysis that is more targeted,'' including approaches ''that take into consideration specific services, facilities, and customer and business considerations.'' It expressly sought comment ''on applying the unbundling analysis to define the network elements'' subject to unbundling, and indicated our intention to ''probe whether and to what extent we should adopt a more sophisticated, refined unbundling analysis.'' The Commission officially stated its intention to reexamine unbundling obligations with respect to loops, switching, interoffice transport, OSS, call-related signaling and call-related databases. It is thus not persuaded that the *NPRM* somehow failed to signal our intent to examine rules that might result in modification of the list of elements (including possible removal of elements) subject to section 251(c)(3)'s unbundling requirements.

Description and Estimate of the Number of Small Entities to Which the Actions Taken Will Apply

84. The RFA directs agencies to provide a description of and, where feasible, an estimate of the number of small entities that will be affected by the rules. The RFA generally defines the term ''small entity'' as having the same meaning as the terms ''small business,'' ''small organization,'' and ''small governmental jurisdiction.'' In addition, the term ''small business'' has the same meaning as the term ''small business concern'' under the Small Business Act. A small business concern is one which: (1) Is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration (SBA).

85. In this section, we further describe and estimate the number of small entity licensees and regulatees that may be affected by rules adopted in this Order. The most reliable source of information regarding the total numbers of certain common carrier and related providers nationwide, as well as the number of commercial wireless entities, appears to be the data that the Commission publishes in its *Trends in Telephone Service* report. The SBA has developed small business size standards for wireline and wireless small businesses within the three commercial census categories of Wired Telecommunications Carriers, Paging, and Cellular and Other Wireless Telecommunications. Under these categories, a business is small if it has 1,500 or fewer employees. Below, using the above size standards and others, we discuss the total estimated numbers of small businesses that might be affected by our actions.

86. The Commission has included small incumbent LECs in this present RFA analysis. As noted above, a ''small business'' under the RFA is one that, *inter alia,* meets the pertinent small business size standard (*e.g.*, a wired telecommunications carrier having 1,500 or fewer employees), and ''is not dominant in its field of operation.'' SBA Advocacy contends that, for RFA purposes, small incumbent LECs are not dominant in their field of operation because any such dominance is not ''national'' in scope. The Commission has therefore included small incumbent LECs in this RFA analysis, although it emphasizes that this RFA action has no effect on Commission analyses and determinations in other, non-RFA contexts.

87. *Wired Telecommunications Carriers.* The SBA has developed a small business size standard for Wired Telecommunications Carriers, which consists of all such companies having 1,500 or fewer employees. According to Census Bureau data for 1997, there were 2,225 firms in this category, total, that operated for the entire year. Of this total, 2,201 firms had employment of 999 or fewer employees, and an additional 24 firms had employment of 1,000 employees or more. Thus, under this size standard, the great majority of firms can be considered small.

88. *Incumbent LECs.* Neither the Commission nor the SBA has developed a size standard for small businesses specifically applicable to incumbent local exchange services. The closest applicable size standard under SBA

rules is for Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees. According to Commission data, 1,329 carriers reported that they were engaged in the provision of local exchange services. Of these 1,329 carriers, an estimated 1,024 have 1,500 or fewer employees and 305 have more than 1,500 employees. Consequently, the Commission estimates that most providers of incumbent local exchange service are small businesses that may be affected by the rules and policies adopted herein.

89. *Competitive LECs.* Neither the Commission nor the SBA has developed a size standard for small businesses specifically applicable to providers of competitive exchange services or to competitive access providers or to ''Other Local Exchange Carriers,'' all of which are discrete categories under which TRS data are collected. The closest applicable size standard under SBA rules is for Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees. According to Commission data, 532 companies reported that they were engaged in the provision of either competitive access provider services or competitive LEC services. Of these 532 companies, an estimated 411 have 1,500 or fewer employees and 121 have more than 1,500 employees. In addition, 55 carriers reported that they were ''Other Local Exchange Carriers.'' Of the 55 ''Other Local Exchange Carriers,'' an estimated 53 have 1,500 or fewer employees and two have more than 1,500 employees. Consequently, the Commission estimates that most providers of competitive local exchange service, competitive access providers, and ''Other Local Exchange Carriers'' are small entities that may be affected by the rules and policies adopted herein.

90. *Interexchange Carriers.* Neither the Commission nor the SBA has developed a size standard for small businesses specifically applicable to interexchange services. The closest applicable size standard under SBA rules is for Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees. According to Commission data, 229 companies reported that their primary telecommunications service activity was the provision of payphone services. Of these 229 companies, an estimated 181 have 1,500 or fewer employees and 48 have more than 1,500 employees. Consequently, the Commission estimates that the majority of payphone service providers are small entities that may be affected by the rules and policies adopted herein.

91. *Operator Service Providers (OSPs).* Neither the Commission nor the SBA has developed a size standard for small businesses specifically applicable to OSPs. The closest applicable size standard under SBA rules is for Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees. According to Commission data, 22 companies reported that they were engaged in the provision of operator services. Of these 22 companies, an estimated 20 have 1,500 or fewer employees and two have more than 1,500 employees. Consequently, the Commission estimates that the great majority of OSPs are small entities that may be affected by the rules and policies adopted herein.

92. *Prepaid Calling Card Providers.* The SBA has developed a size standard for a small business within the category of Telecommunications Resellers. Under that SBA size standard, such a business is small if it has 1,500 or fewer employees. According to Commission data, 32 companies reported that they were engaged in the provision of prepaid calling cards. Of these 32 companies, an estimated 31 have 1,500 or fewer employees and one has more than 1,500 employees. Consequently, the Commission estimates that the great majority of prepaid calling card providers are small entities that may be affected by the rules and policies adopted herein.

93. *Other Toll Carriers.* Neither the Commission nor the SBA has developed a size standard for small businesses specifically applicable to ''Other Toll Carriers.'' This category includes toll carriers that do not fall within the categories of interexchange carriers, OSPs, prepaid calling card providers, satellite service carriers, or toll resellers. The closest applicable size standard under SBA rules is for Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees. According to Commission's data, 42 companies reported that their primary telecommunications service activity was the provision of payphone services. Of these 42 companies, an estimated 37 have 1,500 or fewer employees and five have more than 1,500 employees. Consequently, the Commission estimates that most ''Other Toll Carriers'' are small entities that may be affected by the rules and policies adopted herein.

94. *Wireless Service Providers.* The SBA has developed a small business size standard for wireless firms within the two broad economic census categories of Paging and Cellular and Other Wireless Telecommunications. Under both SBA categories, a wireless business is small if it has 1,500 or fewer employees. For the census category of Paging, Census Bureau data for 1997 show that there were 1,320 firms in this category, total, that operated for the entire year. Of this total, 1,303 firms had employment of 999 or fewer employees, and an additional 17 firms had employment of 1,000 employees or more. Thus, under this category and associated small business size standard, the great majority of firms can be considered small. For the census category Cellular and Other Wireless Telecommunications firms, Census Bureau data for 1997 show that there were 977 firms in this category, total, that operated for the entire year. Of this total, 965 firms had employment of 999 or fewer employees, and an additional 12 firms had employment of 1,000 employees or more. Thus, under this second category and size standard, the great majority of firms can, again, be considered small.

95. *Broadband Personal Communications Service.* The broadband Personal Communications Service (PCS) spectrum is divided into six frequency blocks designated A through F, and the Commission has held auctions for each block. The Commission defined ''small entity'' for Blocks C and F as an entity that has average gross revenues of $40 million or less in the three previous calendar years. For Block F, an additional classification for ''very small business'' was added and is defined as an entity that, together with its affiliates, has average gross revenues of not more than $15 million for the preceding three calendar years.'' These standards defining ''small entity'' in the context of broadband PCS auctions have been approved by the SBA. No small businesses, within the SBA-approved small business size standards bid successfully for licenses in Blocks A and B. There were 90 winning bidders that qualified as small entities in the Block C auctions. A total of 93 small and very small business bidders won approximately 40 percent of the 1,479 licenses for Blocks D, E, and F. On March 23, 1999, the Commission re-auctioned 347 C, D, E, and F Block licenses. There were 48 small business winning bidders. On January 26, 2001, the Commission completed the auction of 422 C and F Broadband PCS licenses in Auction No. 35. Of the 35 winning bidders in this auction, 29 qualified as

''small'' or ''very small'' businesses. Subsequent events, concerning Auction 35, including judicial and agency determinations, resulted in a total of 163 C and F Block licenses being available for grant. In addition, we note that, as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Also, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated.

96. *Narrowband PCS.* To date, two auctions of narrowband PCS licenses have been conducted. For purposes of the two auctions that have already been held, ''small businesses'' were entities with average gross revenues for the prior three calendar years of $40 million or less. Through these auctions, the Commission has awarded a total of 41 licenses, out of which 11 were obtained by small businesses. To ensure meaningful participation of small business entities in future auctions, the Commission has adopted a two-tiered small business size standard in the *Narrowband PCS Second Report and Order.* A ''small business'' is an entity that, together with affiliates and controlling interests, has average gross revenues for the three preceding years of not more than $40 million. A ''very small business'' is an entity that, together with affiliates and controlling interests, has average gross revenues for the three preceding years of not more than $15 million. The SBA has approved these small business size standards. In the future, the Commission will auction 459 licenses to serve Metropolitan Trading Areas (MTAs) and 408 response channel licenses. There is also one megahertz of narrowband PCS spectrum that has been held in reserve and that the Commission has not yet decided to release for licensing. The Commission cannot predict accurately the number of licenses that will be awarded to small entities in future actions. However, four of the 16 winning bidders in the two previous narrowband PCS auctions were small businesses, as that term was defined under the Commission's Rules. The Commission assumes, for purposes of this analysis that a large portion of the remaining narrowband PCS licenses will be awarded to small entities. The Commission also assumes that at least some small businesses will acquire narrowband PCS licenses by means of the Commission's partitioning and disaggregation rules.

97. *220 MHz Radio Service—Phase I Licensees.* The 220 MHz service has both Phase I and Phase II licenses. Phase I licensing was conducted by lotteries in 1992 and 1993. There are approximately 1,515 such non-nationwide licensees and four nationwide licensees currently authorized to operate in the 220 MHz band. The Commission has not developed a small business size standard for small entities specifically applicable to such incumbent 220 MHz Phase I licensees. To estimate the number of such licensees that are small businesses, we apply the small business size standard under the SBA rules applicable to ''Cellular and Other Wireless Telecommunications'' companies. This standard provides that such a company is small if it employs no more than 1,500 persons. According to Census Bureau data for 1997, there were 977 firms in this category, total, that operated for the entire year. Of this total, 965 firms had employment of 999 or fewer employees, and an additional 12 firms had employment of 1,000 employees or more. If this general ratio continues in the context of Phase I 220 MHz licensees, the Commission estimates that nearly all such licensees are small businesses under the SBA's small business size standard.

98. *220 MHz Radio Service—Phase II Licensees.* The 220 MHz service has both Phase I and Phase II licenses. The Phase II 220 MHz service is a new service, and is subject to spectrum auctions. In the 220 MHz Third Report and Order, we adopted a small business size standard for ''small'' and ''very small'' businesses for purposes of determining their eligibility for special provisions such as bidding credits and installment payments. This small business size standard indicates that a ''small business'' is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding $15 million for the preceding three years. A ''very small business'' is an entity that, together with its affiliates and controlling principals, has average gross revenues that do not exceed $3 million for the preceding three years. The SBA has approved these small business size standards. Auctions of Phase II licenses commenced on September 15, 1998, and closed on October 22, 1998. In the first auction, 908 licenses were auctioned in three different-sized geographic areas: three nationwide licenses, 30 Regional Economic Area Group (EAG) Licenses, and 875 Economic Area (EA) Licenses. Of the 908 licenses auctioned, 693 were sold. Thirty-nine small businesses won licenses in the first 220 MHz auction. The second auction included 225 licenses: 216 EA licenses and 9 EAG licenses. Fourteen companies claiming small business status won 158 licenses.

99. *800 MHz and 900 MHz Specialized Mobile Radio Licenses.* The Commission awards ''small entity'' and ''very small entity'' bidding credits in auctions for Specialized Mobile Radio (SMR) geographic area licenses in the 800 MHz and 900 MHz bands to firms that had revenues of no more than $15 million in each of the three previous calendar years, or that had revenues of no more than $3 million in each of the previous calendar years, respectively. These bidding credits apply to SMR providers in the 800 MHz and 900 MHz bands that either hold geographic area licenses or have obtained extended implementation authorizations. The Commission does not know how many firms provide 800 MHz or 900 MHz geographic area SMR service pursuant to extended implementation authorizations, nor how many of these providers have annual revenues of no more than $15 million. One firm has over $15 million in revenues. The Commission assumes, for purposes here, that all of the remaining existing extended implementation authorizations are held by small entities, as that term is defined by the Small Business Act. The Commission has held auctions for geographic area licenses in the 800 MHz and 900 MHz SMR bands. There were 60 winning bidders that qualified as small or very small entities in the 900 MHz SMR auctions. Of the 1,020 licenses won in the 900 MHz auction, bidders qualifying as small or very small entities won 263 licenses. In the 800 MHz auction, 38 of the 524 licenses won were won by small and very small entities. Consequently, the Commission estimates that there are 301 or fewer small entity SMR licensees in the 800 MHz and 900 MHz bands that may be affected by the rules and policies adopted herein.

100. *Common Carrier Paging.* In the *Paging Third Report and Order*, the Commission developed a small business size standard for ''small businesses'' and ''very small businesses'' for purposes of determining their eligibility for special provisions such as bidding credits and installment payments. A ''small business'' is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding $15 million for the preceding three years. Additionally, a ''very small business'' is an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than $3 million for the preceding three years. An auction of Metropolitan

Economic Area licenses commenced on February 24, 2000, and closed on March 2, 2000. Of the 985 licenses auctioned, 440 were sold. Fifty-seven companies claiming small business status won. At present, there are approximately 24,000 Private-Paging site-specific licenses and 74,000 Common Carrier Paging licenses. According to the most recent Trends in Telephone Service, 471 carriers reported that they were engaged in the provision of either paging and messaging services or other mobile services. Of those, the Commission estimates that 450 are small, under the SBA business size standard specifying that firms are small if they have 1,500 or fewer employees.

101. *700 MHz Guard Band Licensees.* In the *700 MHz Guard Band Order*, the Commission adopted a small business size standard for ''small businesses'' and ''very small businesses'' for purposes of determining their eligibility for special provisions such as bidding credits and installment payments. A ''small business'' as an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding $15 million for the preceding three years. Additionally, a ''very small business'' is an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than $3 million for the preceding three years. An auction of 52 Major Economic Area (MEA) licenses commenced on September 6, 2000, and closed on September 21, 2000. Of the 104 licenses auctioned, 96 licenses were sold to nine bidders. Five of these bidders were small businesses that won a total of 26 licenses. A second auction of 700 MHz Guard Band licenses commenced on February 13, 2001 and closed on February 21, 2001. All eight of the licenses auctioned were sold to three bidders. One of these bidders was a small business that won a total of two licenses.

102. *Rural Radiotelephone Service.* The Commission has not adopted a size standard for small businesses specific to the Rural Radiotelephone Service. A significant subset of the Rural Radiotelephone Service is the Basic Exchange Telephone Radio System (BETRS). The Commission uses the SBA's small business size standard applicable to ''Cellular and Other Wireless Telecommunications,'' *i.e.*, an entity employing no more than 1,500 persons. There are approximately 1,000 licensees in the Rural Radiotelephone Service, and the Commission estimates that there are 1,000 or fewer small entity licensees in the Rural Radiotelephone Service that may be affected by the rules and policies adopted herein.

103. *Air-Ground Radiotelephone Service.* The Commission has not adopted a small business size standard specific to the Air-Ground Radiotelephone Service. The Commission will use SBA's small business size standard applicable to ''Cellular and Other Wireless Telecommunications,'' *i.e.*, an entity employing no more than 1,500 persons. There are approximately 100 licensees in the Air-Ground Radiotelephone Service, and we estimate that almost all of them qualify as small under the SBA small business size standard.

104. *Aviation and Marine Radio Services.* Small businesses in the aviation and marine radio services use a very high frequency (VHF) marine or aircraft radio and, as appropriate, an emergency position-indicating radio beacon (and/or radar) or an emergency locator transmitter. The Commission has not developed a small business size standard specifically applicable to these small businesses. For purposes of this analysis, the Commission uses the SBA small business size standard for the category ''Cellular and Other Telecommunications,'' which is 1,500 or fewer employees. Most applicants for recreational licenses are individuals. Approximately 581,000 ship station licensees and 131,000 aircraft station licensees operate domestically and are not subject to the radio carriage requirements of any statute or treaty. For purposes of our evaluations in this analysis, we estimate that there are up to approximately 712,000 licensees that are small businesses (or individuals) under the SBA standard. In addition, between December 3, 1998 and December 14, 1998, the Commission held an auction of 42 VHF Public Coast licenses in the 157.1875–157.4500 MHz (ship transmit) and 161.775–162.0125 MHz (coast transmit) bands. For purposes of the auction, the Commission defined a ''small'' business as an entity that, together with controlling interests and affiliates, has average gross revenues for the preceding three years not to exceed $15 million dollars. In addition, a ''very small'' business is one that, together with controlling interests and affiliates, has average gross revenues for the preceding three years not to exceed $3 million dollars. There are approximately 10,672 licensees in the Marine Coast Service, and the Commission estimates that almost all of them qualify as ''small'' businesses under the above special small business size standards.

105. *Fixed Microwave Services.* Fixed microwave services include common carrier, private operational-fixed, and broadcast auxiliary radio services. At present, there are approximately 22,015 common carrier fixed licensees and 61,670 private operational-fixed licensees and broadcast auxiliary radio licensees in the microwave services. The Commission has not created a size standard for a small business specifically with respect to fixed microwave services. For purposes of this analysis, the Commission uses the SBA small business size standard for the category ''Cellular and Other Telecommunications,'' which is 1,500 or fewer employees. The Commission does not have data specifying the number of these licensees that have more than 1,500 employees, and thus are unable at this time to estimate with greater precision the number of fixed microwave service licensees that would qualify as small business concerns under the SBA's small business size standard. Consequently, the Commission estimates that there are up to 22,015 common carrier fixed licensees and up to 61,670 private operational-fixed licensees and broadcast auxiliary radio licensees in the microwave services that may be small and may be affected by the rules and policies adopted herein. We noted, however, that the common carrier microwave fixed licensee category includes some large entities.

106. *Offshore Radiotelephone Service.* This service operates on several UHF television broadcast channels that are not used for television broadcasting in the coastal areas of states bordering the Gulf of Mexico. There are presently approximately 55 licensees in this service. We are unable to estimate at this time the number of licensees that would qualify as small under the SBA's small business size standard for ''Cellular and Other Wireless Telecommunications'' services. Under that SBA small business size standard, a business is small if it has 1,500 or fewer employees.

107. *Wireless Communications Services (WCS).* This service can be used for fixed, mobile, radiolocation, and digital audio broadcasting satellite uses. The Commission established small business size standards for the WCS auction. A ''small business'' is an entity with average gross revenues of $40 million for each of the three preceding years, and a ''very small business'' is an entity with average gross revenues of $15 million for each of the three preceding years. The SBA has approved these small business size standards. The Commission auctioned geographic area licenses in the WCS service. In the auction, there were seven winning bidders that qualified as ''very small business'' entities, and one that

qualified as a ''small business'' entity. We conclude that the number of geographic area WCS licensees affected by this analysis includes these eight entities.

108. *39 GHz Service.* The Commission created a special small business size standard for 39 GHz licenses—an entity that has average gross revenues of $40 million or less in the three previous calendar years. An additional size standard for ''very small business'' is: an entity that, together with affiliates, has average gross revenues of not more than $15 million for the preceding three calendar years. The SBA has approved these small business size standards. The auction of the 2,173 39 GHz licenses began on April 12, 2000 and closed on May 8, 2000. The 18 bidders who claimed small business status won 849 licenses. Consequently, the Commission estimates that 18 or fewer 39 GHz licensees are small entities that may be affected by the rules and polices adopted herein.

109. *Multipoint Distribution Service (MDS), Multichannel Multipoint Distribution Service (MMDS), and Instructional Television Fixed Service (ITFS).* MMDS systems, often referred to as ''wireless cable,'' transmit video programming to subscribers using the microwave frequencies of the MDS and ITFS. In connection with the 1996 MDS auction, the Commission established a small business size standard as an entity that had annual average gross revenues of less than $40 million in the previous three calendar years. The MDS auctions resulted in 67 successful bidders obtaining licensing opportunities for 493 Basic Trading Areas (BTAs). Of the 67 auction winners, 61 met the definition of a small business. MDS also includes licensees of stations authorized prior to the auction. In addition, the SBA has developed a small business size standard for Cable and Other Program Distribution, which includes all such companies generating $12.5 million or less in annual receipts. According to Census Bureau data for 1997, there were a total of 1,311 firms in this category, total, that had operated for the entire year. Of this total, 1,180 firms had annual receipts of under $10 million and an additional 52 firms had receipts of $10 million or more but less than $25 million. Consequently, we estimate that the majority of providers in this service category are small businesses that may be affected by the rules and policies adopted herein. This SBA small business size standard also appears applicable to ITFS. There are presently 2,032 ITFS licensees. All but 100 of these licenses are held by educational institutions. Educational institutions are included in this analysis as small entities. Thus, we tentatively conclude that at least 1,932 licensees are small businesses.

110. *Local Multipoint Distribution Service.* Local Multipoint Distribution Service (LMDS) is a fixed broadband point-to-multipoint microwave service that provides for two-way video telecommunications. The auction of the 1,030 LMDS licenses began on February 18, 1998, and closed on March 25, 1998. The Commission established a small business size standard for LMDS licenses as an entity that has average gross revenues of less than $40 million in the three previous calendar years. An additional small business size standard for ''very small business'' was added as an entity that, together with its affiliates, has average gross revenues of not more than $15 million for the preceding three calendar years. The SBA has approved these small business size standards in the context of LMDS auctions. There were 93 winning bidders that qualified as small entities in the LMDS auctions. A total of 93 small and very small business bidders won approximately 277 A Block licenses and 387 B Block licenses. On March 27, 1999, the Commission re-auctioned 161 licenses; there were 40 winning bidders. Based on this information, we conclude that the number of small LMDS licenses consists of the 93 winning bidders in the first auction and the 40 winning bidders in the re-auction, for a total of 133 small entity LMDS providers.

111. *218–219 MHz Service.* The first auction of 218–219 MHz spectrum resulted in 170 entities winning licenses for 594 Metropolitan Statistical Area (MSA) licenses. Of the 594 licenses, 557 were won by entities qualifying as a small business. For that auction, the small business size standard was an entity that, together with its affiliates, has no more than a $6 million net worth and, after federal income taxes (excluding any carry-over losses), has no more than $2 million in annual profits each year for the previous two years. In the *218–219 MHz Report and Order and Memorandum Opinion and Order,* we established a small business size standard for a ''small business'' as an entity that, together with its affiliates and persons or entities that hold interests in such an entity and their affiliates, has average annual gross revenues not to exceed $15 million for the preceding three years. A ''very small business'' is defined as an entity that, together with its affiliates and persons or entities that hold interests in such an entity and its affiliates, has average annual gross revenues not to exceed $3 million for the preceding three years. We cannot estimate, however, the number of licenses that will be won by entities qualifying as small or very small businesses under our rules in future auctions of 218–219 MHz spectrum.

112. *24 GHz—Incumbent Licensees.* This analysis may affect incumbent licensees who were relocated to the 24 GHz band from the 18 GHz band, and applicants who wish to provide services in the 24 GHz band. The applicable SBA small business size standard is that of ''Cellular and Other Wireless Telecommunications'' companies. This category provides that such a company is small if it employs no more than 1,500 persons. According to Census Bureau data for 1997, there were 977 firms in this category, total, that operated for the entire year. Of this total, 965 firms had employment of 999 or fewer employees, and an additional 12 firms had employment of 1,000 employees or more. Thus, under this size standard, the great majority of firms can be considered small. These broader census data notwithstanding, we believe that there are only two licensees in the 24 GHz band that were relocated from the 18 GHz band, Teligent and TRW, Inc. It is our understanding that Teligent and its related companies have less than 1,500 employees, though this may change in the future. TRW is not a small entity. Thus, only one incumbent licensee in the 24 GHz band is a small business entity.

113. *24 GHz—Future Licensees.* With respect to new applicants in the 24 GHz band, the small business size standard for ''small business'' is an entity that, together with controlling interests and affiliates, has average annual gross revenues for the three preceding years not in excess of $15 million. ''Very small business'' in the 24 GHz band is an entity that, together with controlling interests and affiliates, has average gross revenues not exceeding $3 million for the preceding three years. The SBA has approved these small business size standards. These size standards will apply to the future auction, if held.

114. *Internet Service Providers.* While internet service providers (ISPs) are only indirectly affected by our present actions, and ISPs are therefore not formally included within this present FRFA, we have addressed them informally to create a fuller record and to recognize their participation in this proceeding. The SBA has developed a small business size standard for Online Information Services, which consists of all such companies having $21 million or less in annual receipts. According to Census Bureau data for 1997, there were 2,751 firms in this category, total, that operated for the entire year. Of this

total, 2,659 firms had annual receipts of $9,999,999 or less, and an additional 67 had receipts of $10 million to $24,999,999. Thus, under this size standard, the great majority of firms can be considered small.

Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements

115. Pursuant to sections 251(c) and (d) of the Act, incumbent LECs, including those that qualify as small entities, are required to provide nondiscriminatory access to UNEs. The only exception to this rule applies to qualifying rural carriers that have gone through the process of obtaining an exemption, suspension, or modification pursuant to section 251(f) of the Act. This Order represents, in large part, a fresh examination of the issues presented in implementing the unbundling requirements of section 251, based on comments from interested parties responding to the *NPRM.* This Order also interprets the necessary and impair standards of section 251(d)(2) in a manner that satisfies the D.C. Circuit's directives that (1) the Commission eschew broad national standards in favor of more granular analysis, and that, (2) in determining whether a carrier is ''impaired'' by diminished access to a given element, the Commission distinguish between ''cost disparities that are universal as between new entrants and incumbents in any industry'' and disparities resulting specifically from the conditions of natural monopoly that the Act is designed to redress.

116. In this Order, we determine that requesting carriers (1) are impaired without access to local circuit switching in providing service to mass market customers using DS0 capacity loops; (2) are not impaired without access to unbundled local circuit switching for the provision of service to enterprise customers using DS1 and higher capacity loops; (3) are not impaired without access to packet switching, including routers and DSLAMs; (4) are not impaired without access to incumbent LECs' signaling systems except where they are also impaired without access to the incumbent LEC's unbundled circuit switching; (5) are impaired without unbundled access to the incumbent LEC's 911 and e911 databases; (6) are not impaired without access to the incumbent LEC's other call-related databases if they deploy their own switches, but otherwise are impaired; (7) are impaired without access to incumbent LECs' OSS; (8) are impaired without access to copper loop or subloop facilities (and must condition copper loops for provision of advanced services), but are not impaired without access to line-sharing (subject to a three-year transition) or hybrid loops; (9) are not impaired without access to new build/greenfield fiber-to-the-home (FTTH) loops for broadband or narrowband services or overbuild/brownfield FTTH loops for broadband services; (10) are not impaired without unbundled access to OCn capacity loop facilities, but are impaired, subject to certain triggers, without access to dark fiber loops, DS1 loops, and DS3 loops; (11) are impaired without access to unbundled subloops associated with accessing customer premises wiring at multiunit premises and are also impaired without unbundled access to the incumbent LEC Inside Wire Subloops and NIDs, regardless of loop type; (12) are not impaired without unbundled access to OCn transport facilities, but are impaired, subject to certain triggers, without access to dark fiber transport facilities, DS1 transport facilities, and DS3 transport facilities; and (13) are impaired without access to unbundled shared transport only to the extent they are impaired without access to local circuit switching. The Order also affirms that incumbent LECs are obligated to provide access to UNE combinations.

117. In this Order, the Commission adopts rules to implement a congressionally-mandated scheme, embodied in section 251 of the Act, that imposes upon incumbent LECs an obligation to provide unbundled access to certain network elements. This Order articulates a new impairment standard to govern which network elements incumbent LECs must unbundle for competitors in accordance with the Act. While this Order imposes no general obligations on competitive LECs, the Order does require competitive LECs to satisfy certain reporting requirements in order to obtain as UNEs certain high-capacity network elements from incumbent LECs. We have attempted to keep the obligations imposed by this Order to the minimum necessary to implement the requirements of the Act.

118. In addition, this Order outlines procedures whereby states may conduct proceedings to determine whether certain network elements satisfy our impairment standard according to specific guidelines and triggers, as outlined in the Order. While this Order does not specifically impose any obligations on carriers in this regard, records regarding facility use may be necessary for these state proceedings.

119. The various compliance requirements contained in this Order will require the use of engineering, technical, operational, accounting, billing, and legal skills. The carriers that are affected by these requirements already possess these skills. This Order contains new or modified information collections, which are subject to Office of Management and Budget review pursuant to the Paperwork Reduction Act of 1995, Pub. L. 104–13.

Steps Taken To Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered

120. The RFA requires an agency to describe any significant alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): (1) The establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities.

121. In this Order, the Commission adopts rules regarding the unbundling of network elements. It has modified our impairment analysis to find that a requesting carrier is impaired when lack of access to a facility in the incumbent LEC's network poses barriers that are likely to make entry into the market uneconomic. These can include both operational and economic barriers, such as scale economies, sunk costs, first mover advantages, absolute cost advantages, and barriers within the control of the incumbent LEC. In adopting this interpretation, the Commission considered a variety of factors relating to the size of regulated entities and the customers they serve. It considered a number of barriers to competitive entry, including those faced by small competitors, as well as the importance of scale economies as they relate to small entities. Finally, the Commission considered and rejected a number of suggested approaches to impairment.

122. In applying its impairment analysis to specific network elements, the Commisson adopts a more granular approach, including the considerations of customer class, geography, and service. The Commission found that conducting a more granular analysis permits it to distinguish, with more particularity, those situations for which there is impairment from those for which there is none. It also found that an even more granular analysis—loop by loop, for example—is neither

administratively feasible nor required by the courts. The Commission considered the differing needs of three classes of telecommunications customers: mass market customers (*i.e.*, residential customers and sometimes very small business customers), small and medium enterprise customers, and large enterprise customers. Mass market customers typically generate lower revenue and tighter profit margins than the other classes and therefore require service providers to minimize costs. Small and medium business customers typically are willing to pay higher prices but are more sensitive to reliability and quality of service. Large enterprise customers tend to demand extensive and sophisticated service packages, and reliability and quality of service are essential to these customers.

123. In addition, because requiring unbundling in the absence of impairment imposes unnecessary costs—including for small or rural incumbent LECs—we considered whether impairment varies geographically throughout the country. The Commission makes unbundling decisions on a national scale where the record permits us to, but delegate some determining role to the states where it appears that impairment might exist in some regions of the country but not others. In this regard, we note that Congress provided a mechanism—in section 251(f) of the Act—to exempt small and rural incumbent LECs from several of the Act's obligations. For example, unbundling rules shall not apply to a rural telephone company until it receives a bona fide request for interconnection and until the state commission determines that the request is technically feasible, not unduly economically burdensome, and consistent with section 254. Or, a LEC with fewer than two percent of the nation's subscriber lines may obtain relief from unbundling if the state commission decides, among other things, that relief is necessary to avoid imposing a economically burdensome requirement or other significant adverse economic impact.

124. Through our granular impairment analysis, the Commission has considered the resources and needs of various carriers, including small businesses, and have examined the state of the marketplace to determine whether it was economically feasible for competitors to self-provision network elements or obtain them from competitive sources other than incumbent LECs. This approach strikes the appropriate balance between the needs of competitors—including small competitors—to access certain network elements, against the burdens unbundling imposes upon incumbent LECs—including small incumbents—and yields a more accurate picture of the state of competition for each of the varied network elements composing the local telephone network. For those network elements for which carriers may be impaired only in certain geographic markets, such as certain high capacity loops and transport, we adopt an approach that permits localized determination—with a role for the states—as to where and whether impairment exists. In this way, the Commission has sought to take a more specific view of the needs of differently situated competitors.

125. The Commission also has established service eligibility requirements for UNEs which are designed to ensure that carriers use UNEs primarily to provide local services in competition with incumbent LECs, ''while avoiding burdensome administrative rules that serve as a drag on competitive entry.'' While we recognize that regulatory requirements may disproportionately impact smaller entities, we have adopted the least burdensome of several available alternatives in requiring competitors to satisfy certain service eligibility criteria. For example, rather than requiring carriers to certify to be the sole provider of local service in order to access certain elements (*e.g.*, high capacity loops and transport)—an approach that might require frequent and costly assurance from a carrier's customers—the Commission permits carriers to certify that they are the primary providers of local service. In this regard, being certified as a competitive LEC is probative of providing qualifying service. The Commission also adopts collocation and local interconnection requirements as less burdensome ways of assuring service eligibility. By contrast, we have rejected a number of suggested approaches as unnecessarily burdensome, such as measuring minutes or traffic percentages, separately measuring voice and data use, or permitting UNEs only where a competitive carrier uses certain types of switches. It finds that our adopted indicia of service eligibility serve as adequate and less burdensome assurance that a carrier is using UNEs in a manner consistent with the local competition goals of the Act.

Ordering Clauses

126. Accordingly, pursuant to sections 1, 3, 4, 201–205, 251, 256, 271, 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. 151, 153, 154, 201–205, 251, 252, 256, 271, 303(r), and section 706 of the Telecommunications Act of 1996, 47 U.S.C. 157 nt, the *Report and Order on Remand and Further Notice of Proposed Rulemaking* in CC Docket No. 01–338 *is adopted,* and that part 51 of the Commission's Rules, 47 CFR part 51, is amended as set forth in the rule changes.

127. The rules contained herein are effective October 2, 2003.

128. Pursuant to sections 1, 3, 4, 201–205, 251, 256, 271, and 303(r) of the Communications Act, as amended, 47 U.S.C. 151, 153, 154, 201–205, 251, 252, 256, 271, and 303(r), and Section 706 of the Telecommunications Act of 1996, 47 U.S.C. 157 nt. that the petitions for reconsideration of the *UNE Remand Order* filed in CC Docket No. 96–98 by Low Tech Designs, Inc. on February 15, 2000, and by the Telecommunications Resellers Association on February 18, 2000; the petition for partial reconsideration of the *UNE Remand Order* filed in CC Docket No. 96–98 by Birch Telecom, Inc. on February 17, 2000; the petition for reconsideration and clarification of the *UNE Remand Order* filed in CC Docket No. 96–98 by Sprint Corporation on February 17, 2000; the petition for clarification on reconsideration of the UNE Remand Order filed in CC Docket No. 96–98, 95–185 by MGC Communications, Inc.; d/b/a Mpower Communications, Corp. on February 17, 2000; the joint petition filed in CC Docket No. 96–98 by BellSouth Corporation and BellSouth Telecommunications, Inc., SBC Communications, Inc., and Verizon Telephone Companies on April 5, 2001; the petitions for waiver of the supplemental order clarification filed in CC Docket No. 96–98 by WorldCom, Inc. on September 12, 2000, and ITC^DeltaCom Communications, Inc. on August 16, 2001; the petition filed in CC Docket Nos. 01–338, 96–98, 98–147 by Promoting Active Competition Everywhere (PACE) Coalition on February 6, 2002; and the petition for declaratory ruling filed in CC Docket No. 01–338 by WorldCom, Inc. on August 8, 2002 *are dismissed as moot.*

129. Pursuant to sections 1, 3, 4, 201–205, 251, 256, 271, and 303(r) of the Communications Act, as amended, 47 U.S.C. 151, 153, 154, 201–205, 251, 252, 256, 271, and 303(r), and Section 706 of the Telecommunications Act of 1996, 47 U.S.C. 157 nt. that the joint petition for declaratory ruling filed in CC Docket No. 96–98 by AT&T Wireless Services, Inc. and VoiceStream Wireless, Corp. on November 19, 2001 *is granted* to the extent indicated herein and otherwise *is moot.*

130. Pursuant to sections 1, 3, 4, 201–205, 251, 256, 271, and 303(r) of the Communications Act, as amended, 47 U.S.C. 151, 153, 154, 201–205, 251, 252, 256, 271, and 303(r), and Section 706 of the Telecommunications Act of 1996, 47 U.S.C. 157 nt. that the petition for reconsideration/clarification of the *UNE Remand Order* filed in CC Docket No. 96–98 by BellSouth Corporation and BellSouth Telecommunications, Inc. on February 17, 2000 *is granted* to the extent indicated herein and otherwise *are denied.*

131. Pursuant to sections 1, 3, 4, 201–205, 251, 256, 271, and 303(r) of the Communications Act, as amended, 47 U.S.C. 151, 153, 154, 201–205, 251, 252, 256, 271, and 303(r), and Section 706 of the Telecommunications Act of 1996, 47 U.S.C. 157 nt. that the petitions for reconsideration of the *UNE Remand Order* filed in CC Docket Nos. 96–98, 95–185 by Rhythms Netconnections Inc. and Covad Communications Co. on January 21, 2000, @Link Networks, Inc., DSL.net, Inc. and MGC Communications, Inc., d/b/a Mpower Communications Corp. on February 17, 2000, McLeodUSA Telecommunications Services, Inc. and the petition for reconsideration of the *UNE Remand Order* filed in CC Docket No. 96–98 by RCN Telecom Services, Inc. on February 17, 2000 *are denied*.

132. Pursuant to sections 1, 3, 4, 201–205, 251, 256, 271, and 303(r) of the Communications Act, as amended, 47 U.S.C. 151, 153, 154, 201–205, 251, 252, 256, 271, and 303(r), and section 706 of the Telecommunications Act of 1996, 47 U.S.C. 157 nt. that the petition of the *UNE Remand Order* filed in CC Docket No. 96–98 by Competitive Telecommunications Association on November 26, 2001; and the petitions for reconsideration of the *UNE Remand Order* filed in CC Docket No. 96–98 by Intermedia Communications, Inc. and by MCI WorldCom, Inc. on February 17, 2000 *are denied* to the extent indicated herein and otherwise *are dismissed as moot*.

133. Pursuant to sections 1, 3, 4, 201–205, 251, 256, 271, and 303(r) of the Communications Act, as amended, 47 U.S.C. 151, 153, 154, 201–205, 251, 252, 256, 271, and 303(r), and Section 706 of the Telecommunications Act of 1996, 47 U.S.C. 157 nt. that the petition for clarification of the *UNE Remand Order* filed in CC Docket No. 96–98 by MCI WorldCom, Inc. on February 17, 2000; the petition for reconsideration of the *UNE Remand Order* filed in CC Docket No. 96–98 by the Competitive Telecommunications Association on February 17, 2000; the petition for reconsideration and clarification of the *UNE Remand Order* filed in CC Docket No. 96–98 by Bell Atlantic on February 17, 2000; and the petition for reconsideration and clarification of the *UNE Remand Order* filed in CC Docket No. 96–98 by AT&T Corp. on February 17, 2000 *are granted* to the extent indicated herein and otherwise *are denied* or *dismissed as moot*.

134. The Public Notice, *Comments Sought on the Use of Unbundled Network Elements to Provide Exchange Access Service,* CC Docket No. 96–98, DA 01–169 (rel. Jan. 24, 2001); *Deployment of Wireline Services Offering Advanced Telecommunications Capability and Implementation of the Local Competition Provisions of the Telecommunications Act of 1996,* Third Report and Order on Reconsideration in CC Docket No. 98–147, Fourth Report and Order on Reconsideration in CC Docket No. 96–98, Third Further Notice of Proposed Rulemaking in CC Docket No. 98–147, and Sixth Further Notice of Proposed Rulemaking in CC Docket No. 96–98, 16 FCC Rcd 2101 (2001); *Implementation of Local Competition Provisions of the Telecommunications Act of 1996,* Third Order on Reconsideration and Further Notice of Proposed Rulemaking, CC Docket Nos. 96–98 and 95–185, 12 FCC Rcd 12460 (1997); and *Implementation of the Local Competition Provisions of 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 (1999) *are terminated*.

135. The Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, *shall send* a copy of this *Report and Order and Order on Remand,* including the Final Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

Report to Congress

125. The Commission will send a copy of the Order, including this FRFA, in a report to be sent to Congress pursuant to the Congressional Review Act. In addition, the Commission will send a copy of the Order, including the FRFA, to the Chief Counsel for SBA Advocacy. The Order and FRFA, or summaries thereof, will also be published in the **Federal Register**.

List of Subjects in 47 CFR Part 51

Interconnection, Telecommunications carriers.

Federal Communications Commission.

William F. Caton,

Deputy Secretary.

Final Rules

■ Part 51 of title 47 of the Code of Federal Regulations is amended as follows:

PART 51—INTERCONNECTION

■ 1. The authority citation for part 51 is revised to read as follows:

Authority: Sections 1–5, 7, 201–05, 207–09, 218, 225–27, 251–54, 256, 271, 303(r), 332, 48 Stat. 1070, as amended, 1077; 47 U.S.C. 151–55, 157, 201–05, 207–09, 218, 225–27, 251–54, 256, 271, 303(r), 332, 47 U.S.C. 157 *note,* unless otherwise noted.

■ 2. Section 51.5 is amended by adding six new definitions in alphabetical order and by revising the definition of ''state commission'' to read as follows:

§ 51.5 Terms and definitions.

* * * * *

Commingling. Commingling means the connecting, attaching, or otherwise linking of an unbundled network element, or a combination of unbundled network elements, to one or more facilities or services that a requesting telecommunications carrier has obtained at wholesale from an incumbent LEC, or the combining of an unbundled network element, or a combination of unbundled network elements, with one or more such facilities or services. *Commingle* means the act of commingling.

* * * * *

Enhanced extended link. An *enhanced extended link* or *EEL* consists of a combination of an unbundled loop and unbundled dedicated transport, together with any facilities, equipment, or functions necessary to combine those network elements.

* * * * *

Intermodal. The term intermodal refers to facilities or technologies other than those found in traditional telephone networks, but that are utilized to provide competing services. Intermodal facilities or technologies include, but are not limited to, traditional or new cable plant, wireless technologies, and power line technologies.

* * * * *

Non-qualifying service. A *non-qualifying service* is a service that is not a qualifying service.

* * * * *

Qualifying service. A *qualifying service* is a telecommunications service that competes with a telecommunications service that has been traditionally the exclusive or

primary domain of incumbent LECs, including, but not limited to, local exchange service, such as plain old telephone service, and access services, such as digital subscriber line services and high-capacity circuits.

* * * * *

State commission. A *state commission* means the commission, board, or official (by whatever name designated) which under the laws of any state has regulatory jurisdiction with respect to intrastate operations of carriers. As referenced in this part, this term may include the Commission if it assumes responsibility for a proceeding or matter, pursuant to section 252(e)(5) of the Act or § 51.320. This term shall also include any person or persons to whom the state commission has delegated its authority under sections 251 and 252 of the Act and this part.

* * * * *

Triennial Review Order. The *Triennial Review Order* means the Commission's Report and Order and Order on Remand and Further Notice of Proposed Rulemaking in CC Docket Nos. 01–338, 96–98, and 98–147.

* * * * *

■ 3. Section 51.301 is amended by revising paragraph (c)(8)(ii) to read as follows:

§ 51.301 Duty to negotiate.

* * * * *

(c) * * *

(8) * * *

(ii) Refusal by an incumbent LEC to furnish cost data that would be relevant to setting rates if the parties were in arbitration.

■ 4. Section 51.305 is amended by removing paragraph (a)(4), redesignating paragraph (a)(5) as paragraph (a)(4), and revising paragraph (a)(3) to read as follows:

§ 51.305 Interconnection.

(a) * * *

(3) That is at a level of quality that is equal to that which the incumbent LEC provides itself, a subsidiary, an affiliate, or any other party. At a minimum, this requires an incumbent LEC to design interconnection facilities to meet the same technical criteria and service standards that are used within the incumbent LEC's network. This obligation is not limited to a consideration of service quality as perceived by end users, and includes, but is not limited to, service quality as perceived by the requesting telecommunications carrier; and

* * * * *

■ 5. Section 51.309 is amended by revising paragraphs (a) and (b), and by adding paragraphs (d) through (g) to read as follows:

§ 51.309 Use of unbundled network elements.

(a) Except as provided in § 51.318, an incumbent LEC shall not impose limitations, restrictions, or requirements on requests for, or the use of, unbundled network elements for the service a requesting telecommunications carrier seeks to offer.

(b) A requesting telecommunications carrier may not access an unbundled network element for the sole purpose of providing non-qualifying services.

* * * * *

(d) A requesting telecommunications carrier that accesses and uses an unbundled network element pursuant to section 251(c)(3) of the Act and this part to provide a qualifying service may use the same unbundled network element to provide non-qualifying services.

(e) Except as provided in § 51.318, an incumbent LEC shall permit a requesting telecommunications carrier to commingle an unbundled network element or a combination of unbundled network elements with wholesale services obtained from an incumbent LEC.

(f) Upon request, an incumbent LEC shall perform the functions necessary to commingle an unbundled network element or a combination of unbundled network elements with one or more facilities or services that a requesting telecommunications carrier has obtained at wholesale from an incumbent LEC.

(g) An incumbent LEC shall not deny access to an unbundled network element or a combination of unbundled network elements on the grounds that one or more of the elements:

(1) Is connected to, attached to, linked to, or combined with, a facility or service obtained from an incumbent LEC; or

(2) Shares part of the incumbent LEC's network with access services or inputs for non-qualifying services.

■ 6. Section 51.311 is amended by revising paragraphs (a) and (b), removing paragraph (c), redesignating paragraphs (d) and (e) as paragraphs (c) and (d) to read as follows:

§ 51.311 Nondiscriminatory access to unbundled network elements.

(a) The quality of an unbundled network element, as well as the quality of the access to the unbundled network element, that an incumbent LEC provides to a requesting telecommunications carrier shall be the same for all telecommunications carriers requesting access to that network element.

(b) To the extent technically feasible, the quality of an unbundled network element, as well as the quality of the access to such unbundled network element, that an incumbent LEC provides to a requesting telecommunications carrier shall be at least equal in quality to that which the incumbent LEC provides to itself. If an incumbent LEC fails to meet this requirement, the incumbent LEC must prove to the state commission that it is not technically feasible to provide the requested unbundled network element, or to provide access to the requested unbundled network element, at a level of quality that is equal to that which the incumbent LEC provides to itself.

* * * * *

■ 7. Section 51.315 is amended by revising paragraphs (c) and (f) to read as follows:

§ 51.315 Combination of unbundled network elements.

* * * * *

(c) Upon request, an incumbent LEC shall perform the functions necessary to combine unbundled network elements in any manner, even if those elements are not ordinarily combined in the incumbent LEC's network, provided that such combination:

(1) Is technically feasible; and

(2) Would not undermine the ability of other carriers to obtain access to unbundled network elements or to interconnect with the incumbent LEC's network.

* * * * *

(f) An incumbent LEC that denies a request to combine unbundled network elements pursuant to paragraph (c)(2) of this section must demonstrate to the state commission that the requested combination would undermine the ability of other carriers to obtain access to unbundled network elements or to interconnect with the incumbent LEC's network.

■ 8. Section 51.316 is added to read as follows:

§ 51.316 Conversion of unbundled network elements and services.

(a) Upon request, an incumbent LEC shall convert a wholesale service, or group of wholesale services, to the equivalent unbundled network element, or combination of unbundled network elements, that is available to the requesting telecommunications carrier under section 251(c)(3) of the Act and this part.

(b) An incumbent LEC shall perform any conversion from a wholesale service

or group of wholesale services to an unbundled network element or combination of unbundled network elements without adversely affecting the service quality perceived by the requesting telecommunications carrier's end-user customer.

(c) Except as agreed to by the parties, an incumbent LEC shall not impose any untariffed termination charges, or any disconnect fees, re-connect fees, or charges associated with establishing a service for the first time, in connection with any conversion between a wholesale service or group of wholesale services and an unbundled network element or combination of unbundled network elements.

■ 9. Section 51.317 is revised to read as follows:

§ 51.317 Standards for requiring the unbundling of network elements.

Proprietary network elements. A network element shall be considered to be proprietary if an incumbent LEC can demonstrate that it has invested resources to develop proprietary information or functionalities that are protected by patent, copyright or trade secret law. The Commission shall undertake the following analysis to determine whether a proprietary network element should be made available for purposes of section 251(c)(3) of the Act:

(a) Determine whether access to the proprietary network element is ''necessary.'' A network element is ''necessary'' if, taking into consideration the availability of alternative elements outside the incumbent LEC's network, including self-provisioning by a requesting telecommunications carrier or acquiring an alternative from a third-party supplier, lack of access to the network element precludes a requesting telecommunications carrier from providing the services that it seeks to offer. If access is ''necessary,'' the Commission may require the unbundling of such proprietary network element.

(b) In the event that such access is not ''necessary,'' the Commission may require unbundling if it is determined that:

(1) The incumbent LEC has implemented only a minor modification to the network element in order to qualify for proprietary treatment;

(2) The information or functionality that is proprietary in nature does not differentiate the incumbent LEC's services from the requesting telecommunications carrier's services; or

(3) Lack of access to such element would jeopardize the goals of the Act.

■ 10. Section 51.318 is added to read as follows:

§ 51.318 Eligibility criteria for access to certain unbundled network elements.

(a) Except as provided in paragraph (b) of this section, an incumbent LEC shall provide access to unbundled network elements and combinations of unbundled network elements without regard to whether the requesting telecommunications carrier seeks access to the elements to establish a new circuit or to convert an existing circuit from a service to unbundled network elements.

(b) An incumbent LEC need not provide access to an unbundled DS1 loop in combination, or commingled, with a dedicated DS1 transport or dedicated DS3 transport facility or service, or to an unbundled DS3 loop in combination, or commingled, with a dedicated DS3 transport facility or service, unless the requesting telecommunications carrier certifies that all of the following conditions are met:

(1) The requesting telecommunications carrier has received state certification to provide local voice service in the area being served or, in the absence of a state certification requirement, has complied with registration, tariffing, filing fee, or other regulatory requirements applicable to the provision of local voice service in that area.

(2) The following criteria are satisfied for each combined circuit, including each DS1 circuit, each DS1 enhanced extended link, and each DS1-equivalent circuit on a DS3 enhanced extended link:

(i) Each circuit to be provided to each customer will be assigned a local number prior to the provision of service over that circuit;

(ii) Each DS1-equivalent circuit on a DS3 enhanced extended link must have its own local number assignment, so that each DS3 must have at least 28 local voice numbers assigned to it;

(iii) Each circuit to be provided to each customer will have 911 or E911 capability prior to the provision of service over that circuit;

(iv) Each circuit to be provided to each customer will terminate in a collocation arrangement that meets the requirements of paragraph (c) of this section;

(v) Each circuit to be provided to each customer will be served by an interconnection trunk that meets the requirements of paragraph (d) of this section;

(vi) For each 24 DS1 enhanced extended links or other facilities having equivalent capacity, the requesting telecommunications carrier will have at least one active DS1 local service interconnection trunk that meets the requirements of paragraph (d) of this section; and

(vii) Each circuit to be provided to each customer will be served by a switch capable of switching local voice traffic.

(c) A collocation arrangement meets the requirements of this paragraph if it is:

(1) Established pursuant to section 251(c)(6) of the Act and located at an incumbent LEC premises within the same LATA as the customer's premises, when the incumbent LEC is not the collocator; and

(2) Located at a third party's premises within the same LATA as the customer's premises, when the incumbent LEC is the collocator.

(d) An interconnection trunk meets the requirements of this paragraph if the requesting telecommunications carrier will transmit the calling party's number in connection with calls exchanged over the trunk.

■ 11. Section 51.319 is revised to read as follows:

§ 51.319 Specific unbundling requirements.

(a) *Local loops.* An incumbent LEC shall provide a requesting telecommunications carrier with nondiscriminatory access to the local loop on an unbundled basis, in accordance with section 251(c)(3) of the Act and this part and as set forth in paragraphs (a)(1) through (a)(9) of this section. The local loop network element is defined as a transmission facility between a distribution frame (or its equivalent) in an incumbent LEC central office and the loop demarcation point at an end-user customer premises. This element includes all features, functions, and capabilities of such transmission facility, including the network interface device. It also includes all electronics, optronics, and intermediate devices (including repeaters and load coils) used to establish the transmission path to the end-user customer premises as well as any inside wire owned or controlled by the incumbent LEC that is part of that transmission path.

(1) *Copper loops.* An incumbent LEC shall provide a requesting telecommunications carrier with nondiscriminatory access to the copper loop on an unbundled basis. A copper loop is a stand-alone local loop comprised entirely of copper wire or cable. Copper loops include two-wire and four-wire analog voice-grade copper loops, digital copper loops (*e.g.*, DS0s and integrated services digital network

lines), as well as two-wire and four-wire copper loops conditioned to transmit the digital signals needed to provide digital subscriber line services, regardless of whether the copper loops are in service or held as spares. The copper loop includes attached electronics using time division multiplexing technology, but does not include packet switching capabilities as defined in paragraph (a)(2)(i) of this section. The availability of DS1 and DS3 copper loops is subject to the requirements of paragraphs (a)(4) and (a)(5) of this section.

(i) *Line sharing.* Beginning on the effective date of the Commission's *Triennial Review Order,* the high frequency portion of a copper loop shall no longer be required to be provided as an unbundled network element, subject to the transitional line sharing conditions in paragraphs (a)(1)(i)(A) and (a)(1)(i)(B) of this section. Line sharing is the process by which a requesting telecommunications carrier provides digital subscriber line service over the same copper loop that the incumbent LEC uses to provide voice service, with the incumbent LEC using the low frequency portion of the loop and the requesting telecommunications carrier using the high frequency portion of the loop. The high frequency portion of the loop consists of the frequency range on the copper loop above the range that carries analog circuit-switched voice transmissions. This portion of the loop includes the features, functions, and capabilities of the loop that are used to establish a complete transmission path on the high frequency range between the incumbent LEC's distribution frame (or its equivalent) in its central office and the demarcation point at the end-user customer premises, and includes the high frequency portion of any inside wire owned or controlled by the incumbent LEC.

(A) *Line sharing customers before the effective date of the Commission's Triennial Review Order.* An incumbent LEC shall provide a requesting telecommunications carrier with the ability to engage in line sharing over a copper loop where, prior to the effective date of the Commission's *Triennial Review Order,* the requesting telecommunications carrier began providing digital subscriber line service to a particular end-user customer and has not ceased providing digital subscriber line service to that customer. Until such end-user customer cancels or otherwise discontinues its subscription to the digital subscriber line service of the requesting telecommunications carrier, or its successor or assign, an incumbent LEC shall continue to provide access to the high frequency portion of the loop at the same rate that the incumbent LEC charged for such access prior to the effective date of the Commission's *Triennial Review Order.*

(B) *Line sharing customers on or after the effective date of the Commission's Triennial Review Order.* An incumbent LEC shall provide a requesting telecommunications carrier with the ability to engage in line sharing over a copper loop, between the effective date of the Commission's *Triennial Review Order* and three years after that effective date, where the requesting telecommunications carrier began providing digital subscriber line service to a particular end-user customer on or before the date one year after that effective date. Beginning three years after the effective date of the Commission's *Triennial Review Order,* the incumbent LEC is no longer required to provide a requesting telecommunications carrier with the ability to engage in line sharing for this end-user customer or any new end-user customer. Between the effective date of the Commission's *Triennial Review Order* and three years after that effective date, an incumbent LEC shall provide a requesting telecommunications carrier with access to the high frequency portion of a copper loop in order to serve line sharing customers obtained between the effective date of the Commission's *Triennial Review Order* and one year after that effective date in the following manner:

(*1*) During the first year following the effective date of the Commission's *Triennial Review Order,* the incumbent LEC shall provide access to the high frequency portion of a copper loop at 25 percent of the state-approved monthly recurring rate, or 25 percent of the monthly recurring rate set forth in the incumbent LEC's and requesting telecommunications carrier's interconnection agreement, for access to a copper loop in effect on that date.

(*2*) Beginning one year plus one day after the effective date of the Commission's *Triennial Review Order* until two years after that effective date, the incumbent LEC shall provide access to the high frequency portion of a copper loop at 50 percent of the state-approved monthly recurring rate, or 50 percent of the monthly recurring rate set forth in the incumbent LEC's and requesting telecommunications carrier's interconnection agreement, for access to a copper loop in effect on the effective date of the Commission's *Triennial Review Order.*

(*3*) Beginning two years plus one day after effective date of the Commission's *Triennial Review Order* until three years after that effective date, the incumbent LEC shall provide access to the high frequency portion of a copper loop at 75 percent of the state-approved monthly recurring rate, or 75 percent of the monthly recurring rate set forth in the incumbent LEC's and requesting telecommunications carrier's interconnection agreement, for access to a copper loop in effect on the effective date of the Commission's *Triennial Review Order.*

(ii) *Line splitting.* An incumbent LEC shall provide a requesting telecommunications carrier that obtains an unbundled copper loop from the incumbent LEC with the ability to engage in line splitting arrangements with another competitive LEC using a splitter collocated at the central office where the loop terminates into a distribution frame or its equivalent. Line splitting is the process in which one competitive LEC provides narrowband voice service over the low frequency portion of a copper loop and a second competitive LEC provides digital subscriber line service over the high frequency portion of that same loop.

(A) An incumbent LEC's obligation, under paragraph (a)(1)(ii) of this section, to provide a requesting telecommunications carrier with the ability to engage in line splitting applies regardless of whether the carrier providing voice service provides its own switching or obtains local circuit switching as an unbundled network element pursuant to paragraph (d) of this section.

(B) An incumbent LEC must make all necessary network modifications, including providing nondiscriminatory access to operations support systems necessary for pre-ordering, ordering, provisioning, maintenance and repair, and billing for loops used in line splitting arrangements.

(iii) *Line conditioning.* The incumbent LEC shall condition a copper loop at the request of the carrier seeking access to a copper loop under paragraph (a)(1) of this section, the high frequency portion of a copper loop under paragraph (a)(1)(i) of this section, or a copper subloop under paragraph (b) of this section to ensure that the copper loop or copper subloop is suitable for providing digital subscriber line services, including those provided over the high frequency portion of the copper loop or copper subloop, whether or not the incumbent LEC offers advanced services to the end-user customer on that copper loop or copper subloop. If the incumbent LEC seeks compensation from the requesting telecommunications carrier for line conditioning, the requesting telecommunications carrier

has the option of refusing, in whole or in part, to have the line conditioned; and a requesting telecommunications carrier's refusal of some or all aspects of line conditioning will not diminish any right it may have, under paragraphs (a) and (b) of this section, to access the copper loop, the high frequency portion of the copper loop, or the copper subloop.

(A) Line conditioning is defined as the removal from a copper loop or copper subloop of any device that could diminish the capability of the loop or subloop to deliver high-speed switched wireline telecommunications capability, including digital subscriber line service. Such devices include, but are not limited to, bridge taps, load coils, low pass filters, and range extenders.

(B) Incumbent LECs shall recover the costs of line conditioning from the requesting telecommunications carrier in accordance with the Commission's forward-looking pricing principles promulgated pursuant to section 252(d)(1) of the Act and in compliance with rules governing nonrecurring costs in § 51.507(e).

(C) Insofar as it is technically feasible, the incumbent LEC shall test and report troubles for all the features, functions, and capabilities of conditioned copper lines, and may not restrict its testing to voice transmission only.

(D) Where the requesting telecommunications carrier is seeking access to the high frequency portion of a copper loop or copper subloop pursuant to paragraphs (a) or (b) of this section and the incumbent LEC claims that conditioning that loop or subloop will significantly degrade, as defined in § 51.233, the voiceband services that the incumbent LEC is currently providing over that loop or subloop, the incumbent LEC must either:

(*1*) Locate another copper loop or copper subloop that has been or can be conditioned, migrate the incumbent LEC's voiceband service to that loop or subloop, and provide the requesting telecommunications carrier with access to the high frequency portion of that alternative loop or subloop; or

(*2*) Make a showing to the state commission that the original copper loop or copper subloop cannot be conditioned without significantly degrading voiceband services on that loop or subloop, as defined in § 51.233, and that there is no adjacent or alternative copper loop or copper subloop available that can be conditioned or to which the end-user customer's voiceband service can be moved to enable line sharing.

(E) If, after evaluating the incumbent LEC's showing under paragraph (a)(1)(iii)(D)(*2*) of this section, the state commission concludes that a copper loop or copper subloop cannot be conditioned without significantly degrading the voiceband service, the incumbent LEC cannot then or subsequently condition that loop or subloop to provide advanced services to its own customers without first making available to any requesting telecommunications carrier the high frequency portion of the newly conditioned loop or subloop.

(iv) *Maintenance, repair, and testing.* (A) An incumbent LEC shall provide, on a nondiscriminatory basis, physical loop test access points to a requesting telecommunications carrier at the splitter, through a cross-connection to the requesting telecommunications carrier's collocation space, or through a standardized interface, such as an intermediate distribution frame or a test access server, for the purpose of testing, maintaining, and repairing copper loops and copper subloops.

(B) An incumbent LEC seeking to utilize an alternative physical access methodology may request approval to do so from the state commission, but must show that the proposed alternative method is reasonable and nondiscriminatory, and will not disadvantage a requesting telecommunications carrier's ability to perform loop or service testing, maintenance, or repair.

(v) *Control of the loop and splitter functionality.* In situations where a requesting telecommunications carrier is obtaining access to the high frequency portion of a copper loop either through a line sharing or line splitting arrangement, the incumbent LEC may maintain control over the loop and splitter equipment and functions, and shall provide to the requesting telecommunications carrier loop and splitter functionality that is compatible with any transmission technology that the requesting telecommunications carrier seeks to deploy using the high frequency portion of the loop, as defined in paragraph (a)(1)(i) of this section, provided that such transmission technology is presumed to be deployable pursuant to § 51.230.

(2) *Hybrid loops.* A hybrid loop is a local loop composed of both fiber optic cable, usually in the feeder plant, and copper wire or cable, usually in the distribution plant.

(i) *Packet switching facilities, features, functions, and capabilities.* An incumbent LEC is not required to provide unbundled access to the packet switched features, functions and capabilities of its hybrid loops. Packet switching capability is the routing or forwarding of packets, frames, cells, or other data units based on address or other routing information contained in the packets, frames, cells or other data units, and the functions that are performed by the digital subscriber line access multiplexers, including but not limited to the ability to terminate an end-user customer's copper loop (which includes both a low-band voice channel and a high-band data channel, or solely a data channel); the ability to forward the voice channels, if present, to a circuit switch or multiple circuit switches; the ability to extract data units from the data channels on the loops; and the ability to combine data units from multiple loops onto one or more trunks connecting to a packet switch or packet switches.

(ii) *Broadband services.* When a requesting telecommunications carrier seeks access to a hybrid loop for the provision of broadband services, an incumbent LEC shall provide the requesting telecommunications carrier with nondiscriminatory access to the time division multiplexing features, functions, and capabilities of that hybrid loop, including DS1 or DS3 capacity (where impairment has been found to exist), on an unbundled basis to establish a complete transmission path between the incumbent LEC's central office and an end user's customer premises. This access shall include access to all features, functions, and capabilities of the hybrid loop that are not used to transmit packetized information.

(iii) *Narrowband services.* When a requesting telecommunications carrier seeks access to a hybrid loop for the provision of narrowband services, the incumbent LEC may either:

(A) Provide nondiscriminatory access, on an unbundled basis, to an entire hybrid loop capable of voice-grade service (*i.e.*, equivalent to DS0 capacity), using time division multiplexing technology; or

(B) Provide nondiscriminatory access to a spare home-run copper loop serving that customer on an unbundled basis.

(3) *Fiber-to-the-home loops.* A fiber-to-the-home loop is a local loop consisting entirely of fiber optic cable, whether dark or lit, and serving a residential end user's customer premises.

(i) *New builds.* An incumbent LEC is not required to provide nondiscriminatory access to a fiber-to-the-home loop on an unbundled basis when the incumbent LEC deploys such a loop to a residential unit that previously has not been served by any loop facility.

(ii) *Overbuilds.* An incumbent LEC is not required to provide nondiscriminatory access to a fiber-to-the-home loop on an unbundled basis when the incumbent LEC has deployed such a loop parallel to, or in replacement of, an existing copper loop facility, except that:

(A) The incumbent LEC must maintain the existing copper loop connected to the particular customer premises after deploying the fiber-to-the-home loop and provide nondiscriminatory access to that copper loop on an unbundled basis unless the incumbent LEC retires the copper loop pursuant to paragraph (a)(3)(iii) of this section.

(B) An incumbent LEC that maintains the existing copper loop pursuant to paragraph (a)(3)(ii)(A) of this section need not incur any expenses to ensure that the existing copper loop remains capable of transmitting signals prior to receiving a request for access pursuant to that paragraph, in which case the incumbent LEC shall restore the copper loop to serviceable condition upon request.

(C) An incumbent LEC that retires the copper loop pursuant to paragraph (a)(3)(iii) of this section shall provide nondiscriminatory access to a 64 kilobits per second transmission path capable of voice grade service over the fiber-to-the-home loop on an unbundled basis.

(iii) *Retirement of copper loops or copper subloops.* Prior to retiring any copper loop or copper subloop that has been replaced with a fiber-to-the-home loop, an incumbent LEC must comply with:

(A) The network disclosure requirements set forth in section 251(c)(5) of the Act and in § 51.325 through § 51.335; and

(B) Any applicable state requirements.

(4) *DS1 loops.* (i) An incumbent LEC shall provide a requesting telecommunications carrier with nondiscriminatory access to a DS1 loop on an unbundled basis except where the state commission has found, through application of the competitive wholesale facilities trigger in paragraph (a)(4)(ii) of this section, that requesting telecommunications carriers are not impaired without access to a DS1 loop at a specific customer location. A DS1 loop is a digital local loop having a total digital signal speed of 1.544 megabytes per second. DS1 loops include, but are not limited to, two-wire and four-wire copper loops capable of providing high-bit rate digital subscriber line services, including T1 services.

(ii) *Competitive wholesale facilities trigger for DS1 loops.* A state commission shall find that a requesting telecommunications carrier is not impaired without access to a DS1 loop at a specific customer location where two or more competing providers not affiliated with each other or with the incumbent LEC, including intermodal providers of service comparable in quality to that of the incumbent LEC, each satisfy the conditions in paragraphs (a)(4)(ii)(A) and (a)(4)(ii)(B) of this section:

(A) The competing provider has deployed its own DS1 facilities, and offers a DS1 loop over its own facilities on a widely available wholesale basis to other carriers desiring to serve customers at that location. For purposes of this paragraph, the competing provider's DS1 facilities may use dark fiber facilities that the competing provider has obtained on an unbundled, leased, or purchased basis if it has attached its own optronics to activate the fiber.

(B) The competing provider has access to the entire customer location, including each individual unit within that location.

(5) *DS3 loops.* Subject to the cap in paragraph (a)(5)(iii), an incumbent LEC shall provide a requesting telecommunications carrier with nondiscriminatory access to a DS3 loop on an unbundled basis except where the state commission has found, through application of either paragraph (a)(5)(i) of this section or the potential deployment analysis in paragraph (a)(5)(ii) of this section, that requesting telecommunications carriers are not impaired without access to a DS3 loop at a specific customer location. A DS3 loop is a digital local loop having a total digital signal speed of 44.736 megabytes per second.

(i) *Triggers for DS3 loops.* A state commission shall find that a requesting telecommunications carrier is not impaired without access to unbundled DS3 loops at a specific customer location where two or more competing providers not affiliated with each other or with the incumbent LEC, including intermodal providers of service comparable in quality to that of the incumbent LEC, satisfy either paragraph (a)(5)(i)(A) or paragraph (a)(5)(i)(B) of this section:

(A) *Self-provisioning trigger for DS3 loops.* To satisfy this trigger, a state commission must find that each competing provider has either deployed its own DS3 facilities at that specific customer location and is serving customers via those facilities at that location, or has deployed DS3 facilities by attaching its own optronics to activate dark fiber transmission facilities obtained under a long-term indefeasible right of use and is serving customers via those facilities at that location.

(B) *Competitive wholesale facilities trigger for DS3 loops.* To satisfy this trigger, a state commission must find that each competing provider satisfies the conditions in paragraphs (a)(5)(i)(B)(*1*) and (a)(5)(i)(B)(*2*) of this section.

(*1*) The competing provider has deployed its own DS3 facilities, and offers a DS3 loop over its own facilities on a widely available wholesale basis to other competing providers seeking to serve customers at the specific customer location. For purposes of this paragraph, the competing provider's DS3 facilities may use dark fiber facilities that the competing provider has obtained on an unbundled, leased, or purchased basis if it has attached its own optronics to activate the fiber.

(*2*) The competing provider has access to the entire customer location, including each individual unit within that location.

(ii) *Potential deployment of DS3 loops.* Where neither trigger in paragraph (a)(5)(i) of this section is satisfied, a state commission shall consider whether other evidence shows that a requesting telecommunications carrier is not impaired without access to an unbundled DS3 loop at a specific customer location. To make this determination, a state must consider the following factors: evidence of alternative loop deployment at that location; local engineering costs of building and utilizing transmission facilities; the cost of underground or aerial laying of fiber or copper; the cost of equipment needed for transmission; installation and other necessary costs involved in setting up service; local topography such as hills and rivers; availability of reasonable access to rights-of-way; building access restrictions/costs; and availability/feasibility of similar quality/reliability alternative transmission technologies at that particular location.

(iii) *Cap on unbundled DS3 circuits.* A requesting telecommunications carrier may obtain a maximum of two unbundled DS3 loops for any single customer location where DS3 loops are available as unbundled loops.

(6) *Dark fiber loops.* An incumbent LEC shall provide a requesting telecommunications carrier with nondiscriminatory access to a dark fiber loop on an unbundled basis except where a state commission has found, through application of the self-provisioning trigger in paragraph (a)(6)(i) of this section or the potential deployment analysis in paragraph

(a)(6)(ii) of this section, that requesting telecommunications carriers are not impaired without access to a dark fiber loop at a specific customer location. Dark fiber is fiber within an existing fiber optic cable that has not yet been activated through optronics to render it capable of carrying communications services.

(i) *Self-provisioning trigger for dark fiber loops.* A state commission shall find that a requesting telecommunications carrier is not impaired without access to a dark fiber loop at a specific customer location where two or more competing providers not affiliated with each other or with the incumbent LEC, have deployed their own dark fiber facilities at that specific customer location. For purposes of making this determination, a competing provider that has obtained those dark fiber facilities under a long-term indefeasible right of use shall be considered a competing provider with its own dark fiber facilities. Dark fiber purchased on an unbundled basis from the incumbent LEC shall not be considered under this paragraph.

(ii) *Potential deployment of dark fiber loops.* Where the trigger in paragraph (a)(6)(i) of this section is not satisfied, a state commission shall consider whether other evidence shows that a requesting telecommunications carrier is not impaired without access to an unbundled dark fiber loop at a specific customer location. To make this determination, a state must consider the following factors: evidence of alternative loop deployment at that location; local engineering costs of building and utilizing transmission facilities; the cost of underground or aerial laying of fiber; the cost of equipment needed for transmission; installation and other necessary costs involved in setting up service; local topography such as hills and rivers; availability of reasonable access to rights-of-way; building access restrictions/costs; and availability/feasibility of similar quality/reliability alternative transmission technologies at that particular location.

(7) *State commission proceedings.* A state commission shall complete the proceedings necessary to satisfy the requirements in paragraphs (a)(4), (a)(5), and (a)(6) of this section in accordance with paragraphs (a)(7)(i) and (a)(7)(ii) of this section.

(i) *Initial review.* A state commission shall complete any initial review applying the triggers and criteria in paragraphs (a)(4), (a)(5), and (a)(6) of this section within nine months from the effective date of the Commission's *Triennial Review Order.*

(ii) *Continuing review.* A state commission shall complete any subsequent review applying these triggers and criteria within six months of the filing of a petition or other pleading to conduct such a review.

(8) *Routine network modifications.* (i) An incumbent LEC shall make all routine network modifications to unbundled loop facilities used by requesting telecommunications carriers where the requested loop facility has already been constructed. An incumbent LEC shall perform these routine network modifications to unbundled loop facilities in a nondiscriminatory fashion, without regard to whether the loop facility being accessed was constructed on behalf, or in accordance with the specifications, of any carrier.

(ii) A routine network modification is an activity that the incumbent LEC regularly undertakes for its own customers. Routine network modifications include, but are not limited to, rearranging or splicing of cable; adding an equipment case; adding a doubler or repeater; adding a smart jack; installing a repeater shelf; adding a line card; deploying a new multiplexer or reconfiguring an existing multiplexer; and attaching electronic and other equipment that the incumbent LEC ordinarily attaches to a DS1 loop to activate such loop for its own customer. They also include activities needed to enable a requesting telecommunications carrier to obtain access to a dark fiber loop. Routine network modifications may entail activities such as accessing manholes, deploying bucket trucks to reach aerial cable, and installing equipment casings. Routine network modifications do not include the construction of a new loop, or the installation of new aerial or buried cable for a requesting telecommunications carrier.

(9) *Engineering policies, practices, and procedures.* An incumbent LEC shall not engineer the transmission capabilities of its network in a manner, or engage in any policy, practice, or procedure, that disrupts or degrades access to a local loop or subloop, including the time division multiplexing-based features, functions, and capabilities of a hybrid loop, for which a requesting telecommunications carrier may obtain or has obtained access pursuant to paragraph (a) of this section.

(b) *Subloops.* An incumbent LEC shall provide a requesting telecommunications carrier with nondiscriminatory access to subloops on an unbundled basis in accordance with section 251(c)(3) of the Act and this part and as set forth in paragraph (b) of this section.

(1) *Copper subloops.* An incumbent LEC shall provide a requesting telecommunications carrier with nondiscriminatory access to a copper subloop on an unbundled basis. A copper subloop is a portion of a copper loop, or hybrid loop, comprised entirely of copper wire or copper cable that acts as a transmission facility between any point of technically feasible access in an incumbent LEC's outside plant, including inside wire owned or controlled by the incumbent LEC, and the end-user customer premises. A copper subloop includes all intermediate devices (including repeaters and load coils) used to establish a transmission path between a point of technically feasible access and the demarcation point at the end-user customer premises, and includes the features, functions, and capabilities of the copper loop. Copper subloops include two-wire and four-wire analog voice-grade subloops as well as two-wire and four-wire subloops conditioned to transmit the digital signals needed to provide digital subscriber line services, regardless of whether the subloops are in service or held as spares.

(i) *Point of technically feasible access.* A point of technically feasible access is any point in the incumbent LEC's outside plant where a technician can access the copper wire within a cable without removing a splice case. Such points include, but are not limited to, a pole or pedestal, the serving area interface, the network interface device, the minimum point of entry, any remote terminal, and the feeder/distribution interface. An incumbent LEC shall, upon a site-specific request, provide access to a copper subloop at a splice near a remote terminal. The incumbent LEC shall be compensated for providing this access in accordance with §§ 51.501 through 51.515.

(ii) *Rules for collocation.* Access to the copper subloop is subject to the Commission's collocation rules at §§ 51.321 and 51.323.

(2) *Subloops for access to multiunit premises wiring.* An incumbent LEC shall provide a requesting telecommunications carrier with nondiscriminatory access to the subloop for access to multiunit premises wiring on an unbundled basis regardless of the capacity level or type of loop that the requesting telecommunications carrier seeks to provision for its customer. The subloop for access to multiunit premises wiring is defined as any portion of the loop that it is technically feasible to access at a terminal in the incumbent

LEC's outside plant at or near a multiunit premises. One category of this subloop is inside wire, which is defined for purposes of this section as all loop plant owned or controlled by the incumbent LEC at a multiunit customer premises between the minimum point of entry as defined in § 68.105 of this chapter and the point of demarcation of the incumbent LEC's network as defined in § 68.3 of this chapter.

(i) *Point of technically feasible access.* A point of technically feasible access is any point in the incumbent LEC's outside plant at or near a multiunit premises where a technician can access the wire or fiber within the cable without removing a splice case to reach the wire or fiber within to access the wiring in the multiunit premises. Such points include, but are not limited to, a pole or pedestal, the network interface device, the minimum point of entry, the single point of interconnection, and the feeder/distribution interface.

(ii) *Single point of interconnection.* Upon notification by a requesting telecommunications carrier that it requests interconnection at a multiunit premises where the incumbent LEC owns, controls, or leases wiring, the incumbent LEC shall provide a single point of interconnection that is suitable for use by multiple carriers. This obligation is in addition to the incumbent LEC's obligations, under paragraph (b)(2) of this section, to provide nondiscriminatory access to a subloop for access to multiunit premises wiring, including any inside wire, at any technically feasible point. If the parties are unable to negotiate rates, terms, and conditions under which the incumbent LEC will provide this single point of interconnection, then any issues in dispute regarding this obligation shall be resolved in state proceedings under section 252 of the Act.

(3) *Other subloop provisions*—(i) *Technical feasibility.* If parties are unable to reach agreement through voluntary negotiations as to whether it is technically feasible, or whether sufficient space is available, to unbundle a copper subloop or subloop for access to multiunit premises wiring at the point where a telecommunications carrier requests, the incumbent LEC shall have the burden of demonstrating to the state commission, in state proceedings under section 252 of the Act, that there is not sufficient space available, or that it is not technically feasible to unbundle the subloop at the point requested.

(ii) *Best practices.* Once one state commission has determined that it is technically feasible to unbundle subloops at a designated point, an incumbent LEC in any state shall have the burden of demonstrating to the state commission, in state proceedings under section 252 of the Act, that it is not technically feasible, or that sufficient space is not available, to unbundle its own loops at such a point.

(c) *Network interface device.* Apart from its obligation to provide the network interface device functionality as part of an unbundled loop or subloop, an incumbent LEC also shall provide nondiscriminatory access to the network interface device on an unbundled basis, in accordance with section 251(c)(3) of the Act and this part. The network interface device element is a stand-alone network element and is defined as any means of interconnection of customer premises wiring to the incumbent LEC's distribution plant, such as a cross-connect device used for that purpose. An incumbent LEC shall permit a requesting telecommunications carrier to connect its own loop facilities to on-premises wiring through the incumbent LEC's network interface device, or at any other technically feasible point.

(d) *Local circuit switching.* An incumbent LEC shall provide a requesting telecommunications carrier with nondiscriminatory access to local circuit switching, including tandem switching, on an unbundled basis, in accordance with section 251(c)(3) of the Act and this part and as set forth in paragraph (d) of this section.

(1) *Definition.* Local circuit switching is defined as follows:

(i) Local circuit switching encompasses all line-side and trunk-side facilities, plus the features, functions, and capabilities of the switch. The features, functions, and capabilities of the switch shall include the basic switching function of connecting lines to lines, lines to trunks, trunks to lines, and trunks to trunks.

(ii) Local circuit switching includes all vertical features that the switch is capable of providing, including custom calling, custom local area signaling services features, and Centrex, as well as any technically feasible customized routing functions.

(2) *DS0 capacity (i.e., mass market)* determinations. An incumbent LEC shall provide access to local circuit switching on an unbundled basis to a requesting telecommunications carrier serving end users using DS0 capacity loops except where the state commission has found, in accordance with the conditions set forth in paragraph (d)(2) of this section, that requesting telecommunications carriers are not impaired in a particular market, or where the state commission has found that all such impairment would be cured by implementation of transitional unbundled local circuit switching in a given market and has implemented such transitional access as set forth in paragraph (d)(2)(iii)(C) of this section.

(i) *Market definition.* A state commission shall define the markets in which it will evaluate impairment by determining the relevant geographic area to include in each market. In defining markets, a state commission shall take into consideration the locations of mass market customers actually being served (if any) by competitors, the variation in factors affecting competitors' ability to serve each group of customers, and competitors' ability to target and serve specific markets profitably and efficiently using currently available technologies. A state commission shall not define the relevant geographic area as the entire state.

(ii) *Batch cut process.* In each of the markets that the state commission defines pursuant to paragraph (d)(2)(i) of this section, the state commission shall either establish an incumbent LEC batch cut process as set forth in paragraph (d)(2)(ii)(A) of this section or issue detailed findings explaining why such a batch process is unnecessary, as set forth in paragraph (d)(2)(ii)(B) of this section. A batch cut process is defined as a process by which the incumbent LEC simultaneously migrates two or more loops from one carrier's local circuit switch to another carrier's local circuit switch, giving rise to operational and economic efficiencies not available when migrating loops from one carrier's local circuit switch to another carrier's local circuit switch on a line-by-line basis.

(A) A state commission shall establish an incumbent LEC batch cut process for use in migrating lines served by one carrier's local circuit switch to lines served by another carrier's local circuit switch in each of the markets the state commission has defined pursuant to paragraph (d)(2)(i) of this section. In establishing the incumbent LEC batch cut process:

(*1*) A state commission shall first determine the appropriate volume of loops that should be included in the ''batch.''

(*2*) A state commission shall adopt specific processes to be employed when performing a batch cut, taking into account the incumbent LEC's particular network design and cut over practices.

(*3*) A state commission shall evaluate whether the incumbent LEC is capable of migrating multiple lines served using

unbundled local circuit switching to switches operated by a carrier other than the incumbent LEC for any requesting telecommunications carrier in a timely manner, and may require that incumbent LECs comply with an average completion interval metric for provision of high volumes of loops.

(*4*) A state commission shall adopt rates for the batch cut activities it approves in accordance with the Commission's pricing rules for unbundled network elements. These rates shall reflect the efficiencies associated with batched migration of loops to a requesting telecommunications carrier's switch, either through a reduced per-line rate or through volume discounts as appropriate.

(B) If a state commission concludes that the absence of a batch cut migration process is not impairing requesting telecommunications carriers' ability to serve end users using DS0 loops in the mass market without access to local circuit switching on an unbundled basis, that conclusion will render the creation of such a process unnecessary. In such cases, the state commission shall issue detailed findings regarding the volume of unbundled loop migrations that could be expected if requesting telecommunications carriers were no longer entitled to local circuit switching on an unbundled basis, the ability of the incumbent LEC to meet that demand in a timely and efficient manner using its existing hot cut process, and the non-recurring costs associated with that hot cut process. The state commission further shall explain why these findings indicate that the absence of a batch cut process does not give rise to impairment in the market at issue.

(iii) *State commission analysis.* To determine whether requesting telecommunications carriers are impaired without access to local circuit switching on an unbundled basis, a state commission shall perform the inquiry set forth in paragraphs (d)(2)(iii)(A) through (d)(2)(iii)(C) of this section:

(A) *Local switching triggers.* A state commission shall find that a requesting telecommunications carrier is not impaired without access to local circuit switching on an unbundled basis in a particular market where either the self-provisioning trigger set forth in paragraph (d)(2)(iii)(A)(*1*) of this section or the competitive wholesale facilities trigger set forth in paragraph (d)(2)(iii)(A)(*2*) of this section is satisfied.

(*1*) *Local switching self-provisioning trigger.* To satisfy this trigger, a state commission must find that three or more competing providers not affiliated with each other or the incumbent LEC, including intermodal providers of service comparable in quality to that of the incumbent LEC, each are serving mass market customers in the particular market with the use of their own local circuit switches.

(*2*) *Local switching competitive wholesale facilities trigger.* To satisfy this trigger, a state commission must find that two or more competing providers not affiliated with each other or the incumbent LEC, including intermodal providers of service comparable in quality to that of the incumbent LEC, each offer wholesale local circuit switching service to customers serving DS0 capacity loops in that market using their own switches.

(B) *Additional state authority.* If neither of the triggers described in paragraph (d)(2)(iii)(A) of this section has been satisfied, the state commission shall find that requesting telecommunications carriers are not impaired without access to unbundled local circuit switching in a particular market where the state commission determines that self-provisioning of local switching is economic based on the following criteria:

(*1*) *Evidence of actual deployment.* The state commission shall consider whether switches actually deployed in the market at issue permit competitive entry in the absence of unbundled local circuit switching. Specifically, the state commission shall examine whether, in the market at issue, there are either two wholesale providers or three self-provisioners of local switching not affiliated with each other or the incumbent LEC, serving end users using DS1 or higher capacity loops in the market at issue; or there is any carrier, including any intermodal provider of service comparable in quality to that of the incumbent LEC, using a self-provisioned switch to serve end users using DS0 capacity loops. If so, and if the state commission determines that the switch or switches identified can be used to serve end users using DS0 capacity loops in that market in an economic fashion, this evidence must be given substantial weight.

(*2*) *Operational barriers.* The state commission also shall examine the role of potential operational barriers in determining whether to find ''no impairment'' in a given market. Specifically, the state commission shall examine whether the incumbent LEC's performance in provisioning loops, difficulties in obtaining collocation space due to lack of space or delays in provisioning by the incumbent LEC, or difficulties in obtaining cross-connects in an incumbent LEC's wire center render entry uneconomic for requesting telecommunications carriers in the absence of unbundled access to local circuit switching.

(*3*) *Economic barriers.* The state commission shall also examine the role of potential economic barriers in determining whether to find ''no impairment'' in a given market. Specifically, the state commission shall examine whether the costs of migrating incumbent LEC loops to requesting telecommunications carriers' switches or the costs of backhauling voice circuits to requesting telecommunications carriers' switches from the end offices serving their end users render entry uneconomic for requesting telecommunications carriers.

(*4*) *Multi-line DS0 end users.* As part of the economic analysis set forth in paragraph (d)(2)(iii)(B)(*3*) of this section, the state commission shall establish a maximum number of DS0 loops for each geographic market that requesting telecommunications carriers can serve through unbundled switching when serving multiline end users at a single location. Specifically, in establishing this ''cutoff,'' the state commission shall take into account the point at which the increased revenue opportunity at a single location is sufficient to overcome impairment and the point at which multiline end users could be served in an economic fashion by higher capacity loops and a carrier's own switching and thus be considered part of the DS1 enterprise market.

(C) *Transitional use of unbundled switching.* If the triggers described in paragraph (d)(2)(iii)(A) of this section have not been satisfied with regard to a particular market and the analysis described in paragraph (d)(2)(iii)(B) of this section has resulted in a finding that requesting telecommunications carriers are impaired without access to local circuit switching on an unbundled basis in that market, the state commission shall consider whether any impairment would be cured by transitional (''rolling'') access to local circuit switching on an unbundled basis for a period of 90 days or more. ''Rolling'' access means the use of unbundled local circuit switching for a limited period of time for each end-user customer to whom a requesting telecommunications carrier seeks to provide service. If the state commission determines that transitional access to unbundled local circuit switching would cure any impairment, it shall require incumbent LECs to make unbundled local circuit switching available to requesting telecommunications carriers for 90 days

or more, as specified by the state commission. The time limit set by the commission shall apply to each request for access to unbundled local circuit switching by a requesting telecommunications carrier on a per customer basis.

(iv) *DS0 capacity end-user transition.* If a state commission finds that no impairment exists in a market or that any impairment could be cured by transitional access to unbundled local circuit switching, all requesting telecommunications carriers in that market shall commit to an implementation plan with the incumbent LEC for the migration of the embedded unbundled switching mass market customer base within 2 months of the state commission determination. A requesting telecommunications carrier may no longer obtain access to unbundled local circuit switching 5 months after the state commission determination, except, where applicable, on a transitional basis as described in paragraph (d)(2)(iii)(C) of this section.

(A) *Transition timeline.* Each requesting telecommunications carrier shall submit the orders necessary to migrate its embedded base of end-user customers off of the unbundled local circuit switching element in accordance with the following timetable, measured from the day of the state commission determination. For purposes of calculating the number of customers who must be migrated, the embedded base of customers shall include all customers served using unbundled switching that are not customers being served with transitional unbundled switching pursuant to paragraph (d)(3)(iii)(C) of this section.

(*1*) *Month 13:* Each requesting telecommunications carrier must submit orders for one-third of all its unbundled local circuit switching end-user customers;

(*2*) *Month 20:* Each requesting telecommunications carrier must submit orders for half of its remaining unbundled local circuit switching end-user customers, as calculated pursuant to paragraph (d)(2)(iv)(A)(*1*) of this section; and

(*3*) *Month 27:* Each requesting telecommunications carrier must submit orders for its remaining unbundled local circuit switching end-user customers.

(B) *Operational aspects of the migration.* Requesting telecommunications carriers and the incumbent LEC shall jointly submit the details of their implementation plans for each market to the state commission within two months of the state commission's determination that requesting telecommunications carriers are not impaired without access to local circuit switching on an unbundled basis. Each requesting telecommunications carrier shall also notify the state commission when it has submitted its orders for migration. Each incumbent LEC shall notify the state commission when it has completed the migration.

(3) *DS1 capacity and above (i.e., enterprise market) determinations.* An incumbent LEC is not required to provide access to local circuit switching on an unbundled basis to requesting telecommunications carriers for the purpose of serving end-user customers using DS1 capacity and above loops except where the state commission petitions this Commission for waiver of this finding in accordance with the conditions set forth in paragraph (d)(3)(i) of this section and the Commission grants such waiver.

(i) *State commission inquiry.* In its petition, a state commission wishing to rebut the Commission's finding should petition the Commission to show that requesting telecommunications carriers are impaired without access to local circuit switching to serve end users using DS1 capacity and above loops in a particular geographic market as defined in accordance with paragraph (d)(2)(i) of this section if it finds that operational or economic barriers exist in that market.

(A) In making this showing, the state commission shall consider the following operational characteristics: incumbent LEC performance in provisioning loops; difficulties associated with obtaining collocation space due to lack of space or delays in provisioning by the incumbent LEC; and the difficulties associated with obtaining cross-connects in the incumbent LEC's wire center.

(B) In making this showing, the state commission shall consider the following economic characteristics: the cost of entry into a particular market, including those caused by both operational and economic barriers to entry; requesting telecommunications carriers' potential revenues from serving enterprise customers in that market, including all likely revenues to be gained from entering that market; the prices requesting telecommunications carriers are likely to be able to charge in that market, based on a consideration of the prevailing retail rates the incumbent LEC charges to the different classes of customers in the different parts of the state.

(ii) *Transitional four-line carve-out.* Until the state commission completes the review described in paragraph (b)(2)(iii)(B)(*4*) of this section, an incumbent LEC shall comply with the four-line ''carve-out'' for unbundled switching established in *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996,* CC Docket No. 96–98, Third Report and Order and Fourth Further Notice of Proposed Rulemaking, 15 FCC Rcd 3822–31, paras. 276–98 (1999), *reversed and remanded in part sub. nom. United States Telecom Ass'n* v. *FCC,* 290 F.3d 415 (D.C. Cir. 2002).

(A) *DS1 capacity and above end-user transition.* Each requesting telecommunications carrier shall transfer its end-user customers served using DS1 and above capacity loops and unbundled local circuit switching to an alternative arrangement within 90 days from the end of the 90-day state commission consideration period set forth in paragraph (d)(5)(i), unless a longer period is necessary to comply with a ''change of law'' provision in an applicable interconnection agreement.

(4) *Other elements to be unbundled.* Elements relating to the local circuit switching element shall be made available on an unbundled basis as set forth in paragraphs (d)(4)(i) and (d)(4)(ii) of this section.

(i) An incumbent LEC shall provide a requesting telecommunications carrier with nondiscriminatory access to signaling, call-related databases, and shared transport facilities on an unbundled basis, in accordance with section 251(c)(3) of the Act and this part, to the extent that local circuit switching is required to be unbundled by a state commission. These elements are defined as follows:

(A) *Signaling networks.* Signaling networks include, but are not limited to, signaling links and signaling transfer points.

(B) *Call-related databases.* Call-related databases are defined as databases, other than operations support systems, that are used in signaling networks for billing and collection, or the transmission, routing, or other provision of a telecommunications service. Where a requesting telecommunications carrier purchases unbundled local circuit switching from an incumbent LEC, an incumbent LEC shall allow a requesting telecommunications carrier to use the incumbent LEC's service control point element in the same manner, and via the same signaling links, as the incumbent LEC itself.

(*1*) Call-related databases include, but are not limited to, the calling name database, 911 database, E911 database, line information database, toll free calling database, advanced intelligent

network databases, and downstream number portability databases by means of physical access at the signaling transfer point linked to the unbundled databases.

(*2*) Service management systems are defined as computer databases or systems not part of the public switched network that interconnect to the service control point and send to the service control point information and call processing instructions needed for a network switch to process and complete a telephone call, and provide a telecommunications carrier with the capability of entering and storing data regarding the processing and completing of a telephone call. Where a requesting telecommunications carrier purchases unbundled local circuit switching from an incumbent LEC, the incumbent LEC shall allow a requesting telecommunications carrier to use the incumbent LEC's service management systems by providing a requesting telecommunications carrier with the information necessary to enter correctly, or format for entry, the information relevant for input into the incumbent LEC's service management system, including access to design, create, test, and deploy advanced intelligent network-based services at the service management system, through a service creation environment, that the incumbent LEC provides to itself.

(*3*) An incumbent LEC shall not be required to unbundle the services created in the advanced intelligent network platform and architecture that qualify for proprietary treatment.

(C) *Shared transport.* Shared transport is defined as the transmission facilities shared by more than one carrier, including the incumbent LEC, between end office switches, between end office switches and tandem switches, and between tandem switches, in the incumbent LEC network.

(ii) An incumbent LEC shall provide a requesting telecommunications carrier nondiscriminatory access to operator services and directory assistance on an unbundled basis, in accordance with section 251(c)(3) of the Act and this part, to the extent that local circuit switching is required to be unbundled by a state commission, if the incumbent LEC does not provide that requesting telecommunications carrier with customized routing, or a compatible signaling protocol, necessary to use either a competing provider's operator services and directory assistance platform or the requesting telecommunications carrier's own platform. Operator services are any automatic or live assistance to a customer to arrange for billing or completion, or both, of a telephone call. Directory assistance is a service that allows subscribers to retrieve telephone numbers of other subscribers.

(5) *State commission proceedings.* A state commission shall complete the proceedings necessary to satisfy the requirements in paragraphs (d)(2) and (d)(3) of this section in accordance with paragraphs (d)(5)(i) and (d)(5)(ii) of this section.

(i) *Timing.* A state commission shall complete any initial review applying the triggers and criteria in paragraph (d)(2) of this section within nine months from the effective date of the Commission's *Triennial Review Order.* A state commission wishing to rebut the Commission's finding of non-impairment for DS1 and above enterprise switches must file a petition with the Commission in accordance with paragraph (d)(3) of this section within 90 days from that effective date.

(ii) *Continuing review.* A state commission shall complete any subsequent review applying these triggers and criteria within six months of the filing of a petition or other pleading to conduct such a review.

(e) *Dedicated transport.* An incumbent LEC shall provide a requesting telecommunications carrier with nondiscriminatory access to dedicated transport on an unbundled basis, in accordance with section 251(c)(3) of the Act and this part and as set forth in paragraph (e)(1) through (e)(5) of this section. As used in those paragraphs, a ''route'' is a transmission path between one of an incumbent LEC's wire centers or switches and another of the incumbent LEC's wire centers or switches. A route between two points (*e.g.*, wire center or switch ''A'' and wire center or switch ''Z'') may pass through one or more intermediate wire centers or switches (*e.g.*, wire center or switch ''X''). Transmission paths between identical end points (*e.g.*, wire center or switch ''A'' and wire center or switch ''Z'') are the same ''route,'' irrespective of whether they pass through the same intermediate wire centers or switches, if any.

(1) *Dedicated DS1 transport.* (i) An incumbent LEC shall provide a requesting telecommunications carrier with nondiscriminatory access to dedicated DS1 transport on an unbundled basis except where the state commission has found, through application of the competitive wholesale facilities trigger in paragraphs (e)(1)(ii) of this section, that requesting telecommunications carriers are not impaired without access to dedicated DS1 transport along a particular route. Dedicated DS1 transport consists of incumbent LEC interoffice transmission facilities that have a total digital signal speed of 1.544 megabytes per second and are dedicated to a particular customer or carrier.

(ii) *Competitive wholesale facilities trigger for dedicated DS1 transport.* A state commission shall find that a requesting telecommunications carrier is not impaired without access to dedicated DS1 transport along a particular route where two or more competing providers not affiliated with each other or with the incumbent LEC, including intermodal providers of service comparable in quality to that of the incumbent LEC, each satisfy the conditions in paragraphs (e)(1)(ii)(A) through (e)(1)(ii)(D) of this section.

(A) The competing provider has deployed its own transport facilities and is operationally ready to use those facilities to provide dedicated DS1 transport along the particular route. For purposes of this paragraph, the competing provider's DS1 facilities may use dark fiber facilities that the competing provider has obtained on an unbundled, leased, or purchased basis if it has attached its own optronics to activate the fiber.

(B) The competing provider is willing immediately to provide, on a widely available basis, dedicated DS1 transport along the particular route.

(C) The competing provider's facilities terminate in a collocation arrangement at each end of the transport route that is located at an incumbent LEC premises and in a similar arrangement at each end of the transport route that is not located at an incumbent LEC premises.

(D) Requesting telecommunications carriers are able to obtain reasonable and nondiscriminatory access to the competing provider's facilities through a cross-connect to the competing provider's collocation arrangement at each end of the transport route that is located at an incumbent LEC premises and though a similar arrangement at each end of the transport route that is not located at an incumbent LEC premises.

(2) *Dedicated DS3 transport.* Subject to the cap in paragraph (e)(2)(iii) of this section, an incumbent LEC shall provide a requesting telecommunications carrier with nondiscriminatory access to dedicated DS3 transport on an unbundled basis except where the state commission has found, through application of either paragraph (e)(2)(i) of this section or the potential deployment analysis in paragraph (e)(2)(ii) of this section, that requesting telecommunications carriers are not impaired without access to dedicated DS3 transport along a particular route.

Dedicated DS3 transport consists of incumbent LEC interoffice transmission facilities that have a total digital signal speed of 44.736 megabytes per second and are dedicated to a particular customer or carrier.

(i) *Triggers for dedicated DS3 transport.* A state commission shall find that a requesting telecommunications carrier is not impaired without access to unbundled dedicated DS3 transport along a particular route where either of the triggers in paragraphs (e)(2)(i)(A) or (e)(2)(i)(B) of this section is satisfied.

(A) *Self-provisioning trigger for dedicated DS3 transport.* To satisfy this trigger, a state must find that three or more competing providers not affiliated with each other or with the incumbent LEC, including intermodal providers of service comparable in quality to that of the incumbent LEC, each satisfy the conditions in paragraphs (e)(2)(i)(A)(*1*) and (e)(2)(i)(A)(*2*) of this section.

(*1*) The competing provider has deployed its own transport facilities and is operationally ready to use those transport facilities to provide dedicated DS3 transport along the particular route. For purposes of this paragraph, the competing provider's DS3 transport facilities may use dark fiber facilities that the competing provider has obtained on a long-term, indefeasible-right of use basis and that it has deployed by attaching its own optronics to activate the fiber.

(*2*) The competing provider's facilities terminate at a collocation arrangement at each end of the transport route that is located at an incumbent LEC premises and in a similar arrangement at each end of the transport route that is not located at an incumbent LEC premises.

(B) *Competitive wholesale facilities trigger for dedicated DS3 transport.* To satisfy this trigger, a state must find that two or more competing providers not affiliated with each other or with the incumbent LEC, including intermodal providers of service comparable in quality to that of the incumbent LEC, each satisfy the conditions in paragraphs (e)(2)(i)(B)(*1*) through (e)(2)(i)(B)(*4*) of this section.

(*1*) The competing provider has deployed its own transport facilities, including transport facilities that use dark fiber facilities that the competing provider has obtained on an unbundled, leased, or purchased basis if it has attached its own optronics to activate the fiber, and is operationally ready to use those facilities to provide dedicated DS3 transport along the particular route.

(*2*) The competing provider is willing immediately to provide, on a widely available basis, dedicated DS3 transport along the particular route.

(*3*) The competing provider's facilities terminate in a collocation arrangement at each end of the transport route that is located at an incumbent LEC premises and in a similar arrangement at each end of the transport route that is not located at an incumbent LEC premises.

(*4*) Requesting telecommunications carriers are able to obtain reasonable and nondiscriminatory access to the competing provider's facilities through a cross-connect to the competing provider's collocation arrangement at each end of the transport route that is located at an incumbent LEC premises and though a similar arrangement at each end of the transport route that is not located at an incumbent LEC premises.

(ii) *Potential deployment of dedicated DS3 transport.* Where neither trigger in paragraph (e)(2)(i) of this section is satisfied, a state commission shall consider whether other evidence shows that a requesting telecommunications carrier is not impaired without access to unbundled dedicated DS3 transport along a particular route. To make this determination, a state must consider the following factors: local engineering costs of building and utilizing transmission facilities; the cost of underground or aerial laying of fiber or copper; the cost of equipment needed for transmission; installation and other necessary costs involved in setting up service; local topography such as hills and rivers; availability of reasonable access to rights-of-way; availability/feasibility of similar quality/reliability alternative transmission technologies along the particular route; customer density or addressable market; and existing facilities-based competition.

(iii) *Cap on unbundled DS3 circuits.* A requesting telecommunications carrier may obtain a maximum of 12 unbundled dedicated DS3 circuits for any single route for which dedicated DS3 transport is available as unbundled transport.

(3) *Dark fiber transport.* An incumbent LEC shall provide a requesting telecommunications carrier with nondiscriminatory access to dark fiber transport on an unbundled basis except where the state commission has found, through application of either paragraph (e)(3)(i) of this section or the potential deployment analysis in paragraph (e)(3)(ii) of this section, that requesting telecommunications carriers are not impaired without access to unbundled dark fiber transport along the particular route. Dark fiber transport consists of unactivated optical interoffice transmission facilities.

(i) *Triggers for dark fiber transport.* A state commission shall find that a requesting telecommunications carrier is not impaired without access to dark fiber transport along a particular route where either of the triggers in paragraph (e)(3)(i)(A) or paragraph (e)(3)(i)(B) of this section is satisfied.

(A) *Self-provisioning trigger for dark fiber transport.* To satisfy this trigger, a state commission must find three or more competing providers not affiliated with each other or with the incumbent LEC, each satisfy paragraphs (e)(3)(i)(A)(*1*) and (e)(3)(i)(A)(*2*) of this section.

(*1*) The competing provider has deployed its own dark fiber facilities, which may include dark fiber facilities that it has obtained on a long-term, indefeasible-right of use basis.

(*2*) The competing provider's facilities terminate in a collocation arrangement at each end of the transport route that is located at an incumbent LEC premises and in a similar arrangement at each end of the transport route that is not located at an incumbent LEC premises.

(B) *Competitive wholesale facilities trigger for dark fiber transport.* To satisfy this trigger, a state commission must find that two or more competing providers not affiliated with each other or with the incumbent LEC, each satisfy paragraphs (e)(3)(i)(B)(*1*) through (e)(3)(i)(B)(*4*) of this section. In applying this trigger, the state commission may consider whether competing providers have sufficient quantities of dark fiber available to satisfy current demand along that route.

(*1*) The competing provider has deployed its own dark fiber, including dark fiber that it has obtained from an entity other than the incumbent LEC, and is operationally ready to lease or sell those facilities for the provision of fiber-based transport along the particular route.

(*2*) The competing provider is willing immediately to provide, on a widely available basis, dark fiber along the particular route.

(*3*) The competing provider's dark fiber terminates in a collocation arrangement at each end of the transport route that is located at an incumbent LEC premises and in a similar arrangement at each end of the transport route that is not located at an incumbent LEC premises.

(*4*) Requesting telecommunications carriers are able to obtain reasonable and nondiscriminatory access to the competing provider's dark fiber through a cross-connect to the competing provider's collocation arrangement at each end of the transport route that is located at an incumbent LEC premises and though a similar arrangement at each end of the transport route that is

not located at an incumbent LEC premises.

(ii) *Potential deployment of dark fiber transport.* Where neither trigger in paragraph (e)(3)(i) of this section is satisfied, a state commission shall consider whether other evidence shows that a requesting telecommunications carrier is not impaired without access to unbundled dark fiber transport along a particular route. To make this determination, a state must consider the following factors: local engineering costs of building and utilizing transmission facilities; the cost of underground or aerial laying of fiber; the cost of equipment needed for transmission; installation and other necessary costs involved in setting up service; local topography such as hills and rivers; availability of reasonable access to rights-of-way; availability/feasibility of similar quality/reliability alternative transmission technologies along the particular route; customer density or addressable market; and existing facilities-based competition.

(4) *State commission proceedings.* A state commission shall complete the proceedings necessary to satisfy the requirements in paragraphs (e)(1), (e)(2), and (e)(3) of this section in accordance with paragraphs (e)(4)(i) and (e)(4)(ii) of this section.

(i) *Initial review.* A state commission shall complete any initial review applying the triggers and criteria in paragraphs (e)(1), (e)(2), and (e)(3) of this section within nine months from the effective date of the Commission's *Triennial Review Order.*

(ii) *Continuing review.* A state commission shall complete any subsequent review applying these triggers and criteria within six months of the filing of a petition or other pleading to conduct such a review.

(5) *Routine network modifications.* (i) An incumbent LEC shall make all routine network modifications to unbundled dedicated transport facilities used by requesting telecommunications carriers where the requested dedicated transport facilities have already been constructed. An incumbent LEC shall perform all routine network modifications to unbundled dedicated transport facilities in a nondiscriminatory fashion, without regard to whether the facility being accessed was constructed on behalf, or in accordance with the specifications, of any carrier.

(ii) A routine network modification is an activity that the incumbent LEC regularly undertakes for its own customers. Routine network modifications include, but are not limited to, rearranging or splicing of cable; adding an equipment case; adding a doubler or repeater; installing a repeater shelf; and deploying a new multiplexer or reconfiguring an existing multiplexer. They also include activities needed to enable a requesting telecommunications carrier to light a dark fiber transport facility. Routine network modifications may entail activities such as accessing manholes, deploying bucket trucks to reach aerial cable, and installing equipment casings. Routine network modifications do not include the installation of new aerial or buried cable for a requesting telecommunications carrier.

(f) *911 and E911 databases.* An incumbent LEC shall provide a requesting telecommunications carrier with nondiscriminatory access to 911 and E911 databases on an unbundled basis, in accordance with section 251(c)(3) of the Act and this part.

(g) *Operations support systems.* An incumbent LEC shall provide a requesting telecommunications carrier with nondiscriminatory access to operations support systems on an unbundled basis, in accordance with section 251(c)(3) of the Act and this part. Operations support system functions consist of pre-ordering, ordering, provisioning, maintenance and repair, and billing functions supported by an incumbent LEC's databases and information. An incumbent LEC, as part of its duty to provide access to the pre-ordering function, shall provide the requesting telecommunications carrier with nondiscriminatory access to the same detailed information about the loop that is available to the incumbent LEC.

■ 12. Section 51.320 is added to read as follows:

§ 51.320 Assumption of responsibility by the Commission.

If a state commission fails to exercise its authority under § 51.319, any party seeking that the Commission step into the role of the state commission shall file with the Commission and serve on the state commission a petition that explains with specificity the bases for the petition and information that supports the claim that the state commission has failed to act. Subsequent to the Commission's issuing a public notice and soliciting comments on the petition from interested parties, the Commission will rule on the petition within 90 days of the date of the public notice. If it agrees that the state commission has failed to act, the Commission will assume responsibility for the proceeding, and within nine months from the date it assumed responsibility for the proceeding, make any findings in accordance with the Commission's rules.

■ 13. Section 51.325 is amended by adding paragraph (a)(4) to read as follows:

§ 51.325 Notice of network changes: Public notice requirement.

(a) * * *

(4) Will result in the retirement of copper loops or copper subloops, and the replacement of such loops with fiber-to-the-home loops, as that term is defined in § 51.319(a)(3).

* * * * *

■ 14. Section 51.331 is amended by adding paragraph (c) to read as follows:

§ 51.331 Notice of network changes: Timing of notice.

* * * * *

(c) Competing service providers may object to incumbent LEC notice of retirement of copper loops or copper subloops and replacement with fiber-to-the-home loops in the manner set forth in § 51.333(c).

■ 15. Section 51.333 is amended by revising the section heading, paragraph (b), paragraph (c) introductory text, and by adding paragraph (f) to read as follows:

§ 51.333 Notice of Network Changes: Short term notice, objections thereto and objections to retirement of copper loops or copper subloops.

* * * * *

(b) *Implementation date.* The Commission will release a public notice of filings of such short term notices or notices of replacement of copper loops or copper subloops with fiber-to-the-home loops. The effective date of the network changes referenced in those filings shall be subject to the following requirements:

(i) *Short term notice.* Short term notices shall be deemed final on the tenth business day after the release of the Commission's public notice, unless an objection is filed pursuant to paragraph (c) of this section.

(ii) *Replacement of copper loops or copper subloops with fiber-to-the-home loops.* Notices of replacement of copper loops or copper subloops with fiber-to-the-home loops shall be deemed approved on the 90th day after the release of the Commission's public notice of the filing, unless an objection is filed pursuant to paragraph (c) of this section. Incumbent LEC notice of intent to retire any copper loops or copper subloops and replace such loops or subloops with fiber-to-the-home loops shall be subject to the short term notice provisions of this section, but under no circumstances may an incumbent LEC

provide less than 90 days notice of such a change.

(c) *Objection procedures for short term notice and notices of replacement of copper loops or copper subloops with fiber-to-the-home loops.* An objection to an incumbent LEC's short term notice or to its notice that it intends to retire copper loops or copper subloops and replace such loops or subloops with fiber-to-the-home loops may be filed by an information service provider or telecommunications service provider that directly interconnects with the incumbent LEC's network. Such objections must be filed with the Commission, and served on the incumbent LEC, no later than the ninth business day following the release of the Commission's public notice. All objections filed under this section must:

* * * * *

(f) *Resolution of objections to replacement of copper loops or copper subloops with fiber-to-the-home loops.* An objection to a notice that an incumbent LEC intends to retire any copper loops or copper subloops and replace such loops or subloops with fiber-to-the-home loops shall be deemed denied 90 days after the date on which the Commission releases public notice of the incumbent LEC filing, unless the Commission rules otherwise within that time. Until the Commission has either ruled on an objection or the 90-day period for the Commission's consideration has expired, an incumbent LEC may not retire those copper loops or copper subloops at issue for replacement with fiber-to-the-home loops.

■ 16. Section 51.509 is amended by revising paragraph (a) and adding paragraph (h) to read as follows:

§ 51.509 Rate structure standards for specific elements.

(a) *Local loop and subloop.* Loop and subloop costs shall be recovered through flat-rated charges.

* * * * *

(h) *Network interface device.* An incumbent LEC must establish a price for the network interface device when that unbundled network element is purchased on a stand-alone basis pursuant to § 51.319(c).

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