Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers	)	CC Docket No. 01-338
	)	
	)	
Implementation of the Local Competition Provisions of the Telecommunications Act of 1996	)	CC Docket No. 96-98
	)	
	)	
Deployment of Wireline Services Offering Advanced Telecommunications Capability	)	CC Docket No. 98-147

REPORT AND ORDER AND ORDER ON REMAND AND FURTHER NOTICE OF PROPOSED RULEMAKING

Adopted: February 20, 2003 **Released:** August 21, 2003

Comment Date: 30 days after Federal Register publication of this Notice
Comment Reply Date: 60 days after Federal Register publication of this Notice

By the Commission: Chairman Powell and Commissioner Abernathy approving in part, dissenting in part and issuing separate statements; Commissioners Copps and Adelstein approving in part, concurring in part, dissenting in part and issuing separate statements; Commissioner Martin issuing a separate statement.

Para.

I. INTRODUCTION

1. Seven years ago, Congress enacted the Telecommunications Act of 1996 (1996 Act) for the benefit of the American consumer.[1] This watershed legislation was partially designed to remove the decades-old system of legal monopoly in the local exchange and open that market to competition. The 1996 Act did so by establishing broad interconnection, resale and network access requirements, designed to facilitate multiple modes of entry into the market by intermodal and intramodal service providers. The 1996 Act also sought to reduce the need for regulation in the presence of competition and provide for universal service mechanisms in order to foster the deployment of advanced telecommunications capabilities to all Americans.

2. This Commission and our colleagues in state commissions around the country have devoted enormous amounts of time and resources to implement the Act's market-opening requirements, and the industry has devoted equally large amounts of time and resources to take advantage of the new business opportunities made available by the 1996 Act. Few, if any, other requirements of the 1996 Act have attracted so much regulatory attention, industry effort, or litigation, however, as the requirement under section 251(c)(3) that incumbent local exchange carriers (incumbent LECs) make elements of their networks available on an unbundled basis to new entrants at cost-based rates. Every aspect and application of this extraordinary vehicle for

[1] Telecommunications Act of 1996, Pub L. No 104-104, 110 Stat 56 The 1996 Act amended the Communications Act of 1934, 47 U.S C § 151 *et seq* We refer to these Acts collectively as the "Communications Act" or the "Act "

196. We find that our federal framework, which provides for uniform national rules for some network elements and a more granular approach for others, offers the certainty and stability necessary to enable parties to make investment decisions. This approach is required under *USTA*.[618] Commenters have argued that nothing could create more instability, and be more destructive of investment incentives for both incumbent LECs and competitive LECs, than the establishment of multiple, separate state decisions as to which UNEs have to be offered and under what conditions.[619] In this Order we have balanced the need for a more granular analysis with the need for certainty through a federal unbundling regime. In light of policy reasons and the fact that the D C. Circuit has found fault with our uniform national rules, we find that the availability of certain network elements may vary between geographic regions. However, the basis on which those more granular determinations will be made is straightforward and predictable. Additionally, we find that the limitations embodied in section 251(d)(3)(B) and (C) will prevent states from taking actions under state law that conflict with our framework and create disincentives for investment.

VI. UNBUNDLING REQUIREMENTS FOR INDIVIDUAL NETWORK ELEMENTS

A. Loops

1. Summary

197. Consistent with our statutory mandate and relevant judicial precedent, we focus on specific market and customer characteristics as informed by the various loop types and capacities that typically serve these markets and customers to undertake the granular inquiry necessary to determine where loop impairment exists.[620] In distinguishing among the various types of loop facilities, *i e.*, DS0 (voice-grade/POTS), DS1, DS3, OCn and dark fiber, we recognize that these facilities, as a practical matter, typically serve distinct classes of customers,[621] resulting in different economic considerations for competitive carriers seeking to self-deploy.[622] Through this approach we are able to more precisely calibrate our rules to ensure that competitive LECs only gain access to unbundled loops where they are impaired under the

---

[618] *See USTA*, 290 F 3d at 427 (finding that Commission's concept of impairment failed to take account of relevant cost disparities)

[619] Verizon Reply at 51. Verizon also urges the Commission to expeditiously halt existing state efforts to craft expanded unbundling requirements *Id* at 53; *see also* SBC Reply at 71-83.

[620] Specifically, the local loop network element is 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 network element also includes all features, functions and capabilities of such transmission facility, including the NID. 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. *See infra* note 638

[621] *See, e g*, SBC Comments at 96-98, NewSouth Reply at 16

[622] As explained in Part VI A 4 a below, we make a further distinction in our unbundling analysis for mass market loops based upon the type of loop facility (*e g*, copper or fiber)

standard we adopt above, *i.e.*, where they cannot economically self-provision loops and competitive alternatives do not exist.[623] To that end, we conduct separate loop impairment analyses based on loop types and capacity levels, which also consider two relevant customer classes – the mass market and the enterprise market.[624]

198. With respect to our mass market analysis, we make national impairment determinations for loops based on general economic and operational factors that do not vary significantly by geographic region.[625] As we explain more fully below, we find that the technical characteristics of the loop facilities generally deployed for use by mass market customers counsel for adopting rules that take into account the various technologies now used in loops. In crafting our unbundling requirements, we consider other factors, most notably our mandate under section 706 of the Act to promote the rapid deployment of advanced services throughout the nation Additionally, we reach our findings after full recognition and consideration of intermodal platforms, notably cable and CMRS.

199. Given the steep economic barriers associated with alternative loop deployment that are compounded by various identified operational issues, we require that loops consisting of either all copper or hybrid copper/fiber facilities must be provided on an unbundled basis so that

---

[623] Our loop unbundling analyses takes into account the relevant customer market typically served by the loop capacity involved However, we recognize that although each loop type and capacity level may be used predominantly to provide service to a particular customer group, that same loop also may be used to provide service across a range of customer categories For that reason, though our loop unbundling analysis focuses upon the customer classes most likely to be served by a specific type of loop, the unbundling rules we adopt apply with equal force to every customer served by that loop type *See infra* paras 209-10

[624] As described in Part V B 2 a above, the mass market consists primarily of residential and similar, very small, business users of analog POTS. The enterprise market is a business customer market of typically medium to large businesses with a high demand for a variety of sophisticated telecommunications services *See supra* Part V B 2 a The record reflects that high-capacity loops, DS1 to OCn, are generally provisioned to enterprise customers, while voice-grade analog loops, DS0 loops, and loops that deploy xDSL services, are used to serve customers typically associated with the mass market. We note, however, that while the enterprise market is comprised of business customers of varying size and capacity requirements, these customers reside, most often, in multiunit premises which are owned or controlled by another entity. Competitive carriers serving multiunit premises face deployment barriers that are not present when a competitive carrier seeks to deploy service to a customer located in a premises that such customer owns or controls *See infra* Part VI B 2 (addressing in detail barriers associated with accessing customers in multiunit premises). When customers typically associated with the mass market reside in multiunit premises, carriers seeking to self-deploy their own facilities to serve these customers face the same barriers as when serving multiunit premise-based enterprise customers. Because we find that the barriers faced by requesting carriers in accessing customers in multiunit premises are not unique to enterprise market customers residing in such premises but extend to all classes of customers residing therein, including residential or other mass market tenants, the conclusions we reach for high-capacity loops in the enterprise market apply equally to mass market customers in multiunit premises This in no way affects or changes the conclusions we reach with respect to DS0 and xDSL capable loops in our mass market analysis.

[625] *See, e g*, AT&T Reply at 146, 165.

requesting carriers may provide narrowband services over them.[626] For these reasons, we also direct incumbent LECs to unbundle stand-alone copper loops and subloops for the provision of broadband service. However, subject to a transition plan discussed below, we do not reinstate the Commission's vacated line sharing rules because we determine that continued unbundled access to stand-alone copper loops and subloops enables a requesting carrier to offer and recover its costs from all of the services that the loop supports, including broadband service.

200. In addition, we find that different policy considerations, as well as different technical considerations, are associated with copper loops, hybrid copper/fiber loops, and FTTH loops. For example, we decline to require incumbent LECs to provide unbundled access to their hybrid loops for the provision of broadband services.[627] Similarly, we decline to unbundle loops that consist of FTTH facilities for broadband services. As explained more fully below, this unbundling approach – *i e* , greater unbundling for legacy copper facilities and more limited unbundling for next-generation network facilities – appropriately balances our goals of promoting facilities-based investment and innovation against our goal of stimulating competition in the market for local telecommunications services.

201. With respect to our enterprise market analysis, we make national impairment determinations based on loop characteristics that do not vary significantly from area to area. Our conclusions with respect to loop deployment do vary, however, according to the loop type, *i e.*, dark fiber[628] or "lit" fiber,[629] and the capacity level of the particular loop. We find that different economic characteristics impact a competitive LEC's ability to self-deploy or utilize wholesale alternatives based on the capacity level of the loop facility demanded by its customer.[630]

---

[626] As explained below, in overbuild situations where the incumbent LEC elects to retire existing copper loops for FTTH loops, we also require incumbent LECs to make available unbundled access to a 64 kbps transmission path over that FTTH loop so that a competitor may provide narrowband service to that end-user customer

[627] Incumbent LECs must continue to provide unbundled access to the TDM features, functions, and capabilities of their hybrid loops This will allow competitive LECs to continue providing both traditional narrowband services (*e g* , voice, fax, dial-up Internet access) and high-capacity services like DS1 and DS3 circuits.

[628] Dark fiber is optical fiber through which no light is transmitted and no signal is carried It is unactivated deployed fiber that is left dark, *i e* , with no necessary equipment, *i e* , "opto-electronics" or "optronics" attached to light the fiber to carry a signal to serve customers *See* NEWTON'S TELECOM DICTIONARY 201 (18th ed 2002) (definition of Dark Fiber), *see also UNE Remand Order*, 15 FCC Rcd at 3771, para 162 n 292 Once the optronics are attached to the fiber to make signal transmission possible the dark fiber becomes "lit " *See* NEWTON'S TELECOM DICTIONARY 538-39 (18th ed 2002) (definition of Opto-Electronics and Optronics)

[629] *Id* , *see also* NEWTON'S TELECOM DICTIONARY 433 (18th ed 2002) (definition of Lit Fiber).

[630] We also know that alternative transmission technologies such as fixed wireless, satellite and unlicensed wireless may exist as potential enterprise market loop alternatives in limited circumstances and, therefore, consider these alternative transmission capabilities in our impairment analysis where appropriate. *See, e g* , BellSouth Comments at 42-44, SBC Reply at 91; Verizon Comments at 118-19

202. With regard to the highest capacity loop facilities, *i e* , OCn loops,[631] we conclude that no impairment exists on a nationwide basis. At the OCn level, requesting carriers have the ability to economically self-provision their own loops or are able to obtain unbundled dark fiber and light it at the OCn level. With respect to dark fiber loops,[632] DS3 loops,[633] and DS1 loops,[634] we conclude that requesting carriers are impaired on a location-by-location basis without unbundled access to incumbent LEC loops nationwide. We find, however, that some competitive carriers have been able to deploy certain high-capacity loops to particular customer locations and that some wholesale alternatives also exist at particular customer locations. Because the record does not provide the specific information necessary to identify the precise customer locations

---

[631] OCn is an optical interface designed to work with a Synchronous Optical Network (SONET) *See* NEWTON'S TELECOM DICTIONARY 528 (18th ed 2002) (definition of OCn) SONET is an optical interface standard for translating electronic communications signals into photonic signals for transmission across fiber optic facilities Ideally, SONET transmission systems are laid out in a ring formation to provide redundancy *See* NEWTON'S TELECOM DICTIONARY 684-85 (18th ed. 2002) (definition of SONET) OCn transmission facilities are deployed as SONET channels having a bandwidth of typically 155 52 Mbps (OC3 or the equivalent capacity of 3 DS3s) and higher, *e g* , OC12 (622.08 Mbps), OC48 (2 488 Gbps) etc *See* NEWTON'S TELECOM DICTIONARY 527 (18th ed. 2002) (definitions of OC3, OC12, and OC48)

[632] In the *UNE Remand Order*, the Commission determined that the loop facility includes dark fiber, stating that both copper and fiber alike represent unused loop capacity therefore dark fiber and extra copper both fall within the loop network element's "facilities, functions, and capabilities." *See UNE Remand Order*, 15 FCC Rcd at 3776. para 174. The Commission went on to state that there is "no reason to distinguish dark fiber from our general unbundling analysis for loops " *UNE Remand Order*, 15 FCC Rcd at 3785, para 196 The record contains no basis for departing from this determination

[633] A DS3 loop is a digital local loop having a total digital signal speed of 44 736 Mbps provided over various transmission media including but not limited to fiber optics, coaxial cable, or radio DS3 loops can be channelized into 28 DS1 channels *See infra* note 634 They can also be unchannelized *See* NEWTON'S TELECOM DICTIONARY 242 (18th ed 2002) (defining DS3)

[634] A DS1 is a 1 544 Mbps first-level signal in the digital transmission hierarchy In the time division multiplexing hierarchy of the telephone network, DS1 is the initial level of multiplexing Traditionally, 24 64 kbps DS0 channels have been multiplexed up to the 1 544 Mbps DS1 rate, with each DS0 channel carrying the digital representation of an analog voice channel *See* TELCORDIA, INC., NOTES ON THE NETWORK, TELCORDIA TECHNOLOGIES SPECIAL REPORT, SR-2275, Issue 4, Oct 2000, Glossary at 46 (TELCORDIA NOTES ON THE NETWORK) DS1 loops are provided over various transmission media and combinations of transmission media, including but not limited to two-wire and four-wire copper, fiber optics, or radio DS1 loops may be channelized typically into up to 24 DS0 channels of 56/64 kbps each, or unchannelized, *i e.*, providing a continuous bit stream for data (such as frame relay, ATM, or Internet access) or other customer applications We note that throughout the record in this proceeding parties use the terms DS1 and T1 interchangeably when describing a symmetric digital transmission link having a total 1 544 Mbps digital signal speed Carriers frequently use a form of DSL service, *i e* , High-bit rate DSL (HDSL), both two-wire and four-wire HDSL, as the means for delivering T1 services to customers. We will use DS1 for consistency but note that a DS1 loop and a T1 are equivalent in speed and capacity, both representing the North American standard for a symmetric digital transmission link of 1 544 Mbps. *See* NEWTON'S TELECOM DICTIONARY 242 (18th ed 2002) (definition of DS1), *id* at 718 (definition of T1), *see also* ENGINEERING AND OPERATIONS IN THE BELL SYSTEM 198-201 (R F Ray Technical ed , 2d ed 1983) (channelization process for transmission of telecommunications), 369-73 (technical characteristics of DS1 loops), 386-93 (describing T-carrier hierarchy and necessary equipment), TELCORDIA, INC , NOTES ON THE NETWORK, SR-2275, section 7 7 (Dec 2000) (describing digital data services provided over local loops) at 7-23 (overview of DS hierarchy)

where this deployment has occurred,[635] we delegate to state commissions the authority to make findings of fact within the scope of the deployment triggers we define, to identify on a more granular scale where carriers are not impaired without access to incumbent LEC unbundled high-capacity loops.

2. Background

203. Loops in their simplest form are the transmission facilities between a central office and the customer's premises, *i e* , "the last mile" of a carrier's network that enables the end-user customer to receive, for example, a telephone call or a facsimile, as well as to originate similar communications.[636] Loops were included on the initial list of UNEs in the *Local Competition Order*, and even the incumbent LECs agreed that the loop network element must be unbundled pursuant to sections 251(c)(3) and 251(d)(2) of the Act.[637] In the *UNE Remand Order*, the Commission broadened the definition of the loop to include all features, functions, and capabilities of these transmission facilities, including high-capacity loops, dark fiber and all attached electronics (except those used for providing advanced services).[638] The Commission also concluded that obtaining all types of loops from alternative, non-incumbent LEC sources, *i e.*, third party or self-provisioning, would impede competitive entry by materially raising entry costs; delaying entry; and limiting the scope and timeliness of competitor's offerings [639] Accordingly, the Commission applied a one-size-fits-all approach to loops, and ordered

---

[635] We do, however, determine that the record contains sufficient information to enable us to identify appropriate triggers and related criteria that will, after a more particularized analysis, identify the specific customer locations where certain types of high-capacity loop impairment does not exist. To that end, we develop a mechanism for a further level of granular inquiry by state commissions on a customer location-specific basis where our defined triggers exist. We both delegate authority to and direct state commissions to undertake more granular analyses for dark fiber loops, DS3 loops, and DS1 loops at specific customer locations based upon our defined triggers and related criteria for each of these three types of loops, as described below These more granular impairment analyses may result in non-impairment determinations for one or more of these three types of high-capacity loop facilities at specified customer locations

[636] *Local Competition Order*, 11 FCC Rcd at 15691, para 380

[637] *Id* at 15689-90, para 377; *see also UNE Remand Order*, 15 FCC Rcd at 3771, para 162 n 292

[638] *UNE Remand Order*, 15 FCC Rcd at 3772, paras 166-67 nn.300 & 301, *see also* 47 C.F R § 51 319(a)(1), which defined loops as

> Local loop 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, including inside wire owned by the incumbent LEC The local loop network element includes all features, functions, and capabilities of such transmission facility Those features, functions, and capabilities include, but are not limited to, dark fiber, attached electronics (except those electronics used for the provision of advanced services, such as Digital Subscriber Line Access Multiplexers), and line conditioning The local loop includes, but is not limited to, DS1, DS3, fiber, and other high-capacity loops

[639] *UNE Remand Order*, 15 FCC Rcd at 3772, para 165

unbundling of all incumbent LEC loops, from DS0 to OCn and dark fiber, throughout the nation.[640]

204. In the *Triennial Review NPRM*, as part of its overall inquiry about the viability of adopting more granular unbundling rules, the Commission asked whether its impairment analysis should make "service, geographic, capacity or other distinctions to the unbundled loop."[641] In addition, the Commission asked whether there were meaningful distinctions between those loops capable of providing basic services versus those capable of advanced or broadband services.[642] Finally, for high-capacity loops (DS1 and above), the Commission sought comment on whether there was a particular capacity level at which new entrants could economically self-deploy.[643]

3. General Economic Characteristics of Loop Deployment

205. Constructing loop plant is both costly and time consuming, regardless of the type of loop being deployed.[644] Notably, both the Supreme Court and the D.C. Circuit recognized that incumbent LECs may be required to unbundle loop facilities because they are "very expensive to duplicate."[645] Because the distribution portion of the loop serves a specific location,[646] and installing and rewiring that loop is very expensive, most of the costs of constructing loops are sunk costs. Unless that loop is subsequently purchased by another provider wishing to serve that same location, a carrier's ability to recover the cost of that loop is generally constrained except in limited circumstances at certain capacity levels. While fixed costs for constructing loops are quite high, economies of scale in deployment can accrue in constructing loops to locations that are geographically close to a carrier's transport network, assuming other barriers do not preclude

---

[640] In the *UNE Remand Order*, the Commission did not engage in a capacity-based analysis beyond confirming that high-capacity loops were included in the definition of the loop The Commission found that because "the wire facility used for transmission of the traffic is indistinguishable from any other copper wire" there was no reason to modify the definition of loops to describe various categories of capacity *UNE Remand Order*, 15 FCC Rcd at 3777, para 176. The Commission, however, did separately consider dark fiber local loops, finding the characteristics to be similar to dark fiber transport ("Because fiber is currently a more significant component of interoffice transport than the loop network element, we discuss aspects of dark fiber common to both elements when we discuss interoffice transport below") *UNE Remand Order*, 15 FCC Rcd at 3785-86, para 198

[641] *Triennial Review NPRM*, 16 FCC Rcd at 22804, para 51

[642] *Id* at 22804-05, para 51

[643] *Id*

[644] *See, e g*, ALTS *et al* Comments at 56-57 (stating that fiber deployment costs $100,000-$300,000 per mile underground, $50,000 per mile on poles, and $10,000 to $60,000 through pipelines and adding a building averages $250,000 – and that if the building is more than a mile from the competitive LEC's existing networks, it can cost more that $1,000,000 per mile to construct fiber loops in urban areas), WorldCom Comments at 74-75 (stating that it costs approximately $250,000 for a "building add" and can take six to nine months for a competitive LEC to deploy a new DS1 loop)

[645] *USTA*, 290 F 3d at 426 (citing *Verizon*, 535 U S. 467 at n 27)

[646] This contrasts with the feeder portion of the loop which may serve multiple locations

construction.[647] This is especially true in urban areas where the concentration of potential customer locations is very dense.[648] Conversely, because of long loop lengths required to reach more distant, geographically dispersed customers, loops are more expensive to build in rural areas, raising the average cost per loop for equipment, installation, and maintenance.[649] In addition to the cost-related barriers discussed above, competitive carriers deploying loops also face difficulties in acquiring municipal and private rights-of-ways as well as gaining building access from owners of multiunit premises.[650] These additional factors can further affect competitive carriers' ability to sign up customers that need predictability in their business decisions.[651]

206. For fiber-based loops, the cost of construction does not vary significantly by loop capacity, *i e* , the per-mile cost of building a DS1 loop does not differ significantly from the cost to construct an OCn loop. The most significant portion of the costs incurred result from deploying the physical fiber infrastructure in the ground, rather than from lighting the fiber optical cable.[652] The ability to recover these construction costs for different loop capacities does, however, vary based on the relevant capacity level of the loop to be provided. Accordingly, a key consideration in our impairment analysis is the loop capacity level at which a competitive entrant can recover its construction costs. Similarly, the ability to overcome other operational barriers to deployment varies based on the capacity of the loop. The record confirms that loop capacity level directly affects the potential revenue stream that can reasonably be obtained to offset construction costs in an economically feasible timeframe [653] Thus, in addition to the barriers a

---

[647] *See, e g* , AT&T Comments at 134.

[648] *See, e g* , Letter from Douglas A Dawson, CCG Consulting, (on behalf of 20 "network-based" competitive LECs) to Marlene H Dortch, Secretary, FCC, CC Docket Nos 01-338, 96-98, 98-147 at 6-7 (filed July 17, 2002) (submitting survey-based "State Of CLEC Competition") (CCG July 17, 2002 CLEC Survey *Ex Parte* Letter) (demonstrating that for the six major metropolitan areas surveyed the concentration of competitive LEC loop deployment is in the downtown area), Allegiance Comments at 23.

[649] In addition, we note that scale economies may particularly affect small businesses

[650] *See, e g* , AT&T Reply at 174-79 (discussing other barriers linked to the incumbent LECs' historical monopoly that preclude competitive loop deployment independent of cost factors), *see also* NuVox Comments at 74, KMC Duke Aff at paras 7-8 (citing proprietary information), Affidavit of Joseph Polito, SNiP LiNK, Inc (SNiP LiNK Polito Aff) at paras. 4-7; Sprint Comments at 22, Letter from Ruth Milkman, Counsel for WorldCom, to Marlene H Dortch, Secretary, FCC, CC Docket Nos 01-338, 96-98, 98-147 at 2-3 (filed Oct 25, 2002) (discussing building access barriers) (WorldCom Oct. 25, 2002 Building Access *Ex Parte* Letter), ALTS *et al* Comments at 56

[651] *See, e g* , AT&T Reply at 175 (describing how it keeps statistics on "breakage," *i e* , instances where it initially won a customer but subsequently lost it due to delay in gaining building access to provision the customer), *see also* Sprint Comments at 23 ("Customers will not wait the months required by CLECs to acquire permits, cut streets, install additional equipment, engineer, construct, and test new facilities ")

[652] *See, e g.*, AT&T Comments at 130, AT&T Reply at 148 (arguing that the cost of loop deployment primarily lies in the structures and rights-of-way, not in the copper or fiber conductor)

[653] *See, e g* , WorldCom Comments at 76, Letter from Timothy J Regan, Senior Vice President – Government Affairs, Corning, to Marlene H. Dortch, Secretary, FCC, CC Docket Nos 01-338, 96-98, 98-147, Attach. at 32 (filed Nov 26, 2002) (Corning Nov. 26, 2002 *Ex Parte* Letter), Corning Comments, App A at 10 (Cambridge Strategic (continued.. .)

new entrant faces in deploying loops, we consider the revenue potential associated with particular loop capacity,[654] as well as the ability to mitigate construction delays that affect provisioning intervals as keys to determining the degree to which an entrant is impaired in deploying a particular loop capacity.

207. Unlike transport facilities, loops generally do not aggregate multiple customers' traffic. As a result, loop impairment is more closely related to the demands of the individual customer served by such loop. In that regard, customer class distinctions are useful in understanding competitive carriers' decisions and economic abilities regarding deployment of loops typically used to serve customers generally associated with that particular class.

208. Consistent with our impairment framework set out above,[655] our loop analysis considers alternative transmission technologies that are capable of providing transmission to individual customers as alternatives to the incumbent LEC's loop facility. These alternative technologies may use non-wireline platforms to offer other kinds of services to customers, *i e* , intermodal competition, such as cable operators providing cable telephony and cable modem service in addition to cable television, or may be used solely to provide telephone and data communications service, such as fixed wireless technologies. As explained above, we will consider whether these alternative technologies permit a requesting carrier to serve the market, either through self-provisioning the necessary transmission capacity to the customer, or by obtaining the transmission capacity on a wholesale basis from other firms deploying that technology.

4. Loop Impairment by Customer Market

209. The record reflects that customers generally associated with the mass market typically use different types of loop facilities than customers generally associated with the enterprise market. We note that very small business customers, like residential customers, typically purchase analog loops, DS0 loops, or loops using xDSL-based technologies. We address the loops provisioned to these customers as part of our mass market analysis. All other business customers – whom we characterize as the enterprise market – typically purchase

(Continued from previous page)

Management Group, *Assessing the Impact of Regulation on Deployment of Fiber to the Home* (2002) (*CSMG Study*))

[654] In considering potential revenue streams from the various types of loops, it is necessary to factor in the ability to enter into and enforce long-term contracts with customers We have some evidence that certain states have adopted or are considering regulations that limit the ability of carriers to bind a customer to a long-term local service contract (*i e* , longer than one year) and associated termination charges. *See, e g , Missouri Public Service Commission, Southwestern Bell Telephone Company's Proposed Revisions to PSC Mo No 26, Long Distance Message Telecommunications Service Tariff*, Report and Order, Case Nos TT-2002-227 *et al.* (June 27, 2002) (local service terms in excess of one year will not be permitted), California Public Utilities Commission, *Rules Governing Telecommunications Consumer Protection*, Interim Decision, Rulemaking 00-02-004, Rule 3 (June 6, 2002) To the extent such limitations exist, a carrier's ability to rely on a guaranteed long-term revenue stream from a loop to recover sunk construction costs is adversely affected

[655] *See supra* Part V B

high-capacity loops, such as DS1, DS3, and OCn capacity loops. We address high-capacity loops provisioned to these customers as part of our enterprise market analysis.[656] We first analyze those loops generally provisioned to mass market customers and then analyze the high-capacity loops generally provisioned to enterprise customers.

210. In considering the different customer markets to inform our understanding of competitive carrier loop deployment, we note that our market classifications allow us to conduct our impairment analyses for the various loop types at a more granular level but are not intended to prohibit the use of UNE loops by customers not typically associated with the respective customer market class. For example, business customers typically associated with the enterprise market may require DS0 lines, particularly if they have remote business locations staffed by only a few employees where high-capacity loop facilities are not required.[657] Because a competitive carrier faces the same economic characteristics to serve these customers at their remote locations with a DS0 loop that it faces to serve residential customers served by the same loop type, our customer class distinctions are not intended to preclude a competitive LEC from obtaining an unbundled DS0 loop to serve these business customers. Similarly, a competitive LEC faces the same economic considerations in provisioning a DS1 loop to a large business customer typically associated with the enterprise market that it faces in provisioning that same loop type to a very small business or residential customer typically associated with the mass market. Thus, while we adopt loop unbundling rules specific to each loop type, our unbundling obligations and limitations for such loops do not vary based on the customer to be served.

a. Mass Market Loops

(i) Introduction

211. We conclude that requesting carriers seeking to serve the mass market face varying levels of impairment without unbundled access to the transmission path between the central office and the customer premises depending upon whether the loop used to complete this path consists entirely of copper, or consists of a hybrid of fiber and copper cables, and whether a requesting carrier seeks to offer narrowband or broadband services or both. In fact, for those loops consisting of fiber from the central office to the customer premises, *i e* , FTTH loops, we find no impairment on a national basis.[658] Based on our review of the record, which covers the

---

[656] We note that through the application of our new impairment standard to high-capacity loops, including impairment analyses based on each particular loop capacity level, we have considered evidence raised by joint petitioners in the High-Capacity Loop and Transport Petition *See, e g* , BellSouth, SBC, and Verizon, Joint Petition for Elimination of Mandatory Unbundling of High-Capacity Loops and Dedicated Transport, CC Docket No 96-98 (filed Apr. 5, 2001) (High-Capacity Loop and Transport Petition) Because we base our unbundling obligations with respect to high-capacity loops on our findings of impairment and non-impairment according to our new impairment standard, we dismiss the High-Capacity Loop and Transport Petition as moot

[657] *See, e g* , WorldCom Comments at 14

[658] As discussed more fully below, there is an unbundling obligation for narrowband voice services in one FTTH loop deployment scenario, *i e* , overbuild deployment in which an incumbent LEC constructs fiber transmission facilities parallel to or in replacement of its existing copper loop plant *See infra* Part VI A 4 a (v)(b)

current deployment of local loops, technological advancements in incumbent LEC outside plant, and the economic barriers and revenue opportunities facing competitive providers today with regard to loops, we conclude that incumbent LECs must provide, as UNEs pursuant to section 251(c)(3), copper loops, including copper loops conditioned to provide xDSL service. As discussed below, we also require incumbent LECs to provide competitive LECs the ability to line split, which allows two competitive LECs to split the loop so that one carrier can provide narrowband service and the other can provide broadband service.

212. As for our unbundling rules related to broadband, we recognize there are special considerations in crafting unbundling rules for loops used to provide broadband service. Broadband deployment is a critical domestic policy objective that transcends the realm of communications. While the development of broadband infrastructure is a fundamental and integral step in ensuring that consumers are able to fully reap the benefits of the information age, even more broadly, it is vital to the long-term growth of our economy as well as our country's continued preeminence as the global leader in information and telecommunications technologies. The Commission's primary regulatory challenge for broadband is to determine how we can help drive the enormous infrastructure investment required to turn the broadband promise into a reality. This challenge is squarely raised in our consideration of unbundling rules for last-mile facilities.

213. With respect to unbundling obligations for facilities used to provide broadband service, we are charged with determining the potential impact of our rules on advanced services, including those supported by broadband deployment and infrastructure investment, as directed by section 706 of the 1996 Act.[659] For this reason, we craft unbundling rules that provide the right incentives for all carriers, including incumbent LECs, to invest in broadband facilities. Thus, we decline to require unbundling on a national basis of the features, functions, and capabilities of the packetized fiber facilities of incumbent LEC hybrid loops. We require, however, incumbent LECs to provide unbundled access to the time division multiplexing (TDM) features, functions, and capabilities of their hybrid loops on a national basis. Subject to a three-year transition period explained below, we also decline to require incumbent LECs to continue to unbundle the high frequency portion of the loop. Our rules strike the appropriate statutorily required balance between ensuring competitive access and maintaining incentives to invest in next-generation networks.

(ii) Mass Market Loop Types

214. At its most basic level, a local loop that serves the mass market consists of a transmission medium, which almost always includes copper wires of various gauges. The loop may include additional components (*e g* , load coils, bridge taps, repeaters, multiplexing equipment) that are usually intended to facilitate the provision of narrowband voice service.

215. As a general matter, incumbent LECs use two local exchange network configurations to connect customers to their switching systems. First, carriers connect customers

[659] 47 U.S C § 157 nt.

directly to a central office via a loop dedicated solely to a particular customer. In this configuration, the local loop consists of a single cable pair – for copper loops, this is often referred to as "home-run copper."[660] For the mass market, carriers can use copper loops to provide both narrowband voice service and broadband xDSL services.[661] Providing broadband service requires the use of special equipment, such as DSLAMs[662] located in the central office (or remote terminals in the incumbent LEC's outside plant) and xDSL modems or other equipment at the customer's premises.

216. Second, incumbent LECs deploy "feeder plant" to a centralized location (referred to as a "remote terminal") where the carrier aggregates "distribution plant," *i e.*, copper cable pairs that are used to serve individual customers. In this second configuration, then, the local loop portion of the network consists of two parts, *i e.*, feeder plant and distribution plant.[663] The feeder plant consists of a large number of high-capacity cable pairs to accommodate a large volume of telecommunications traffic. In recent years, carriers have started deploying fiber optic cable in the feeder plant to handle more efficiently the increasing volume of traffic (although some legacy technologies continue to require use of copper feeder plant).[664] By contrast, the distribution plant consists generally of many copper cable pairs, *i e* , one direct connection or transmission path to each customer premises.

---

[660] *See, e g* , Letter from Stephen C Gray, President, McLeodUSA, to William Maher, Chief, Wireline Competition Bureau, FCC, CC Docket Nos 96-98, 98-147, 01-338, 02-33 at 8 (filed Dec 18, 2002) (McLeodUSA Dec 18, 2002 *Ex Parte* Letter) McLeod states that customers are served by "a connected-through copper loop, with a direct analog electrical connection between the customer's network interface and the central office main distribution frame" or one of two types of DLC systems

[661] Subject to certain distance limitations, a carrier can provide various types of xDSL service over a copper loop with appropriate conditioning. We use the term "xDSL" to refer to DSL as a generic transmission technology, as opposed to a specific type of DSL such as ADSL (asymmetric digital subscriber line), HDSL (high-speed digital subscriber line), UDSL (universal digital subscriber line), VDSL (very-high speed digital subscriber line), and RADSL (rate-adaptive digital subscriber line)

[662] DSLAMs send the customer's voice traffic to the public, circuit-switched telephone network and the customer's data traffic (combined with that of other xDSL users) to a packet-switched data network *See Line Sharing Order*, 14 FCC Rcd at 20920, para. 9, *see also* Walter Goralski, ADSL AND DSL TECHNOLOGIES at 252-60 (describing DSLAMs).

[663] TELCORDIA NOTES ON THE NETWORK at § 12 (describing LEC distribution networks), AT&T Comments at 184-86, AT&T Reply at 149 We recognize that carriers may categorize their outside plant facilities into three sections, *i e* , feeder, distribution, and customer drops *See* AT&T Reply at 149 For the purposes of our unbundling analysis, we consider customer drops to be part of an incumbent LEC's distribution plant

[664] WorldCom Comments, Joint Declaration of Tom Stumbaugh and David Reilly (WorldCom Stumbaugh/Reilly Joint Decl.) at paras. 8-10, Letter from Leonard G Ray, Government Relations Committee Chairman, FTTH Council, to Marlene H Dortch, Secretary, FCC, CC Docket No 01-338 at 10 (filed Jan 8, 2003) (FTTH Council Jan 8, 2003 FTTH Deployment *Ex Parte* Letter) (noting that fiber feeder optimized the network for voice transmission), Letter from Kimberly Scardino, Senior Counsel, WorldCom, to Marlene H Dortch, Secretary, FCC, CC Docket Nos 96-98, 98-147, 01-338 at 2 (filed Dec 12, 2002) (WorldCom Dec. 12, 2002 Next-Generation Networks *Ex Parte* Letter)

217. Carriers use digital line carrier (DLC) systems to aggregate the many copper loops that terminate at a remote terminal location,[665] multiplex such signals onto a fiber or copper feeder loop facility, and transport them to the carrier's central office.[666] These DLC systems may be integrated directly to the carrier's switch (*i.e.*, Integrated DLC systems) or not (*i e.*, Universal DLC systems).[667] Through the use of feeder loop plant and DLC systems, carriers can reduce the costs of constructing, deploying, and maintaining their outside plant.[668]

218. Although originally deployed to manage voice networks, carriers now use DLC systems to provide both voice and data services. Technological improvements have enabled carriers to use DLC systems to deliver broadband services (*e g.*, ADSL) in addition to narrowband services.[669] In particular, manufacturers have developed "line cards" that can be

---

[665] Although there are different varieties of DLC systems, they typically consist of cross-connect and multiplexing equipment that are housed in remote terminals, which are intended to house a limited amount of equipment There are three basic types of remote terminals (1) huts, which are above-ground structures with environmental control capabilities. (2) controlled environmental vaults (CEVs), which are below-ground structures that are accessed through manholes and contain environmental control capabilities, and (3) cabinets, which are above-ground structures that are typically designed as an integrated system *See Ameritech Corp , Transferor, and SBC Communications, Inc , Transferee, For Consent to Transfer Control of Corporations Holding Commission Licenses and Lines Pursuant to Sections 214 and 310(d) of the Communications Act and Parts 5, 22, 24, 25, 63, 90, 95, and 101 of the Commission's Rules*, CC Docket No 98-141, Second Memorandum Opinion and Order, 15 FCC Rcd 17521, 17539, para. 34 n 94 (2000) (*Pronto Modification Order*) (describing remote terminals).

[666] Carriers historically deployed local loops on a one-for-one basis, *i e* , one direct copper cable pair connecting a customer to the central office WorldCom Stumbaugh/Reilly Decl at para 7 Carriers started using DLC for feeder pair relief in urban areas *Id* at para 9

[667] Universal DLC systems consist of a "central office terminal" and a "remote terminal," *i e* , a DLC system in the carrier's central office terminal mirrors the deployment at the remote terminal Notes on the Network at § 12 6 By contrast, an Integrated DLC system does not require the use of a central office terminal because the DLC system is integrated into the carrier's switch (thus, the naming convention) *Id* § 12 7; *see also* Letter from David R Conn, Deputy General Counsel, McLeodUSA, to Marlene H Dortch, Secretary, FCC, CC Docket Nos 96-98, 98-147, 01-338, 02-33 at 8 (filed Nov 15, 2002) (McLeodUSA Nov 15, 2002 DLC systems *Ex Parte* Letter), McLeodUSA Dec 18, 2002 *Ex Parte* Letter at 8, *see also* TELCORDIA NOTES ON THE NETWORK at 2-2 to 2-5 (describing DLC systems)

[668] TELCORDIA NOTES ON THE NETWORK at § 12 6-12 7.

[669] WorldCom Stumbaugh/Reilly Decl. at paras. 9-11 (describing technological developments in DLC systems), AT&T Reply at 152-53 (noting that incumbent LECs can upgrade existing DLC systems by replacing the line cards installed in such systems) In their original form, carriers connected DLC systems to copper transmission facilities that comprised the feeder loop plant The DLC system would convert analog signals transmitted from the customer's premises to digital signals suitable for transmission over the carrier's network. By the late 1990s, carriers were purchasing "Next Generation Digital Loop Carrier" (NGDLC) systems, which were designed for use with fiber optic cable In addition to the fiber capability, NGDLC systems have more flexible and remote configuration capabilities than their predecessors and, depending on the manufacturer, they may contain additional features like the ability to provide broadband services *See* Walter Goralski, ADSL AND DSL TECHNOLOGIES, 273 (1998), NEWTON'S TELECOM DICTIONARY 510 (18th ed 2002) (defining NGDLC systems as "DLC [that] can receive and aggregate large amounts of bandwidth (higher than T-1)); *see also* Letter from Jim Lamourex, Senior Counsel, SBC, to Marlene H Dortch, Secretary, FCC, CC Docket No 01-338 at 1-2 (filed Dec 12, 2002) (SBC Dec 12, 2002 *Ex* (continued .)

installed (along with other components) into a DLC system to provide broadband services, or a combination of broadband and narrowband service, to customers served by DLC systems.[670] By deploying this DSLAM functionality in a DLC system, carriers can serve customers whose copper loop facility would otherwise be too long to support the provision of xDSL service.[671] To do so has generally required incumbent LECs deploying this technology to segregate and minimize the traffic in a different way – that is, carriers dedicate a segment of their feeder plant to serving narrowband voice traffic and another segment to serving broadband traffic.[672] The feeder loop plant transporting voice traffic connects to the carrier's switch in its central office (often through intermediate electronics in the central office).[673] By contrast, the feeder loop plant transporting the broadband signal terminates at a packet switch (usually referred to as an "optical concentration device" or OCD) also located in the carrier's central office.[674]

219. In recent years, carriers have started deploying FTTH – that is, using fiber optic cable to replace traditional copper loops. Whereas the use of fiber feeder plant and DLC systems is an augmentation of the existing network and relies on the continued use of copper (albeit to a lesser degree) in the loop plant, FTTH is essentially a broad replacement of the existing loop plant. The use of fiber optic cable requires the deployment of network equipment with different features and capabilities from comparable equipment used for copper cable. As noted above, deployment of FTTH loops – that is, a transmission path consisting entirely of fiber optic cable and associated equipment between the customer's premises and the central office – remains in its infancy.

220. Carriers use different technologies to transport telecommunications over their networks. As digital transmission technologies replaced analog systems, carriers started using

(Continued from previous page) ———————————

Parte Letter) (stating that SBC "considers DLC that provides both time slot interchanger and xDSL functionality as NGDLC ")

[670] Alcatel Comments at 26; Catena Comments in CC Dkt Nos 02-33, 95-20, and 98-10, at 5 n 7 (describing Catena's DLC system upgrade), WorldCom Stumbaugh/Reilly Decl at para. 13, Alcatel Reply at 6, *see Pronto Modification Order*, 15 FCC Rcd at 17523-31, paras 4-19 (describing SBC's DLC network architecture used to provide broadband service)

[671] WorldCom Stumbaugh/Reilly Decl. at para 13

[672] *Id* at para 15; Letter from W Scott Randolph, Director – Federal Regulatory Affairs, Verizon, to Marlene H. Dortch, Secretary, FCC, CC Docket Nos 01-337, 01-338, 96-98, 98-147, 02-33 at 10 (filed Sept 30, 2002) (Verizon Sept 30, 2002 *Ex Parte* Letter) (submitting diagram showing the use of two parallel feeder loops to provide broadband service through DLC systems)

[673] Alcatel Reply at 6 (explaining that voice and data traffic are segregated in the incumbent LEC's central office)

[674] AT&T Comments at 187-89, Covad Comments at 65; WorldCom Comments at 108, WorldCom Stumbaugh/Reilly Decl at para. 13, Letter from Jonathan J Boynton, Associate Director – Federal Regulatory, SBC, to Marlene H Dortch, Secretary, FCC, CC Docket No 01-338 at 5 (filed Jan 15, 2003) (SBC Jan 15, 2003 *Ex Parte* Letter), Verizon Sept. 30, 2002 *Ex Parte* Letter at 10 Several parties explain that an OCD is equivalent to a main distribution frame *See, e g* , Covad Comments at 65 (noting that the OCD demultiplexes data transmissions from the fiber feeder and distributes the signal to its next destination)

TDM to combine multiple transmission paths onto a single cable.[675] TDM provides a transmission path by dividing a circuit into time slots and providing a dedicated time slot to an end user for the duration of the call. More recently, carriers have started using packet-switched technologies (*e.g.*, ATM or frame relay) to combine different types of traffic over shared facilities.[676] By using packet-switched technology, carriers can transmit voice, fax, data, video, and other over a single transmission path at the same time.

221. In light of the foregoing, we find that our unbundling rules for local loops serving the mass market must account for these different loop architectures. Therefore, we craft unbundling rules specific to each different loop type. First, we address our unbundling rules for loops consisting of copper pairs of various gauges and associated electronics (*e.g.*, load coils, repeaters, multiplexers), which we refer to as copper loops. Second, we address our unbundling rules for loops consisting of DLC systems that are fed by fiber optic cable, which we refer to as "hybrid loops." Finally, we address our unbundling rules for loops consisting entirely of fiber optic cable, which we refer to as FTTH loops.

(iii) Evidence of Loop Deployment

222. The record indicates that deployment of alternative local loop facilities for the purposes of providing telecommunications services to the mass market has been minimal. The record also indicates, however, that there is evidence that other types of network facilities deployed primarily for other purposes (*e.g.*, cable television systems, satellite technologies) can and are increasingly being modified to support the delivery of narrowband and broadband services, particularly telephony and high-speed Internet access services, to the mass market. As a general matter, while these systems are increasingly being used for the delivery of retail narrowband and broadband services (*e.g.*, telephony and high-speed Internet access services), the record indicates that such systems are not being used currently to provide wholesale local loop offerings that might substitute for access to incumbent LECs' loop facilities.

223. The factual record consists of three parts. First, several parties submitted detailed studies describing local loop deployment and conditions surrounding competitive access to local loops.[677] Second, many parties described their network operations, experiences, and future

---

[675] *See, e.g.*, Walter Goralski, ADSL AND DSL TECHNOLOGIES 77-98 (1998) (describing differences between packet-switched and circuit-switched networks), Walter Goralski, SONET 99-108 (2d ed. 2000) (describing T-carrier and different multiplexing techniques).

[676] For example, some carriers use packet-switching technology as the building blocks of their networks. *See, e.g.*, NewSouth Comments at 11-13 (describing use of packet-switching technology in its network).

[677] *See, e.g.*, BOC UNE Fact Report 2002, Letter from Dee May, Assistant Vice President, Verizon, to Marlene H. Dortch, Secretary, FCC, CC Docket No. 01-338 (filed Oct. 23, 2002) (submitting *UNE Rebuttal Report 2002* commissioned by the BOCs), CCG July 17, 2002 CLEC Survey *Ex Parte* Letter. These studies in turn rely on additional evidence to support their conclusions, such as briefings to the investment community, analyst reports, newspaper articles, and trade industry reports. Some commenters argue that unbundling requirements decrease incumbent LECs' financial rewards from selling future broadband services by increasing the risk of investment, thereby decreasing the amount of investment incumbent LECs will make in broadband infrastructure. *See, e.g.*, Corning Comments at 5-9, HTBC Comments at 28-33, App. A (submitting John Haring and Jeffrey H. Rohlfs, *The* (continued)

deployment plans in comments and *ex parte* letters.[678] Finally, the Commission staff has published reports arising from its monitoring of the deployment of advanced telecommunications capability and the development of local competition throughout the country.[679]

224. Relying on these sources, the record shows that incumbent LECs continue to control the vast majority of voice-grade local loops throughout the nation. The Commission staff's recent *Local Telephone Competition December 2002 Report* noted that incumbent LECs served approximately 167.5 million switched access lines, or approximately 88.6 percent of the national market.[680] The record reflects a significant growth in the amount of fiber incumbent LECs are deploying in the local loop, with most of this deployment occurring in the feeder plant rather than the distribution plant. According to some estimates, upwards of 30 percent of incumbent LEC access lines are now supported by the use of mixed fiber-copper loop facilities.[681]

(a) Self-Deployment

225. The record reflects that competitive LECs have not self-deployed alternate copper local loops to provide telecommunications services (or packages of telecommunications and

(Continued from previous page)

Disincentives for ILEC Broadband Deployment Afforded by the FCC's Unbundling Policies (July 16, 2002)), Verizon Comments at 27-32 (submitting Declaration of Alfred E Kahn and Timothy J. Tardiff), Letter from Matthew J. Tanielian, Vice President – Governmental Relations, ITI – Information Technology Industry Council, to Marlene H. Dortch, Secretary, FCC, CC Docket No 01-338 (filed Apr 22, 2002) (HTBC Apr 22, 2002 *Ex Parte* Letter); Letter from W. W Jordan, Vice President – Federal Regulatory, BellSouth, to Marlene H. Dortch, Secretary, FCC, CC Docket No 01-338 (filed Oct 15, 2002) (BellSouth Oct 15, 2002 *Ex Parte* Letter) By contrast, other commenters argue that unbundling requirements do not decrease the incentives for BOCs to provide broadband services over fiber-fed loops *See, e g*, AT&T Willig Decl at paras 15, 175, Letter From Jason D Oxman, Vice President and Assistant General Counsel, Covad, to Marlene H Dortch, Secretary, FCC, CC Docket Nos 01-338, 96-98, 98-147 (filed Nov 22, 2002) (Covad Nov. 22, 2002 *Ex Parte* Letter), Covad Murray Reply Decl at paras 99-113, Letter from C Frederick Beckner III, Counsel for AT&T, to Marlene H. Dortch, Secretary, FCC, CC Docket Nos 01-338, 96-98, 98-147 at 4 (filed Dec 6, 2002) (AT&T Dec 6, 2002 *Ex Parte* Letter)

[678] *See, e g*, ACS Reply at 5-6 (describing market conditions in Alaska), BellSouth Rely, Reply Declaration of Prof Robert G Harris (BellSouth Harris Reply Decl.) at paras 11-21 (submitting projections and market data related to broadband services), New York State Attorney General Reply at 4, 9-11 (describing competitive entry in New York), Letter from Rebecca H Sommi, Vice President Operations Support, Broadview Networks, to Marlene H Dortch, Secretary, FCC, CC Docket Nos 01-338, 96-98, 98-147 (filed Oct 16, 2002) (Broadview Oct 16, 2002 *Ex Parte* Letter); Letter from Jason Oxman, Vice President and Assistant General Counsel, Covad, to William Maher, Chief, Wireline Competition Bureau, FCC, CC Docket No 01-338 (filed Oct. 15, 2002) (Covad Oct. 15, 2002 Broadband Deployment *Ex Parte* Letter), Letter from Thomas Jones, Counsel for Allegiance, to William Maher, Chief, Wireline Competition Bureau, FCC, CC Docket Nos 01-338, 96-98, 98-147 at 3-4 (filed Dec. 12, 2002) (Allegiance Dec 12, 2002 *Ex Parte* Letter)

[679] *See Seventh Wireless Report 2002*, *Third Section 706 Report 2002*, 17 FCC Rcd at 2844.

[680] *Local Telephone Competition December 2002 Report* at Table 1

[681] Covad Comments at 55 n 105 (citing *Trends in Telephone Service May 2002 Report* at Table 18 3 (21.7% of working telecommunications channels are fiber)), AT&T Reply at 80 (citing *Trends in Telephone Service May 2002 Report* at Table 18 3 (32 5% of working telecommunications channels are fiber)).

other services) to the mass market. Moreover, the record indicates that, in those limited cases where competitors are deploying alternative loop facilities, competitive LECs are using fiber, although such deployment continues to be targeted primarily to serving the enterprise market rather than the mass market. We recognize, however, that potential self-deployment could use existing wireline telephony technologies and facilities or could employ other approaches that bear little or no resemblance to the current network architecture of the incumbent LECs.

226. No party seriously asserts that competitive LECs are self-deploying copper loops to provide telecommunications services to the mass market. Indeed, in the BOC UNE Fact Report 2002, the BOCs provide no evidence that competitive LECs have made any progress towards replicating the incumbent LECs' embedded base of voice-grade copper local loops.[682] Likewise, no competitive LEC claims to have made, let alone attempted to make, such progress. Competitive LECs generally argue that building new local loops to serve the mass market would be prohibitively expensive.[683] Considered as a whole, the record indicates that competitive LECs rely primarily on unbundled local loops to serve the mass market on a nationwide basis.[684]

227. The record demonstrates that current deployment of FTTH for providing telecommunications services to the mass market is still in its infancy.[685] Corning, for example, presents evidence of FTTH deployment to approximately 26,000 homes and asserts that competitive LECs account for 77 percent of this FTTH deployment to date.[686] The record shows further that some competitive LECs are self-deploying fiber transmission facilities primarily to serve business customers in downtown locations.[687] The record also shows that competitive LECs are self-deploying fiber transmission facilities to the mass market in certain circumstances. In particular, competitive LECs are competing in so-called "greenfield" markets, which require entirely new construction of local loops (in addition to the deployment of the necessary switching and other network equipment) to serve new residential communities.[688] According to at least one

[682] In their UNE Fact Report, the BOCs rely primarily on intermodal sources to argue that viable alternatives exist to incumbent LEC local loop facilities. We address these arguments below.

[683] *See* Covad Comments at 16-18, AT&T Comments at 132

[684] CompTel Reply at 24 (citing statistics compiled by Commission staff showing that competitive LECs serve 23% of the access lines in New York, 14% of the access lines in Texas, and 13% of the access lines in Illinois) Incumbent LECs assert that competitive LECs have deployed on a national basis somewhere between 16 and 23 million loops based on their interpretation of data in E911 databases *See* BOC UNE Fact Report 2002 at I-5, II-4, and A-2. We note that CompTel's data, among other competitive LECs', are generally closer to those published by the Commission in the *Local Telephone Competition December 2002 Report.*

[685] AT&T Reply at 74

[686] Corning Reply at 12 (citing *CSMG Study* at 51) In other studies submitted on the record, Corning estimates that competitive LECs account for 68% of the FTTH deployment nationwide *See* Corning Nov 20, 2002 *Ex Parte* Letter at 7

[687] CCG July 17, 2002 CLEC Survey *Ex Parte* Letter at 6 (noting that five competitive LECs are deploying fiber in Chicago and four competitive LECs are deploying fiber in Boston and Portland)

[688] BOC UNE Fact Report 2002 at IV-16.

study, non-incumbent LEC providers (*i.e.*, competitive LECs and municipalities) have deployed 90 percent of current FTTH.[689] We also note that the Commission staff's *High Speed Services December 2002 Report* found that parties *other than* incumbent LECs deployed 92 percent of FTTH and fixed wireless service lines.[690]

(b) Intermodal Loops

228. The record presents some evidence that intermodal platforms increasingly support the provision of narrowband and broadband services to the mass market. In particular, the record indicates that cable and wireless technologies are currently being used, and will likely increasingly be used, to provide loop substitutes to support services that compete with incumbent local services.[691]

229. Cable companies have widely deployed local broadband service in the form of high-speed Internet access offered via cable modem service. As of June 2002, cable companies provided more than 9.1 million high speed lines for Internet access to consumers nationwide and the service is available to more than 70 million homes in the nation.[692] Some cable companies also have augmented their networks to enable the provision of two-way voice telephony services.[693] For such services, the cable infrastructure serves as a replacement for loops. At this time, however, deployment of voice telephony by cable companies has been substantially exceeded by the deployment of cable modem service.[694] In their *UNE Fact Report*, the BOCs

---

[689] FTTH Council Second Reply at 2

[690] *High Speed Services December 2002 Report* at Table 5. In that report, staff found that, as of June 2002, carriers provided 6,120 fiber lines capable of supporting data transmissions over 200 kbps in at least one direction *See id* at Table 3

[691] BOC UNE Fact Report 2002 at IV-8 to IV-14 Current estimates are that only 1 7% of U S households rely on other technologies to replace their traditional wireline voice service. Allegiance Reply at 35 n.38.

[692] Cable companies provided 9,172,895 high speed lines for Internet access as of June 30, 2002. *High Speed Services December 2002 Report* at Table 1 *See* Letter from Jason D. Oxman, Vice President and Assistant General Counsel, Covad, to Marlene H Dortch, Secretary, FCC, CC Docket No 01-338, Declaration of Stephen Siwek and Su Sun (Covad Siwek/Sun Decl) at paras. 58-59 (filed Nov 20, 2002) (Covad Nov 20, 2002 *Ex Parte* Letter) Some parties estimate that cable modem service is available to two-thirds or more of the homes in the nation BOC UNE Fact Report 2002 at IV-12 n.59 (estimating that cable modem service is available to 70-75 million homes)

[693] BellSouth Comments at 64 (noting cable companies upgraded to provide voice in Atlanta, Jacksonville, Miami and Louisville), Letter from Florence M Grasso, Covad, to Marlene M Dortch, Secretary, FCC, Docket Nos 01-338, 96-98, 98-147 at 6 (filed Apr 19, 2002) (Covad Apr 19, 2002 *Ex Parte* Letter) (noting cable companies spent $55 billion to upgrade their facilities).

[694] As of June 2001, only 1% of all local access lines terminated over coaxial cable facilities For example, AT&T notes that UNE-P providers in New York alone have as many customers as cable-provided telephony does on a nationwide basis AT&T Reply at 26

note that 1.5 million homes[695] subscribe to cable telephony on a nationwide basis. The record indicates that circuit-switched cable telephony has been deployed in portions of 20 states and is now available to about 10 million households in the United States, or about 9.6 percent of the total households in the nation.[696] Because companies originally deployed cable television systems for the provision of a one-way mass media service, retrofitting cable infrastructure to support cable telephony and broadband services requires substantial investment and modification.[697] For those cable operators that have not already augmented their networks to offer cable telephony, which encompasses the majority of the cable networks currently in operation, significant technical and operational issues must still be resolved.[698] Thus, it is difficult to predict at what point cable telephony will be deployed on a more widespread and ubiquitous basis. In addition, the record reflects that a number of cable operators are delaying their deployment of voice telephony until they are able to deploy such services over a packet-switched platform.

230. The record also shows that narrowband local services are widely available through CMRS providers. As discussed in Part IV above, one study estimates that 64.3 million households (*i.e.*, 61 percent of all U.S. households) use wireless phones.[699] The record shows that

---

[695] BOC UNE Fact Report 2002 at IV-10. There are approximately 108.3 million households in the nation. *See* Industry Analysis and Technology Division, Wireline Competition Bureau, *Telephone Subscribership in the United States* (Nov. 8, 2002) at Table 1 (*Telephone Subscribership November 2002 Report*).

[696] BOC UNE Fact Report 2002 at II-11, IV-10 (noting that Cox has the capability to offer cable telephony to "75 to 95 percent" of the consumers in Rhode Island).

[697] WorldCom Comments at 35-36, Attach. A at 23, 25-27 (Richard A. Chandler, A. Daniel Kelley, David M. Nugent, *The Technology and Economics of Cross-Platform Competition in Local Telecommunications Markets* (Apr. 4, 2002) (HAI Report)). Although precise numbers are difficult to assemble because much of the necessary information is not publicly available, there is substantial evidence in our record concerning actual and projected completion of cable plant upgrades necessary to provide voice and data services. For example, according to a Yankee Group Report, at the end of 2000, 50% of United States households had cable modem service available and this percentage was predicted to exceed 80% by the end of 2005. BellSouth Comments at 39 (citing *Broadband Access Technology: Whose Number is Up?*, Yankee Group Report (Sept. 19, 2001)). BellSouth offered more recent numbers: at the end of 2001, 70% of United States households had cable modem service available. BellSouth Reply at 48 (citing BellSouth Harris Reply Decl. at para. 9).

[698] For example, potential cable telephony providers must determine how to provide power to the consumer premises equipment (wireline systems utilizing copper facilities already provide power through the same network telephony service is provided, thus ensuring continuous access to telecommunications in the event of power outages) and ensure accurate 911 service. Allegiance Reply at 33. Allegiance notes that incumbent LEC comments rely not on current deployment but on predictions such as whether Comcast will deploy telephony after merger with AT&T and future deployment of IP telephony over cable networks.

[699] *See* BOC UNE Fact Report 2002 at IV-12 (citing *Implementation of Section 6002(B) of the Omnibus Budget Reconciliation Act of 1993*, Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services, Sixth Report, 16 FCC Rcd 13350, 13381 n.211 (2001) (*Sixth Wireless Report 2001*)). Wireless phones are now a mass market consumer device used by some 45% of the United States. *Seventh CMRS Report* at 31. One study estimates that 64.3 million households (*i.e.*, 61% of all U.S. households) use wireless phones. *Id.* By contrast, 103.4 million households (*i.e.*, 95.5% of all U.S. households) own and use wireline (continued)

CMRS, while continuing to be primarily a complementary technology to wireline narrowband service, is growing as a substitute to wireline narrowband service with about three to five percent of CMRS subscribers using their service as a replacement for *primary* fixed voice wireline service.[700] While this percentage is small, it continues to show increasing growth. Indeed, the Commission recently relied on wireless substitution to support the Track A findings in two section 271 proceedings where residential customers in New Mexico and Nevada had replaced their landline phones with wireless ones.[701] In addition, the record demonstrates that, although promising, wireless CMRS connections in general do not yet equal traditional landline local loops in their quality, their ability to handle data traffic, and their ubiquity.[702] Finally, the record indicates that CMRS is not yet capable of providing broadband services to the mass market – although a growing number of wireless carriers make available Internet access, such access is generally limited to transmissions of 25 to 66 kbps.[703]

231. The record indicates that, at present, fixed wireless and satellite services remain nascent technologies, with limited availability, when used to provide broadband services to the mass market. Although current satellite services may be available in all 50 states, their transmission capabilities remain limited and their mass market services have few subscribers.[704] For example, combined, satellite and fixed wireless provide broadband services to approximately 200,000 customers nationwide.[705] In addition, recent financial difficulties of fixed wireless

(Continued from previous page) ———————————

telephones *Telephone Subscribership November 2002 Report* at Table 1 BellSouth Comments at 64 (arguing wireless is a substitute for wireline)

[700] *See Seventh CMRS Report* at 32 n 208, *see also* BOC UNE Fact Report 2002 at IV-12 (citing *Sixth Wireless Report 2001*, 16 FCC Rcd at 13381 n 211)

[701] *See Application by SBC Communications Inc , Nevada Bell Telephone Company, and Southwestern Bell Communications Services, Inc , for Authorization to Provide In-Region, InterLATA Services in Nevada*, WC Docket No 03-10, Memorandum Opinion and Order, 18 FCC Rcd 7196, 7206, para 18 (2003) (*SBC Nevada 271 Order*), *Application by Qwest Communications International, Inc for Authorization to Provide In-Region, InterLATA Services in New Mexico, Oregon and South Dakota*, WC Docket No 03-11, Memorandum Opinion and Order, 18 FCC Rcd 7325, 7336 n 53 (2003) (*Qwest New Mexico 271 Order*), *see also In the Matter of Application of BellSouth Corporation, BellSouth Telecommunications, Inc , and BellSouth Long Distance, Inc , for Provision of In-Region, Interlata Services in Louisiana*, CC Docket No 98-121, Memorandum Opinion and Order, 13 FCC Rcd 20599, 20606, 20622-23, paras 11, 29-33 (1998) (*BellSouth Louisiana II 271 Order*) (finding that PCS can be a substitute for wireline service)

[702] BellSouth Comments at 41 (stating that wireless is "[not] very effective in transmitting large amount of data at high speed ") AT&T points out, for example, that wireless service is engineered to provide only roughly 70% call completion rate while wireline call completion rates exceed 99% AT&T Reply at 25, *see also id* at 162-63.

[703] *Seventh CMRS Report* at 53-54 By the end of 2001, approximately eight to ten million people accessed the Internet through their wireless telephones, up from 2 to 2 5 million the year before *Id* at 53

[704] *See, e g* , WorldCom Comments at 4, 47, Attach. A at 76-78

[705] *See High Speed Services December 2002 Report* at Table 3

carriers suggest the potential to use such services as substitutes for local loops used to serve the mass market is limited, at least for the short term.[706]

232. Finally, we note that other technologies that can substitute for loops in providing narrowband and broadband service are currently under development. For example, some companies are experimenting with delivering narrowband voice service via power lines.[707] Such technologies have not been deployed beyond an experimental basis (*e.g.*, technical trials) at this time.

(c) Third-Party Offerings

233. The record indicates that no third parties are effectively offering, on a wholesale basis, alternative local loops capable of providing narrowband or broadband transmission capabilities to the mass market.[708] This includes intermodal platforms such as cable and satellite that have no statutory or regulatory obligation comparable to the unbundling requirements of section 251(c).[709] We note that, in their various reports and other submissions, the incumbent LECs have not demonstrated that third parties are offering alternate local loop transmission on a wholesale basis.

(iv) Unbundling Analysis

234. We engage in a balancing test in determining our unbundling requirements for mass market local loops. We recognize, of course, that impairment remains our statutory touchstone. We do not rely exclusively, however, on an impairment analysis to make our unbundling determination. We retain the flexibility under our section 251(d)(2) "at a minimum" authority to consider other factors. We use this flexibility sparingly. However, we believe that the goal of swift and ubiquitous broadband deployment is so important to the United States that we consider the statutory goals outlined in section 706 and how they relate to broadband as additional factors when considering loops. In addition, we also consider the comparative weight of the costs versus benefits of unbundling and the effect of intermodal competition.[710] As explained below, based on our analysis of impairment and evaluation of other factors, we adopt

---

[706] *See* Sprint Comments at 24-25; *see also* Covad Siwek/Sun Decl. at paras. 49-57 & Schedule 5 (arguing that consumers are not buying satellite broadband because it does not work well in inclement weather, requires unobstructed view of southern sky, and is too expensive), Letter from Florence Grasso, Covad, to Marlene H. Dortch, Secretary, FCC, CC Docket No 01-338 at 6 (filed Oct 21, 2002) (Covad Oct 21, 2002 *Ex Parte* Letter)

[707] *See* Committee on Broadband Last Mile Technology, Computer Science and Telecommunications Board, National Research Council, BROADBAND BRINGING HOME THE BITS 135-36 (2002).

[708] Covad Comments at 35 (no copper alternative), *see also* Access Integrated Networks Reply at 13, Allegiance Reply at 32-33 (contending that incumbent LEC arguments are based on predictions and speculation rather than actual marketplace conditions).

[709] Covad Comments at 36-37 (arguing cable, wireless satellite and competitive fiber are not capable of providing xDSL quality or ubiquity); *see* AT&T Reply at 95-98, 161-63, WorldCom Reply at 87

[710] *See supra* Part V D

loop unbundling rules for the mass market that ensure competitive access through extensive unbundling of the legacy copper loop facilities while promoting incentives to invest in next-generation network facilities and equipment through more limited unbundling of fiber-based loop facilities.

235. We conclude that requesting carriers seeking to serve the mass market face varying levels of impairment on a national basis without unbundled access to the transmission path between the central office and the customer premises depending upon whether the loop used to complete this path consists entirely of copper, or consists of a hybrid of fiber and copper cables, and whether a requesting carrier seeks to offer narrowband or broadband services or both. Pursuant to our section 251(d)(2) unbundling standard, we consider generally whether the potential revenue opportunity exceeds the costs, taking into consideration the relevant entry barriers – *i e* , scale economies, sunk costs, first-mover advantages, and barriers within the control of the incumbent LEC – and evidence of actual marketplace conditions.

236. Because of the importance of broadband to the American public and telecommunications users generally, we also consider other factors, foremost among these our obligation to ensure adequate incentives for infrastructure investment under section 706 of the Telecommunications Act of 1996, under our "at a minimum" authority in section 251(d)(2). For copper loops, we find on a national basis that requesting carriers are impaired without access to these loops, including copper subloops, because their absence is likely to make entry uneconomic.[711] For other types of loops (*i e* , FTTH loops and hybrid fiber/copper loops used in packet-based transmissions), however, we recognize that additional revenue opportunities associated with increased bandwidth capabilities may alleviate, in direct proportion to the level of fiber deployment, at least some of these entry barriers. Moreover, our obligation to ensure adequate infrastructure investment incentives pursuant to section 706 supports limitations on the unbundling of fiber-based loops. Finally, the existence of intermodal competition for mass market broadband services reduces the need for more extensive unbundling rules.

(a) Impairment

237. The costs of local loops serving the mass market are largely fixed and sunk. By fixed we mean that these costs are largely insensitive to the number of customers being served.[712] Much of the cost applies whether a carrier serves a single residential customer or ten thousand

---

[711] In its *Verizon* decision, the Supreme Court stated that "the most costly and difficult part of [replicating the incumbent LEC's network] would be laying down the 'last mile' of feeder wire, the local loop, to the thousands (or millions) of terminal points in individual houses and businesses " *Verizon*, 535 U.S at 490-91. Indeed, in its *USTA* decision, the D C Circuit quotes the following passage from this Supreme Court decision in its discussion of cost disparities· "entrants may need to share some facilities that are *very expensive to duplicate* (say, loop elements) in order to be able to compete in other, *more sensibly duplicable* elements (say, digital switches or signal-multiplexing technology)." *USTA*, 290 F 3d at 426 (citing *Verizon*, 535 U S at 510 n 27) (emphasis added by D C Circuit)

[712] Covad Comments at 28, AT&T Reply at 150, 154-55 (citing AT&T Comments, Attach B, Declaration of Richard N Clarke (AT&T Clarke Decl) at para. 23), WorldCom Reply at 14-18 (citing WorldCom Reply, Attach A, Declaration of Mark T Bryant (WorldCom Bryant Reply Decl) at paras 3, 5-14)

residential customers: that carrier must secure rights-of-way, dig trenches or place poles, and run wire underground or along poles.[713] Such deployment costs are also sunk. That is, local loop facilities are not fungible because they cannot be used for any other purpose if the investment fails.[714] If a new entrant overbuilds to serve a mass market customer and loses that customer to another carrier, the new entrant cannot economically redeploy that loop to another location. Its investment might be lost unless it could find a purchaser for its redundant loops. This is true regardless of whether the new entrant was providing narrowband or broadband service, or both. A carrier will not deploy mass market loops unless it knows in advance that it will have customers that will generate sufficient revenues to allow it to recover its sunk loop investment.[715] This certainty could most easily be achieved through long-term service contracts and a large, guaranteed customer base. In contrast to the enterprise market, however, long-term contracts are not commonplace in the mass market for either the narrowband or the broadband services and we have no information in our record to indicate that consumers ordinarily would accept such terms.[716] As new entrants, competitive LECs do not enjoy a large guaranteed subscriber base that would provide a predictable source of funding to offset their local loop deployment costs.[717] For these reasons, we find that the costs of self-provisioning mass market loop facilities are demonstrably greater than those faced universally by new entrants in other industries.[718]

238. Incumbent LECs also enjoy first-mover advantages that work with the steep costs noted above to compound the entry barriers associated with local loop deployment. When the incumbent LECs installed most of their loop plant, they had exclusive franchises and, as such,

---

[713] *See* Covad Comments at 28 (arguing that incumbents could afford such massive fixed costs because they had 100% of the market share when they constructed their loop plant), WorldCom Reply at 63 (citing WorldCom Bryant Reply Decl at para 11) We note that fixed costs may strongly affect small businesses because, among other things, they likely serve fewer customers See *supra* Part V B for a discussion of the relationship between fixed costs and scale economies.

[714] AT&T Reply at 144, WorldCom Reply at 16

[715] NuVox Comments at 74-75, AT&T Reply at 154 (citing AT&T Willig Reply Decl at paras 21-22, 26, 39), *see also* Covad Reply at 16 (arguing that there are no "uncommitted entrants" because of the extremely high sunk costs in constructing loop plant).

[716] The record reflects that mass market customers typically purchase services offered over voice-grade loops on a month-to-month basis at relatively low prices Compared to higher-capacity loops demanded by other customer classes, loops serving the mass market require less complex technology. Nevertheless, replicating a single loop for a mass market customer is prohibitively expensive due to the relatively low revenue per loop as compared to the cost of construction This factor, coupled with the market's predominant use of short-term customer commitments, equates to a very low profit margin per loop, especially for new entrants Moreover, loops for mass market customers exhibit substantial economies of scale, in that the larger the number of loops provisioned in a given area, the lower the average cost of provisioning each loop.

[717] As noted earlier in this Order, large sunk costs make it more difficult to ramp up to scale and, therefore, overcome a scale economies problem *See supra* Part V B

[718] AT&T Comments at 127, Covad Reply at 15-18, WorldCom Reply at 14-18 (citing WorldCom Bryant Reply Decl at paras 3, 5-14)

the record shows that they secured rights-of-way at preferential terms and at minimal costs.[719] By contrast, our record shows that new entrants have no such advantage.[720] Even if a competitive LEC obtains speedy resolution of rights-of-way issues, it may still experience delays involved with constructing new loop plant. Incumbent LECs, of course, experience no such delays when providing narrowband or broadband services over their legacy copper loops. Because these loops are already deployed, they are available immediately for providing narrowband services (*i e* , voice, fax, dial-up Internet access) and available after performing any necessary line conditioning for providing broadband service. Furthermore, competitive LECs are also faced with the problem of overcoming the incumbent LECs' established brand name recognition for providing reliable service in order to convince (potentially reluctant) mass market customers to change carriers.

239. According to several commenters, due to the high fixed costs described above, the incumbents LECs designed their networks to minimize the extent to which they must modify their loop plant when adding new customers or services.[721] Accordingly, when incumbent LECs construct loops, they typically add several spare wire pairs to the customer's location because the cost of these spare wires is small in comparison to the cost of adding these pairs at a later date.[722] This design lowers the incumbent LECs' cost of adding customers. Incumbent LECs achieved low average costs because historically they have served 100 percent of demand in any given area. Their investments were recovered, in most cases, through regulated rates and an authorized rate

[719] *See, e g* , Covad Comments at 28 (stating that incumbents often obtained rights-of-way through the use of the states' eminent domain power); AT&T Willig Decl at paras 62-63 (arguing that as the first mover, incumbents received rights-of-way from local governments with only minimal transaction costs because the residents in that neighborhood or municipality otherwise would not receive any telecommunications services).

[720] *See* WorldCom Comments at 33 (contending that competitive LECs have been hindered in their ability to install their own loops by "municipal ordinances that have imposed excessive, non-cost based fees on access to rights-of-way and have also delayed such access through unnecessary and cumbersome application procedures and bonding requirements.") Although section 224 of the Act imposes nondiscriminatory access obligations on incumbent LECs with respect to their poles, ducts, conduits, and rights-of-ways, we note that such access does not eliminate the transaction costs or first-mover advantages described above. 47 U S C § 224

[721] *See* AT&T Reply at 149

[722] *See id.* (stating that "a customer drop may contain six pairs of wires rather than two because the carrying costs of the extra capacity are small compared to the cost of deploying additional capacity later (*e g* , to add a second or third line)"); *see also* AT&T Reply at 150 n 101 (explaining the incumbent LECs' use of bridged tap and additional transmission electronics to maximize the use of the existing plant); WorldCom Reply at 15 (citing WorldCom Bryant Reply Decl at paras 11-14; AT&T Clarke Decl at para. 23) (arguing that "once a cable route is established, there are only small incremental structure costs to serving additional customer lines located along the route ").

of return.[723] For a new entrant to match or even come close to the incumbent LECs' economies of scale, at a minimum, it would have to capture quickly a significant percentage of the market.[724]

240. We recognize, however, that the deployment of next-generation network facilities and equipment – that is, fiber optic cables and equipment used to provide packet-based services – affects our analysis. Although some of the entry barriers exist for both all-copper and all-fiber loops (*e.g.*, the costs are both fixed and sunk, and such deployment is characterized by scale economies),[725] the revenue opportunities are significantly greater for fiber-based construction. The record indicates that carriers can earn significant returns on their fiber-based investment by providing a suite of services ranging from traditional voice to full-motion video.[726] In fact, the potential rewards of fiber deployment may offset the likelihood that competitive LECs will view entry as uneconomic. In addition, the barriers faced in deploying fiber loops, as opposed to existing copper loops, may be similar for both incumbent LECs and competitive LECs.[727] Both incumbent and competitive LECs must purchase fiber and the associated equipment, negotiate access to the necessary rights-of-way, obtain any necessary government permits, hire skilled labor, and manage their construction projects in order to deploy fiber loops. Moreover, by some estimates, competitive LECs enjoy advantages that incumbent LECs do not have, such as lower labor costs and superior back office systems.[728]

---

[723] AT&T Reply at 150 (citing AT&T Reply, Tab C, Declaration of Anthony Fea and Anthony Giovannucci (AT&T Fea/Giovannucci Reply Decl.) at paras. 6-7)

[724] *See, e.g.*, AT&T Reply at 157 (arguing that even with an "aggressive" market share of 30%, the new entrant's loop investments per line costs would exceed the incumbent's by 45 to 87% and its monthly loop costs would exceed the incumbent's by 39 to 65%).

[725] Covad Comments at 27 (arguing that xDSL "signals are no easier or cheaper to replicate than loops carrying POTS"), WorldCom Reply at 15 (citing AT&T Clarke Decl. at para. 23)

[726] Corning Comments at 19-20 (asserting that incumbent and competitive LECs are on equal footing for FTTH deployment). Corning and the FTTH Council estimate that FTTH loops allow revenue opportunities of approximately $33 per subscriber compared to $18 per subscriber for xDSL-based services. Letter from Timothy J. Regan, Senior Vice President, Corning, to Marlene H. Dortch, Secretary, FCC, CC Docket 01-338, Attach. at 33 (filed Nov. 26, 2002) (Corning Nov. 26, 2002 FTTH Deployment *Ex Parte* Letter).

[727] *See, e.g.*, Verizon Reply at 40 n.117 (arguing that both incumbents and competitive LECs must incur and recover the costs of obtaining franchises and construction permits, and building out fiber loops). Similarly, as discussed earlier in this Order, incumbent LECs' first-mover advantages would be greatly reduced in greenfield situations. *See supra* Part V.B.

[728] Corning estimates construction accounts for more than 50% of FTTH deployment costs. Letter from Timothy J. Regan, Senior Vice President, Corning, to Marlene H. Dortch, Secretary, FCC, CC Docket No. 01-338, Attach. 2 at 9 (filed Nov. 20, 2002) (Corning Nov. 20, 2002 FTTH Deployment *Ex Parte* Letter). Corning further explains that labor is "the largest component" of construction costs, and that competitive LECs enjoy an advantage. *Id.*, Attach. 2 at 10-11. *See CSMG Study* at 14 (noting that competitive LEC FTTH construction costs for labor are lower than those of incumbent LECs), BOC Shelanski Reply Decl. at para. 3, *see also* Verizon Reply at 42.

(b) Other Considerations

241. As we have stated elsewhere, broadband deployment is a critical policy objective that is necessary to ensure that consumers are able to fully reap the benefits of the information age.[729] In this regard, we weigh how our rules related to broadband deployment address other policy considerations. In particular, we seek to encourage investment in next-generation network architecture suitable for delivering advanced telecommunications capability throughout the nation. We also look to promote the potential of broadband in a minimally regulated environment in accordance with the deregulatory intent of the 1996 Act. Finally, we seek to unleash the innovation that has been characteristic of the computer and software industries. We expect to develop unbundling rules that serve these broad goals so that consumers ultimately benefit from a ubiquitous, efficient, nationwide broadband deployment.

242. *Section 706.* In determining what our unbundling rules for loops used for broadband services should be, we also are guided by the goals of, and our obligations under, section 706 of the 1996 Act.[730] Section 706 directs the Commission to "encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans" by using regulatory measures that "promote competition in the local telecommunications market" and "remove barriers to infrastructure investment."[731] Through its "at a minimum" language, section 251(d)(2) provides the Commission with the discretion to consider factors in addition to impairment before requiring unbundling.[732] We find that this discretion is appropriately exercised by evaluating whether unbundling of local loops used to provide broadband services to the mass market is consistent with our section 706 mandate. In particular, we consider whether our unbundling requirements encourage the deployment of advanced telecommunications capability to all Americans by, among other things, promoting competition in the local market, promoting facilities-based deployment, promoting the delivery of innovative advanced services offerings, and removing barriers to infrastructure investment. In addition, we note that section 706 promotes the deployment of "high-speed, switched, broadband

---

[729] *See, e g , Appropriate Framework for Broadband Access to the Internet over Wireline Facilities, Universal Service Obligations of Broadband Providers*, CC Docket Nos 02-33, 95-20, 98-10, Notice of Proposed Rulemaking, 17 FCC Rcd 3019 (2002) (*Wireline Broadband NPRM*), *Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services*, CC Docket No 01-337, Notice of Proposed Rulemaking, 16 FCC Rcd 22745, 22747, para 4 (2001) (*Dom/Non-Dom NPRM*)

[730] 47 U S C. § 157 nt

[731] *Id*

[732] With regard to the Commission's authority to "consider other elements" under the "at a minimum" language, the Court of Appeals for the D C Circuit has stated, "[w]e assume in favor of the Commission that is so " *USTA*, 290 F 3d at 425.

telecommunications capability," which counsels in favor of measures aimed at spurring the deployment of packet-switching technologies.[733]

243. Upgrading telecommunications loop plant is a central and critical component of ensuring that deployment of advanced telecommunications capability to all Americans is done on a reasonable and timely basis and, therefore, where directly implicated, our policies must encourage such modifications. Although a copper loop can support high transmission speeds and bandwidth, it can only do so subject to distance limitations and its broadband capabilities are ultimately limited by its technical characteristics.[734] The replacement of copper loops with fiber will permit far greater and more flexible broadband capabilities.[735] Although both the material used in the transmission path and the attached equipment work together to enable broadband capabilities, the record shows that, of the two, it is the upgrade to the transmission path (the loop) that is, by far, the more costly, complex, and risky endeavor.

244. In establishing our unbundling requirements, we consider our section 706 mandate in light of the technical characteristics of local loops. As we discuss in more detail below, we determine that our obligation to ensure the deployment of advanced telecommunications capability under section 706 warrants different approaches with regard to existing loop plant and new loop plant. With existing copper loops, all investment in advanced telecommunications capability is necessarily limited to the equipment, not the transmission facility. Therefore, our obligation to encourage infrastructure investment tied to legacy loops is more squarely driven by facilitating competition and promoting innovation Because the incumbent LEC has already made the most significant infrastructure investment, *i e.*, deployed the loop to the customer's premises, we seek, through our unbundling rules, to encourage both intramodal and intermodal carriers (in addition to incumbent LECs) to enter the broadband mass market and make infrastructure investments in equipment. In addition, we seek to promote the deployment of equipment that can unleash the full potential of the embedded copper loop plant so that consumers can experience enhanced broadband capabilities before the mass deployment of fiber loops. We expect that more innovative products and services will follow the deployment of new loop plant and associated equipment. With new loop plant, however, encouraging infrastructure investment must be balanced between ensuring that incumbent LECs retain adequate incentives to upgrade their loop plant and ensuring that competition continues to drive the deployment of innovative broadband services. These considerations come into play most acutely in determining

---

[733] 47 U S.C § 157 nt Section 706 defines "advanced telecommunications capability" as "high-speed, switched, broadband telecommunications capability that enables users to originate and receive high-quality voice, data, graphics, and video telecommunications using any technology "

[734] *Line Sharing Order*, 14 FCC Rcd at 20919, para 8 n 9.

[735] BROADBAND BRINGING HOME THE BITS, *supra* note 707, at 129-30, Corning Comments at 2, Letter from Timothy Regan, Senior Vice President, Corning, to Marlene H Dortch, Secretary, FCC, CC Docket No 01-338, FTTH Council Attach at 28 (filed Jan 29, 2003) (Corning Jan 29, 2003 *Ex Parte* Letter)

the appropriate unbundling requirements for loops used to provide broadband service to the mass market.[736]

245. *Intermodal Competition.* Upon review of the extensive record on intermodal competition compiled in this proceeding, we determine that, although the existence of intermodal loops does not warrant a finding of no impairment, such competition is a factor to consider in establishing our unbundling requirements. We have discussed the competitive characteristics of intermodal loops in preceding paragraphs. Indeed, the broadband competition posed by cable operators in the mass market supports our decision to refrain from unbundling requirements on the features, functions, and capabilities of certain types of loops. Similarly, the state of intermodal competition, including competition from wireless telephony, in the mass market for narrowband services supports our approach to unbundling the legacy loops of incumbent LECs. Neither wireless nor cable has blossomed into a full substitute for wireline telephony. In addition, because wireless does not yet demonstrate the technical characteristics necessary to provide broadband services, unbundling incumbent LEC legacy loops is necessary for mass market consumers to realize the benefits of competition both for narrowband and broadband services, as well as both combined as a bundle.

246. There appear to be a number of promising access technologies on the horizon[737] and we expect intermodal platforms to become increasingly a substitute for wireline voice telephony services and for wireline broadband services. As we continue to assess impairment in the future, we recognize that the increased presence of viable alternative platforms may help increase competitive alternatives, both retail and wholesale, in the narrowband and broadband mass markets. The presence of such alternatives in the future may enable us to find that requesting carriers are no longer impaired in their ability to compete without access to incumbent LEC loops.[738]

(v) Specific Unbundling Requirements for Mass Market Loops

247. In this section, we address the specific unbundling requirements for mass market loops. We address the requirements based on the three primary types of local loops noted above, *i e* , copper loops, FTTH loops, and hybrid fiber/copper loops.

---

[736] We note that one party, Corning, requested that the Commission forbear from imposing on incumbent LECs the resale requirements set forth in section 251(c)(4) for FTTH loops Corning Comments at 31-33 Obviously, Corning's request is outside the scope of this proceeding and, thus, we will not address it in this Order

[737] *See, e g , Third Section 706 Report 2002*, 17 FCC Rcd at 2877-80, paras. 79-88 (describing other potential intermodal platforms capable of providing broadband service)

[738] We note that the impairment standard set forth in section 251 is different from, and does not prejudge, the standard we use to assess a carrier's dominant or non-dominant status *See Dom/Non-Dom NPRM*

(a) Legacy Networks

248. *Stand-Alone Copper Loops.* As discussed above, we find that requesting carriers are generally impaired on a national basis without unbundled access to an incumbent LEC's local loops, whether they seek to provide narrowband or broadband services, or both.[739] However, we determine that unbundled access to conditioned, stand-alone copper loops (which, of course, may be shared between two competitive LECs as discussed below) is sufficient to overcome such impairment for the provision of broadband services. Consequently, we find that, subject to the grandfather provision and transition period explained below, incumbent LECs do not have to unbundle the HFPL for requesting telecommunications carriers.

249. With more than 6 million kilometers of copper cable deployed, it is clear that copper remains the predominant loop type serving the mass market[740] and no party seriously asserts that stand-alone copper loops should not be unbundled in order to provide services to the mass market.[741] To address the impairment discussed above, we conclude that incumbent LECs must provide unbundled access to local loops comprised of copper wire.[742] That is, incumbent LECs shall provide, as a UNE, access to the complete transmission path comprised of a copper local loop between the central office and the customer's premises The copper loop network element is a single local loop, including all intermediate devices (*e g* , repeaters, load coils) used to establish the transmission path. Consistent with the definition the Commission adopted in the *UNE Remand Order*, this complete transmission path between the incumbent LEC's main distribution frame (or its equivalent) in its central office and the demarcation point at the customer's premises[743] also includes the features, functions, and capabilities of the copper loop.[744] We include within this network element all local loops comprised of copper cable, including two- and four-wire analog voice-grade loops, digital loops (*e g* , DS0s and ISDN lines) and two- and four-wire loops conditioned to transmit the digital signals needed to provide xDSL service. Consistent with their obligation to provide unbundled local loops on just, reasonable, and

---

739 *See* our discussion of the high fixed and sunk costs, large economies of scale, and operational barriers such as rights-of-way, *supra* Part VI A 4 a(iv)(a)

740 *See Statistics of Communications Common Carriers September 2002 Report* at Table 2 2

741 *See, e g* , SBC Reply at 109 (stating that competitive LECs have "ample opportunity to offer voice and data over the legacy network" and can "access the copper distribution subloop at the first accessible point in the ILEC's network . . and use it to provision DSL service.") In addition, we note that some commenters assumed continued unbundling of loops to support their argument that UNE-P is unnecessary. *See, e g* , Verizon Reply at 113 (arguing that UNE-P is unnecessary because a competitive LEC could simply "use hot cuts and a UNE-L strategy to serve mass market customers ").

742 To be clear, we require incumbent LECs to unbundle both existing copper loops and copper loops as they are newly deployed

743 As discussed below, this also includes any inside wire owned by the incumbent LEC. *See infra* Part VI B 2 (discussing inside wire).

744 As noted above, the Act defines the term "network element" as "a facility or equipment used in the provision of a telecommunications service. Such term also includes features, functions, and capabilities that are provided by means of such facility or equipment " 47 U.S C § 153(29).

nondiscriminatory terms and conditions, incumbent LECs must provide the requesting carriers with nondiscriminatory access to the same detailed information about the loop that is available to the incumbent LEC in the same time intervals it is provided to the incumbent LEC's retail operations.[745] We note that our requirements for stand-alone copper loops apply to both copper loops that are in active service and those that are deployed in the network as spares.[746]

250. The practical effect of this unbundling requirement is to ensure that requesting carriers have access to the copper transmission facilities they need in order to provide narrowband or broadband services (or both) to customers served by copper local loops. We understand that this unbundling obligation may require an incumbent LEC to provide the functionality available in certain equipment, as well as to remove the functionality from other equipment (*i.e.*, to condition the loop), in order to provide a complete transmission path between its main distribution frame (or equivalent) and the demarcation point at the customer's premises.[747] As noted elsewhere in this Order, we find that line conditioning constitutes a form of routine network modification that must be performed at the competitive carrier's request to ensure that a copper local loop is suitable for providing xDSL service.[748]

251. *Line Splitting.* We find that when competitive carriers opt to take an unbundled stand-alone loop, the incumbent LEC must provide the requesting carrier with the ability to engage in line splitting arrangements. We use the term "line splitting" to describe the scenario where one competitive LEC provides narrowband voice service over the low frequency of a loop and a second competitive LEC provides xDSL service over the high frequency portion of that same loop. The Commission previously found that existing rules require incumbent LECs to

---

[745] *See supra* Part VI I (discussing incumbent LECs' OSS obligations), *see also UNE Remand Order*, 14 FCC Rcd at 3884-87, paras 426-31 (requiring incumbent LECs to provide, among other things, the composition of the loop material, the existence, location and type of any electronic or other equipment on the loop, the loop length, the wire gauge(s) of the loop, and the electrical parameters of the loops), *Line Sharing Order*, 14 FCC Rcd at 20958-73, paras 96-130, 47 C.F R § 51 319(g)

[746] These requirements also include the obligation to condition the spare pair so that the requesting carrier may provide xDSL service As Qwest points out, when incumbent LECs construct new loop plant, they frequently overlay fiber facilities that supplement existing loops Qwest Comments at 45, *see* Alcatel Comments at 16 (noting that, when incumbent LECs deploy fiber loops, competitive LECs would continue to maintain access to legacy copper transmission facilities) Thus, the construction of new facilities does not in itself alter a competitive LEC's ability to use the incumbent LEC's network Qwest explains that it "does not proactively remove copper facilities in the case of an overlay" so that requesting carriers should be able to continue providing service in these circumstances Qwest Comments at 45-46.

[747] As discussed in Part VI A *infra*, we readopt incumbent LECs' line conditioning obligations The Commission noted in its *Line Sharing Order* that devices such as load coils and bridged taps interfere with the provision of xDSL service and, absent a certain showing by the incumbent LEC to the relevant state commission, must be removed at the request of the competitive LEC *See Line Sharing Order*, 14 FCC Rcd at 20952-54, paras. 83-86 We determine that, upon the competitive LEC's request, incumbent LECs must similarly condition unbundled stand-alone loops to make them xDSL-compatible

[748] We also require such conditioning for the HFPL consistent with the grandfather provision and transition period described below *See Line Sharing Order*, 14 FCC Rcd at 20952-54, paras 83-87.

permit competing carriers to engage in line splitting where a competing carrier purchases the whole loop and provides its own splitter to be collocated in the central office.[749] We reaffirm those requirements but, for purposes of clarity and ensuring regulatory certainty, we find that it is appropriate to adopt line splitting-specific rules.

252. Included among these rules is the requirement that incumbent LECs modify their OSS in such a manner as to facilitate line splitting. We also readopt the Commission rules requiring incumbent LECs to provide access to physical loop test access points on a nondiscriminatory basis for the purpose of loop testing, maintenance, and repair activities, and allowing incumbent LECs to maintain control over the loop and splitter equipment and functions in certain circumstances. We do not anticipate that the incumbent LECs will have any difficulty implementing such an obligation because the Commission required as much from them in its *Line Sharing Reconsideration Order*.[750] Furthermore, so long as the unbundled loop-switch combination is permitted in a particular state, the rules make clear that incumbent LECs must permit competitive LECs providing voice service through that arrangement to line split with another competitive LEC.[751] As the Commission did before, we encourage incumbent LECs and competitors to use existing state commission collaboratives and change management processes to address OSS modifications that are necessary to support line splitting.[752]

---

[749] *See Application by SBC Communications Inc , Southwestern Bell Telephone Company, and Southwestern Bell Communications Services, Inc d/b/a Southwestern Bell Long Distance Pursuant to Section 271 of the Telecommunications Act of 1996 to Provide In-Region, InterLATA Services in Texas*, CC Docket No 00-65, Memorandum Opinion and Order, 15 FCC Rcd 18354, 18515-16, paras 324-25 (2000) (*SWBT Texas 271 Order*), *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, 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, Sixth Further Notice of Proposed Rulemaking in CC Docket No 96-98, 16 FCC Rcd 2101, 2109-14, paras. 16-26 (2001) (*Line Sharing Reconsideration Order*) These Orders expressly determined that rules 51 307(c) (requiring incumbent LECs to provide unbundled access to a UNE in a manner that "allows the requesting telecommunications carrier to provide any telecommunications service that can be offered by means of that network element") and 51 309(a) (prohibiting an incumbent LEC from imposing "limitations, restrictions, or requirements on . the use of unbundled network elements that would impair the ability of a requesting telecommunications carrier to offer a telecommunications service in the manner" the requesting carrier intends) require incumbent LECs to permit line splitting

[750] *See Line Sharing Reconsideration Order*, 16 FCC Rcd at 2111, para 20 (requiring incumbent LECs to make all necessary network modifications, including providing nondiscriminatory access to OSS necessary for pre-ordering, ordering, provisioning, maintenance and repair, and billing for loops used in line splitting arrangements) For the reasons explained herein, we grant WorldCom's request for clarification that requesting carriers may engage in line splitting MCI WorldCom Petition for Clarification, CC Docket No 96-98 at 10 (filed Feb 17, 2000) (MCI WorldCom Feb. 17, 2000 Petition for Clarification).

[751] Again, the Commission required this in an earlier Order *See Line Sharing Reconsideration Order*, 16 FCC Rcd at 2110-11, para. 19.

[752] *See id* at 2111-12, para 21 We note with support the work already performed by state commissions in this area and we encourage states to continue overseeing and participating in such collaboratives. *See, e g*, New York Department Comments at 6-7 Some commenters claimed that BOCs reject competitive LEC xDSL orders because the BOCs are not the local voice provider and they refuse to coordinate the HFPL order with the voice competitive LEC *See, e g*, WorldCom Comments, Declaration of Ian Graham (WorldCom Graham Decl) at para. 33 We do (continued . .)

253. *Unbundled Access to Copper Subloops.* We require 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.[753] We conclude that our impairment finding extends to copper subloops because they are part and parcel of the local loop plant of incumbent LECs – requesting carriers face precisely the same barriers to entry for a subloop as with a copper loop that extends from the incumbent LEC's central office to the customer's premises. Indeed, we note that several incumbent LECs argue that accessing copper subloops provides competitive LECs with sufficient access to the loop for the provision of the services that they seek to provide.[754] Consistent with our section 706 goal to spur deployment of advanced telecommunications capability, we do not require incumbent LECs to provide access to their fiber feeder loop plant on an unbundled basis as a subloop UNE. As explained below, in light of our decision to refrain from unbundling the packetized capabilities of incumbent LECs, incumbent LECs will provide access to their fiber feeder plant only to the extent their fiber feeder plant is necessary to provide a complete transmission path between the central office and the customer premises when incumbent LECs provide unbundled access to the TDM-based capabilities of their hybrid loops. We encourage parties to negotiate access arrangements that would facilitate competitive LEC access to copper subloops. Specifically, we expect that incumbent LECs will develop wholesale service offerings for access to their fiber feeder to ensure that competitive LECs have access to copper subloops. Of course, the terms and conditions of such access would be subject to sections 201 and 202 of the Act.[755]

254. We define the copper subloop UNE as the distribution portion of the copper loop that is technically feasible to access at terminals in the incumbent LEC's outside plant (*i e* , outside its central offices), including inside wire.[756] We find that any point on the loop where technicians can access the cable without removing a splice case constitutes an accessible terminal. As HTBC points out, a non-exhaustive list of these points includes the pole or pedestal, the serving area interface (SAI), the NID itself, the MPOE, the remote terminal, and the

(Continued from previous page) ———————————

expect incumbent LECs to implement, in a timely fashion, "practical and reasonable measures" to enable competitive LECs to line split. *Id*

[753] Letter from Derek R Khlopin, High Tech Broadband Coalition, to Marlene H Dortch, Secretary, FCC, CC Docket No 01-338, Attach at 2 (filed Feb 14, 2003) (HTBC Feb 14, 2003 *Ex Parte* Letter) (submitting proposed rule language)

[754] Qwest Comments at 46; SBC Comments at 53-54, Verizon Comments at 89 n 296.

[755] For example, incumbent LECs could develop, and provide pursuant to sections 201/202 of the Act, telecommunications services that are similar to the special access services they already provide. Such services would, in effect, offer competitive LECs access to the shared fiber feeder plant (and any necessary cross-connections or similar functions) in order to obtain access to equipment in a remote terminal or to the copper subloop itself. We note that at least one incumbent LEC has supported making available wholesale broadband service offerings because such arrangements would make commercial sense *See, e g* , Verizon Comments at 82 (arguing that incumbent LECs should be permitted to offer wholesale broadband services in lieu of unbundling its broadband network equipment and facilities) *But see* WorldCom Reply at 120-21 (criticizing Verizon's proposal)

[756] HTBC Feb 14, 2003 *Ex Parte* Letter at 2 (submitting proposed rule language)

feeder/distribution interface. To facilitate competitive LEC access to the copper subloop UNE, we require incumbent LECs to provide, upon a site-specific request, access to the copper subloop at a splice near their remote terminals.[757] With respect to the copper subloop, in addition to providing greater specificity of access points consistent with the HTBC proposal, we readopt our previous requirements for providing unbundled access to subloop UNEs. Unlike our previous subloop unbundling rules, however, the rules we adopt herein do not require incumbent LECs to provide unbundled access to their feeder loop plant as stand-alone UNEs, thereby limiting incumbent LEC subloop unbundling obligations to their distribution loop plant.

255. *High Frequency Portion of the Loop.* Although we make the whole copper loop and the copper subloop available to requesting carriers as UNEs, along with the ability to engage in line splitting, some parties have requested that we also make available the high frequency portion of the copper loop. For reasons we discuss below, we decline to do so except as specified on a grandfathered basis. As an initial matter, we use the term "line sharing" to describe when a competing carrier provides xDSL service over the same line that the incumbent LEC uses to provide voice service to a particular end user, with the incumbent LEC using the low frequency portion of the loop and the competing carrier using the HFPL. Continued access to the incumbent LEC's conditioned, stand-alone copper loops and subloops enables a requesting carrier to offer and recover its costs from all of the services that the loop supports, including xDSL service.[758] Commenters have not argued that it is technically infeasible to provide xDSL service over a stand-alone copper loop nor have they argued that it is technically infeasible to provide xDSL service over a line split loop (*i e* , a loop that is shared by two competitive LECs – one offering voice service and the second offering xDSL service). Advocates for reinstating unbundled access to the HFPL instead offer various economic and operational reasons for why they would be impaired without such access, generally reiterating the same reasons that were offered in the Commission's original line sharing proceeding in 1999.[759]

256. As we noted above, the D.C. Circuit vacated these rules and directed the Commission to apply some limiting standard rationally related to the goals of the Act.[760] The D.C. Circuit stated that the Commission must weigh the costs associated with unbundling in making its section 251(d)(2) determinations.[761] More generally, the D.C. Circuit explained that

---

[757] *Id*

[758] Moreover, as explained above, the Commission reaffirms the incumbent LECs' obligation to permit line splitting so that a competitive LEC seeking only to offer xDSL service (*i e* , a data LEC) may partner with a voice-only competitive LEC to provide the service – xDSL – that the data LEC offered under the Commission's now-vacated rules.

[759] *Line Sharing Order*, 14 FCC Rcd at 20931-38, paras 38-53.

[760] *USTA*, 290 F 3d at 429 (citing *Iowa Utils Bd* , 525 U S at 386-88) The D C Circuit also cautioned the Commission against imposing the costs of unbundling if doing so would not bring on a significant enhancement of competition *Id*

[761] *Id.* at 429

the Commission must make an effort to balance these costs against the benefits of unbundling.[762] It is against this backdrop that the Commission makes its decision on line sharing.

257. In its *Line Sharing Order*, the Commission found that competitive LECs were impaired without unbundled access to the HFPL because, among other things, purchasing a stand-alone loop would be too costly for carriers seeking to offer only broadband service.[763] It also determined that requiring these carriers to offer voice service in order to provide xDSL service would impose on them the cost of providing circuit-switched voice services, which includes the development of marketing, billing, and customer care infrastructure to serve the needs of voice customers.[764] In addition, the Commission found no evidence that requesting carriers could obtain the HFPL from another competitive LEC (*i e* , what the Commission subsequently termed "line splitting").[765]

258. As an initial matter, we disagree with the Commission's prior finding that competitive LECs are impaired without unbundled access to the HPFL because purchasing a stand-alone loop would be too costly for carriers seeking to offer a broadband service. Whereas in the *Line Sharing Order*, the focus was only on the revenues derived from an individual service, our focus is on the all potential revenues derived from using the full functionality of the loop. As stated above, the impairment standard we adopt today considers whether *all* potential revenues from entering a market exceed the costs of entry, taking into account consideration of any advantages a new entrant may have.[766] Thus, in the instant case, we take into the account the fact that there are a number of services that can be provided over the stand-alone loop, including voice, voice over xDSL (i.e., VoDSL), data, and video services. In so doing, we conclude that the increased operational and economic costs of a stand-alone loop (including costs associated with the development of marketing, billing, and customer care infrastructure) are offset by the increased revenue opportunities afforded by the whole loop.

259. Moreover, we can no longer find that competitive LECs are unable to obtain the HFPL from other competitive LECs through line splitting. For example, the largest non-incumbent LEC provider of xDSL service, Covad, recently announced plans to offer ADSL service to "more of AT&T's 50 million consumer customers" through line splitting.[767] In

---

[762] *Id* at 427, 429

[763] *Line Sharing Order*, 14 FCC Rcd at 20932-35, paras 39-43.

[764] *Id* at 20936, para 48

[765] *Id* at 20938, para 53.

[766] *See supra* para 84

[767] *See* Covad Communications, *AT&T and Covad Extend Residential DSL Relationship*, Press Release (dated Jan 6, 2003) <http //www covad com/companyinfo/pressroom/pr_2003/010603_press shtml> (stating that this agreement will enable more of AT&T's 50 million consumer customers to obtain xDSL service through Covad's network, which itself covers more than 40 million households and businesses nationwide). We thus do not find credible Covad's argument that the Commission's previous finding, that there are no third-party alternatives to the incumbent LEC's HFPL, remains valid *See* Covad Comments at 42.

addition, in the 1999 *Line Sharing Order*, the Commission relied on the marketplace conditions present at the time to justify, at least partially, its decision to unbundle the HFPL. Specifically, the Commission noted the nascency of local competition and the lack of viable alternatives for a provider of broadband services.[768] Although we recognize that these circumstances have not been completely reversed, significant strides have been made by competitors in the local market. Competitors now serve more than three times the number of voice customers that were served in 1999.[769] Moreover, the conditions for further competitive entry are much better established as evidenced by the Commission's approval of 43 section 271 applications, which requires the Commission to find that the local telephone market is open to competition in a particular state, since 1999.[770] Since some incumbent LECs have thus far refused to provide xDSL service to customers that obtain voice service from a competitive LEC, by necessity, any of the over 11 million voice customers served by competitive LECs who seek xDSL service would have to obtain that service from a competing carrier.[771]

260. We find that allowing competitive LECs unbundled access to the whole loop and to line splitting but not requiring the HFPL to be separately unbundled creates better competitive incentives than the alternatives. This is largely due to the difficulties in pricing the HFPL as a separate element. As we explained in the *Line Sharing Order*, the same physical loop is used for multiple services, and there is no single correct method for allocating loop costs among these services and the HFPL.[772] Pricing the HFPL thus creates a dilemma: either incumbent LECs are allowed to over-recover their loop costs by fully charging for both the HFPL and the low frequency portion of the loop, or competitive LECs are allowed to purchase the HFPL at a price of roughly zero.[773] Following our pricing rules, most states did the latter.[774] The result is that competitive LECs purchasing only the HFPL have an irrational cost advantage over competitive LECs purchasing the whole loop and over the incumbent LECs. In contrast, allowing competitive LECs unbundled access to the whole loop and to line splitting but not requiring the

---

[768] *See, e g , Line Sharing Order*, 14 FCC Rcd at 20938, 20939-40, paras 53, 56.

[769] *See Local Telephone Competition December 2002 Report* at Table 2 (comparing 3 4 million mass market customers in December 1999 with over 11 million mass market customers in June 2002) We also note that several voice providers, AT&T and WorldCom, subsequently purchased the assets of two former data LECs: NorthPoint and Rhythms NetConnections, respectively *See, e g* , WorldCom Reply, Reply Declaration of Ian Graham (WorldCom Graham Reply Decl.) at para 1.

[770] We note that in 1999, only one state, New York, had been granted section 271 authority. Since then, the Commission has approved section 271 applications in 42 other states (including the District of Columbia).

[771] *See Local Telephone Competition December 2002 Report* at Table 2. As noted by WorldCom, the need for line splitting is likely to grow as penetration by competitive voice providers increases WorldCom Comments at 104

[772] *Line Sharing Order*, 14 FCC Rcd at 20975, para 138, *see also Intercarrier Compensation NPRM*, 16 FCC Rcd at 9625, para. 39 (describing generally the difficulties associated with allocating common costs among services)

[773] *Line Sharing Order*, 14 FCC Rcd at 20975, para 137

[774] *See, e g* , Covad Dec 27, 2002 *Ex Parte* Letter at 6 (noting that 73% of the states in which Covad does business have approved a zero rate for the HFPL) *See also CALLS Order*, 15 FCC Rcd at 13001, para. 98 (stating that, as of 2000, the Commission was unaware of any incumbent LEC allocating any loop costs to ADSL service)

HFPL to be separately unbundled puts competitive LECs using only the HFPL in a more fair competitive position with respect to other competitive LECs and to the incumbent LECs. Each carrier faces the same loop costs and, it if wishes, each can partner with another carrier to provide service over the HFPL alone or the low frequency portion of the loop alone as it wishes.

261. We expressly reject the Commission's earlier finding that "line sharing will level the competitive playing field . . . ."[775] In fact, rules requiring line sharing may skew competitive LECs' incentives toward providing a broadband-only service to mass market consumers, rather than a voice-only service or, perhaps more importantly, a bundled voice and xDSL service offering. In addition, readopting our line sharing rules on a permanent basis would likely discourage innovative arrangements between voice and data competitive LECs and greater product differentiation between the incumbent LECs' and the competitive LECs' offerings. We find that such results would run counter to the statute's express goal of encouraging competition and innovation in all telecommunications markets.

262. Furthermore, in vacating the Commission's line sharing rules, the D.C. Circuit found that the Commission failed to consider the relevance of broadband competition coming from cable and, to a lesser extent, satellite providers [776] The Commission staff's *High Speed Services December 2002 Report* shows that, nationally, cable modem service is the most widely used means by which the mass market obtains broadband service.[777] Indeed, two reports show that the gap between cable modem and ADSL subscribership continues to widen.[778]

263. As discussed earlier, the Commission also has acknowledged the important broadband potential of other platforms and technologies, such as third generation wireless, satellite, and power lines.[779] Although cable modem's lead in broadband deployment is not dispositive in our impairment analysis,[780] the fact that broadband service is actually available through another network platform and may potentially be available through additional platforms helps alleviate any concern that competition in the broadband market may be heavily dependent upon unbundled access to the HFPL. Indeed, as noted by Allegiance, the existence of some

---

[775] *Line Sharing Order*, 14 FCC Rcd at 20930-31, para 35

[776] *USTA*, 290 F 3d at 428

[777] *See High Speed Services December 2002 Report* at Table 5 (noting that cable modem service is provided over nine million lines, which is approximately 57% of all high-speed lines).

[778] *Compare* Industry Analysis and Technology Division, Wireline Competition Bureau, *High Speed Services July 2002 Report* at Table 5 (noting that the difference in number of high-speed lines served by cable modem service and ADSL service was 3 11 million as of December 2001) *with High Speed Services December 2002 Report* at Table 5 (noting that the difference in number of high-speed lines served by cable modem service and ADSL service was 4 07 million as of June 2002)

[779] *See, e g , Third Section 706 Report 2002*, 17 FCC Rcd at 2877-81, paras 79-88

[780] *See supra* Part V B (discussing intermodal alternatives in the general impairment Part of this Order)

measure of intermodal alternatives in the residential market lessens the benefits of unbundling.[781] Given that the whole loop is available, on an unbundled basis, we find that the costs of unbundling the HFPL outweigh the benefits when taking into account the skewed entry incentives discussed above. Moreover, we anticipate that the Commission's decisions in this Order and other proceedings will encourage the deployment of new technologies providing the mass market with even more broadband options.[782]

264. *Line Sharing Transition* We recognize that a number of competitive LECs have relied on the existence of line sharing to provide broadband service to end users since the adoption of the *Line Sharing Order*. These carriers have built internal systems to order the HFPL from incumbent LECs and have designed products that depend on line sharing as an input. In order to ensure that these carriers have adequate time to implement new internal processes and procedures, design new product offerings, and negotiate new arrangements with incumbent LECs to replace line sharing, we adopt a three-year transition period for new line sharing arrangements of requesting carriers.[783] In addition, until the next biennial review, a proceeding that will

---

[781] *See* Letter from Thomas Jones, Counsel for Allegiance, to Marlene H Dortch, Secretary, FCC, CC Docket Nos 01-338, 96-98, 98-147 at 2 (filed Feb 13, 2003) (Allegiance Feb 13, 2003 *Ex Parte* Letter)

[782] Chairman Powell claims that our decision on line sharing contains some compromises, which, he contends, are improper. *Chairman Powell Statement* at 15-16 There is nothing improper about our decision The Commission is composed of five people, each of whom sometimes has a different view of the right answer. When that occurs, it is essential to work together to find common ground, or else the agency cannot function. Compromise is inherently part of that process, and "good public policy often must be[] a balanced compromise of conflicting values and judgments " Separate Statement of Commissioner Michael K Powell, *Review of the Commission's Regulations Governing Attribution of Broadcast and Cable/MDS Interests*, Report and Order, 14 FCC Rcd 12559, 12669 (1999), *see also* Separate Statement of Commissioner Michael K Powell, *1998 Biennial Regulatory Review Spectrum Aggregation Limits for Wireless Telecommunications Carriers*, Report and Order, 15 FCC Rcd 9219, 9296-97 (1999) ("Well, this time we are not doing much to modify or eliminate the rule and I do not agree with all of the findings and competitive analysis in the item. . . Most importantly, in the spirit of compromise, the item recognizes three things that I find somewhat comforting in my decision today to support the item ") In fact, "compromise is within the Commission's purview," *Interstate Natural Gas Ass'n v FERC*, 285 F 3d 18, 36 (D C Cir 2002), so long as an "agency articulate[s] a satisfactory explanation for its action including a rational connection between the facts found and the choice made " *Ass'n of American Railroads v Surface Transp Bd*, 161 F 3d 58, 66 (D.C. Cir. 1998) (quoting *Michigan Consol Gas Co v FERC*, 883 F 2d 117, 120-21 (D C. Cir. 1989)) (quotation marks omitted). Here, we have offered a detailed justification of our actions Specifically, as discussed, the Commission's previous decision to require line sharing was unequivocally vacated by the D C Circuit; the Commission's earlier assessment of costs and revenues from the local loop failed to consider all potential revenues, competitive LECs are now able to obtain the HFPL from other competitive LECs through line splitting, the Commission's previous line sharing rule created warped incentives, because there is no single correct method for allocating the costs attributable to the HFPL, and cable television providers, who are not subject to line sharing obligations, serve a majority of the current residential broadband customers, while incumbent LECs have only a fraction of this market share

[783] In response to the transition mechanism for line sharing voted on February 20th, the dissent raised some concerns regarding aspects of the transition for existing customers that had not been previously discussed. Separate Statement of Commissioner Kathleen Q Abernathy, *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, CC Docket Nos 01-338, 96-98, 98-147, FCC 03-36 (rel. Feb. 20, 2003) ("I am also troubled by the majority's decision to establish a three-year transition period for the elimination of line sharing. I believe that the majority should own up to the fact that, by cutting off data LECs' access to line sharing, it has shut down residential (continued . .)

commence in 2004, we grandfather all existing line sharing arrangements unless the respective competitive LEC, or its successor or assign, discontinues providing xDSL service to that particular end-user customer. During this interim period, we direct incumbent LECs to charge competitive LECs the same price for access to the HFPL for those grandfathered customers that they charged prior to the effective date of this Order. Consistent with our stated policy goal of preventing harm to consumers caused by a discontinuance of service, we conclude that establishing a grandfathering rule is necessary to prevent consumers who currently rely on line sharing from losing their broadband service.[784] This interim grandfathering rule will help alleviate the impact of such a significant rule change on end-user customers.[785] Consistent with

(Continued from previous page)

broadband competition over the copper loop Any talk of a glide path is fanciful, because, in all likelihood, there will regrettably be no providers left to participate in a transition three years from now "), Separate Statement of Chairman Michael K Powell, *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, CC Docket Nos 01-338, 96-98, 98-147, FCC 03-36 (rel Feb 20, 2003) ("By some estimates, 40% of DSL providers use line shared inputs The decision to kill off this element and replace it with a transition of higher wholesale prices will lead quite quickly to higher retail prices for broadband consumers ") As the Commission has concluded in other contexts, "some of those concerns were well thought out and prompted the majority to rethink its position and further explain its rationale Those steps improved this Order --and in turn resulted in a higher quality product for the American people. At the end of the day that should be the goal of all the Commissioners " Joint Statement of Chairman Michael Powell and Commissioner Kathleen Q. Abernathy, *Amendment of Parts 2 and 25 of the Commission's Rules to Permit Operation of NGSO FSS Systems Co-Frequency with GSO and Terrestrial Systems in the Ku-Band Frequency Range*, ET Docket No 98-206, RM-9147, RM-9245, Memorandum Opinion and Order and Second Report and Order, 17 FCC Rcd 9614, 9807 (2002) (*Joint Statement of Chairman Powell and Commissioner Abernathy on Northpoint*) Those concerns prompted the majority to address the status of existing customers and further explain its rationale. The interim grandfathering rule we adopted improved this Order, responds to the dissenters' call for the need to strengthen the glide path we set forth on February 20th, and further ameliorates the immediate impact of our decision on retail prices for broadband consumers. In addition, immediate change of existing service may be unnecessary in light of frequent broadband customer churn and our effort to reevaluate the extent that grandfathered customers remain prior to the end of the three-year transition in the context of our next biennial review While ideally we would engage in the dialogue at an earlier stage, "continuous improvement of our items is the right thing to do " *See id*, *see also infra* note 1396

[784] *See e spire Application to Discontinue Domestic and International Telecommunications Services*, Order, Comp File No 592, 17 FCC Rcd 14785, para 1 (WCB 2002) (denying application to discontinue telecommunications service because such action would disrupt service to consumers), *Rhythms Link Inc Section 63 71 Application to Discontinue Domestic Telecommunications Services*, Order, NSD File No W-P-D-517, 16 FCC Rcd 17024, 17025, paras 4, 13 (CCB 2001) (granting application to discontinue telecommunications service after determining that Rhythms gave proper notice to its customers, which resulted in most affected customers being migrated to other carriers without a service interruption)

[785] We note that both Qwest and Verizon suggested some form of grandfathering line sharing customers For example, Qwest proposed grandfathering existing locations for line sharing Qwest Comments at 44-45 Although Qwest's proposal was premised on the D C Circuit upholding the Commission's line sharing rules, we find that a modification of this proposal to address current marketplace conditions is appropriate. *Id* at 45 n 115 Namely, instead of permitting competitive LECs to continue obtaining unbundled access to the HFPL at all current locations, which presumably would allow requesting carriers to add new subscribers served out of those locations, we limit this proposal to existing customers only Even after issuance of the *USTA* decision, Verizon suggested grandfathering existing competitive LEC xDSL customers served over line shared loops *See* Letter from William P. Barr, Verizon, to Michael Powell, Chairman, FCC, CC Docket Nos 01-338, 96-98, 98-147 at 5 (filed Jan 17, 2003) (Verizon Jan 17, 2003 *Ex Parte* Letter) (noting that "[a]s a purely transitional measure . existing [line sharing] customers could (continued .)

our findings set forth above in Part V.E, if a decision taken pursuant to state law after this Order becomes effective were to require line sharing obligations, any party that believes such decision is inconsistent with the limits of section 251(d)(3)(B) and (C) may seek a declaratory ruling from this Commission [786]

265. The three-year transition period for new line sharing arrangements will work as follows. During the first year, which begins on the effective date of this Order, competitive LECs may continue to obtain new line sharing customers through the use of the HFPL at 25 percent of the state-approved recurring rates or the agreed-upon recurring rates in existing interconnection agreements for stand-alone copper loops for that particular location.[787] During the second year, the recurring charge for such access for those customers will increase to 50 percent of the state-approved recurring rate or the agreed-upon recurring rate in existing interconnection agreements for a stand-alone copper loop for that particular location. Finally, in the last year of the transition period, the competitive LECs' recurring charge for access to the HFPL for those customers obtained during the first year after release of this Order will increase to 75 percent of the state-approved recurring rate or the agreed-upon recurring rate for a stand-alone loop for that location.[788] After the transition period, any new customer must be served through a line splitting arrangement, through use of the stand-alone copper loop, or through an arrangement that a competitive LEC has negotiated with the incumbent LEC to replace line sharing.[789] We strongly encourage the parties to commence negotiations as soon as possible so that a long-term arrangement is reached and reliance on the shorter-term default mechanism that we describe above is unnecessary.

266. The purpose of this transition is to minimize disruption to the customers that obtain xDSL service through line shared loops and to provide a reasonable glide path to competitive LECs currently availing themselves of this UNE. The Commission has established

(Continued from previous page) ———————————

be grandfathered for some period of time "). As a practical matter, because of the churn rates associated with this industry, we find that our grandfathering requirement described above is not without end

[786] *See supra* Part V E for our discussion of the role of the states

[787] We determine that it is appropriate to permit requesting carriers to continue obtaining new customers during the first year of the transition This augmented customer base will enable requesting carriers, especially data LECs, to continue their day-to-day operations while modifying their business plans and working to preserve access arrangements with incumbent LECs *See* Letter From Jason D Oxman, Vice President and Assistant General Counsel, Covad, to Marlene H Dortch, Secretary, FCC, CC Docket Nos 01-338, 96-98, 98-147 at 2 (Covad Feb 24, 2003 *Ex Parte* Letter)

[788] After this third year, competitive LECs will not have unbundled access to the HFPL, pursuant to section 251(c)(3), to provide those customers obtained after the Order became effective xDSL service over line shared loops. That is, after this third year, the recurring charge for the HFPL increases to 100% of the recurring charge for a stand-alone loop.

[789] By new customers, we mean any customer obtained during the three-year transition period or after the three-year transition period New customers do not include, however, those line sharing customers who have been grandfathered, as described above in para 264

transition periods of this length in the past. For example, in establishing a three-year interim intercarrier compensation regime for ISP-bound traffic, the Commission stated that it would be "prudent to avoid a 'flash cut' to a new compensation regime that would upset the legitimate business expectations of carriers and their customers."[790] We find that a similar approach is required here. It is entirely appropriate to fashion a transition period of sufficient length to enable competitive LECs to move their customers to alternative arrangements and modify their business practices and operations going forward.[791]

267. As one commenter noted in describing the Commission's authority to establish interim rates for unbundled local circuit switching, in combination with other elements, inherent in the Commission's authority to establish transitional rules is its authority to establish transitional rates.[792] Section 201(b) gives the Commission broad authority to adopt the transition mechanism set forth in this Part and nothing in that provision limits our authority with respect to rates. Indeed, we agree with those commenters that contend that a transitional rate is often the most effective means by which to implement a "glide path from one regulatory/pricing regime to another."[793] The incremental approach we adopt here will encourage requesting carriers either to migrate their customers to the whole loop in an orderly manner or to reach agreement, if it is desired, with the incumbent LEC to continue access to the HFPL on different terms and conditions.

268. In order to implement the line sharing transition plan described above, we find that it is necessary to reinstate certain rules concerning the HFPL.[794] Specifically, we define the HFPL as the frequency range above the voiceband on a copper loop facility that is being used to carry analog circuit-switched voiceband transmissions.[795] The features, functions, and capabilities of the HFPL network element are those that establish a complete transmission path on the frequency range above the one used to carry analog circuit-switched voice transmissions between the incumbent LEC's distribution frame (or its equivalent) in its central office and the demarcation point at the customer's premises, and includes any inside wire owned by the

---

[790] *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, Intercarrier Compensation for ISP-Bound Traffic*, CC Docket Nos. 96-98, 99-68, Order on Remand and Report and Order, 16 FCC Rcd 9151, 9186-87, paras 77-78 (2001) (*ISP Remand Order*)

[791] *See, e g*, Letter from Susan Guyer and Michael Glover, Verizon, to William F Maher, Chief, Wireline Competition Bureau, FCC, CC Docket Nos 01-338, 96-98, 98-147 at 4 (filed Jan 10, 2003).

[792] *See* Letter from Gary L Phillips, Counsel for SBC, to Michael K Powell, Chairman, FCC, CC Docket No. 01-338 at 2 (filed Dec 19, 2002) (SBC Dec. 19, 2002 *Ex Parte* Letter) (citing the Commission's *ISP Remand Order*)

[793] *Id*

[794] To be clear, although the D C. Circuit referred broadly to vacating the *Line Sharing Order*, it did not address the Commission's spectrum management rules or that portion of the Order in its decision Consequently, the Commission finds that these rules were unaffected by the *USTA* decision and therefore do not need to be readopted because they remain in effect *See, e g*, 47 C F R §§ 51 230- 233. Finally, we find no reason to modify these rules in this Order

[795] 47 C F R § 51 319(h)(1). *Line Sharing Order*, 14 FCC Rcd at 20926-27, para 26.

incumbent LEC. Incumbent LECs must condition loops to enable requesting carriers to access the HFPL.[796] Finally, incumbent LECs must provide physical loop test access points on a nondiscriminatory basis for the purposes of loop testing, maintenance, and repair activities.[797]

269. 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 particular loop over which the requesting carriers seeks access to provide ADSL service.[798] 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. Finally, as the Commission found before, incumbent LECs may also maintain control over the loop and splitter equipment and functions.[799]

270. *Low Frequency Portion of the Loop.* We disagree with CompTel that we should separately unbundle the low frequency portion of the loop, which is the portion of the copper local loop used to transmit voice signals.[800] We conclude that unbundling the low frequency portion of the loop is not necessary to address the impairment faced by requesting carriers because we continue (through our line splitting rules) to permit a narrowband service-only competitive LEC to take full advantage of an unbundled loop's capabilities by partnering with a second competitive LEC that will offer xDSL service.

271. *Retirement of Copper Loops and Copper Subloops.* As we note below in our discussion of FTTH loops, we decline to prohibit incumbent LECs from retiring copper loops or copper subloops that they have replaced with fiber. Instead, we reiterate that our section 251(c)(5) network modification disclosure requirements (with the minor modifications also noted below in that same discussion) apply to the retirement of copper loops and copper subloops.[801] In

---

[796] *Line Sharing Order*, 14 FCC Rcd at 20952-54, paras 83-87, 47 C F.R § 51.319(h)(5) Included among the incumbent LECs' conditioning requirements that we reinstate is the requirement that, after determining that conditioning a loop will significantly degrade the voiceband service offered by the incumbent LEC on that loop, the incumbent LEC must either locate another loop and migrate its voice service to that loop while providing the requesting carrier with access to the HFPL, or demonstrate to the relevant state commission that the loop cannot be conditioned without significantly degrading the voiceband service and no alternative loop exists to which the customer's voiceband service can be moved to enable line sharing *See* 47 C F R § 51 319(h)(5)(ii), *see also infra* Part VII D (discussing modifications to the existing network)

[797] *See Line Sharing Order*, 14 FCC Rcd at 20964-67, paras 111-18, 47 C.F R § 51.319(h)(7).

[798] *Line Sharing Order*, 14 FCC Rcd at 20947, para 72, 47 C F R § 51 319(h)(3). Finally, we also readopt our finding contained in the *Line Sharing Order* that if an incumbent LEC disconnects a customer's voice service in accordance with applicable law, then the competitive LEC must purchase the entire loop to continue providing that customer with xDSL service *Line Sharing Order*, 14 FCC Rcd at 20947-48, para 73.

[799] *Id* at 20949-50, paras 76-79

[800] CompTel Comments at 43-45

[801] *See* 47 U S C § 251(c)(5) (specifying network disclosure requirements), 47 C F R. §§ 51 324-.335

addition, any state requirements that currently apply to an incumbent LEC's copper loop or copper subloop retirement practices will continue to apply.

(b) Next-Generation Networks

272. Although we require the unbundling of legacy technology used over hybrid loops, we decline to attach unbundling requirements to the next-generation network capabilities of fiber-based local loops, *i e* , those loops that make use of fiber optic cables and electronic or optical equipment capable of supporting truly broadband transmission capabilities based on the analysis described earlier in this subsection. We expect that this decision to refrain from unbundling incumbent LEC next-generation networks – which is based on our evaluation of an extensive record developed over more than two years – will stimulate facilities-based deployment in two ways. First, with the certainty that their fiber optic and packet-based networks will remain free of unbundling requirements, incumbent LECs will have the opportunity to expand their deployment of these networks, enter new lines of business, and reap the rewards of delivering broadband services to the mass market. Thus, we conclude that relieving incumbent LECs from unbundling requirements for these networks will promote investment in, and deployment of, next-generation networks Second, with the knowledge that incumbent LEC next-generation networks will not be available on an unbundled basis, competitive LECs will need to continue to seek innovative network access options to serve end users and to fully compete against incumbent LECs in the mass market. The end result is that consumers will benefit from this race to build next generation networks and the increased competition in the delivery of broadband services.

(i) FTTH Loops

273. We conclude that requesting carriers are not impaired without access to FTTH loops,[802] although we find that the level of impairment varies to some degree depending on whether such loop is a new loop or a replacement of a pre-existing copper loop.[803] With a limited exception for narrowband services, our conclusion applies to FTTH loops deployed by incumbent LECs in both new construction and overbuild situations. Only in fiber loop overbuild situations where the incumbent LEC elects to retire existing copper loops must the incumbent LEC offer unbundled access to those fiber loops, and in such cases the fiber loops must be

[802] By "FTTH loop," we mean a local loop consisting entirely of fiber optic cable (and the attached electronics), whether lit or dark fiber, that connects a customer's premises with a wire center (*i e* , from the demarcation point at the customer's premises to the central office) *See* Corning Nov. 20, 2002 *Ex Parte* Letter at 2 (submitting proposed definition of FTTH loop)

[803] Alcatel Comments at 15-16, Corning Comments at 22-26 (arguing that no impairment exists for FTTH loops), Corning Nov 26, 2002 *Ex Parte* Letter, Attach 1 at 17-21, 78-89, Attach 2 at 7-10, HTBC Comments at 40-41 We therefore disagree with those parties who argue we should require unbundling of FTTH loops. *See* ALTS *et al* Comments at 82 (contending that the Commission should require incumbent LECs to provide unbundled access to "broadband fiber"), CompTel Comments at 40-42, Covad Comments at 54-58 (arguing that the Commission should unbundle fiber loops)

unbundled for narrowband services only. Incumbent LECs do not have to offer unbundled access to newly deployed or "greenfield" fiber loops.

274. FTTH loop deployment is still in its infancy. Corning notes, for example, that only 47 communities throughout the nation currently enjoy widespread FTTH deployment.[804] The record demonstrates that mass market FTTH loops are used almost entirely for providing broadband services (or broadband in conjunction with narrowband services) at this time, and that carriers are not deploying such loops to provide narrowband services alone.[805] The record further indicates that FTTH loops display several economic and operational entry barriers in common with copper loops – that is, the costs of FTTH loops are both fixed and sunk, and deployment is expensive.[806] The record also shows, however, that the potential rewards from FTTH deployment are significant. Corning notes, for example, that carriers will be able to earn a substantially greater return on their FTTH investment by offering voice, data, video, and other services.[807] Thus, we find that the substantial revenue opportunities posed by FTTH deployment help ameliorate many of the entry barriers presented by the costs and scale economies.

275. With respect to new FTTH deployments (*i e* , so-called "greenfield" construction projects), we note that the entry barriers appear to be largely the same for both incumbent and competitive LECs – that is, both incumbent and competitive carriers must negotiate rights-of-way, respond to bid requests for new housing developments, obtain fiber optic cabling and other materials, develop deployment plans, and implement construction programs [808] Indeed, the record indicates that competitive LECs are currently leading the overall deployment of FTTH loops after having constructed some two-thirds or more of the FTTH loops throughout the nation.[809] Competitive LECs' active participation in deploying FTTH loops demonstrates that

---

[804] Letter from Timothy Regan, Senior Vice President, Corning, to Marlene H Dortch, Secretary, FCC, CC Docket 01-338 at 5 (filed Dec 20, 2002) (Corning Dec 20, 2002 FTTH *Ex Parte* Letter)

[805] Deployment of FTTH loop plant enables a carrier to provide both narrowband voice and broadband services – in essence, voice telephony becomes an application provided over an integrated network. *See* Corning Comments at 2 (asserting that FTTH allows carriers to provide narrowband voice service, full motion video, and high speed data transfers simultaneously), 16-18, FTTH Council Comments at 1, HTBC Comments at 6-8, 14-17.

[806] *See* Corning Nov 20, 2002 *Ex Parte* Letter, Attach at 7-10 (estimating costs involved with deploying FTTH loops).

[807] Corning Nov 26, 2002 *Ex Parte* Letter, Attach at 33 Corning indicates that, through FTTH deployment, carriers could reasonably earn a return of $33 per subscriber, compared to $18 for ADSL deployment and $21 for cable modem service *Id*

[808] Some parties contend that competitive LECs actually have a competitive advantage in deploying FTTH loops because their labor costs are generally lower *See* Corning Comments at 4, Corning Jan 29, 2003 *Ex Parte* Letter at 19, Corning Nov. 20, 2002 *Ex Parte* Letter, Attach 2 at 10. In addition, some parties argue that FTTH loop costs are declining because of the cost of the necessary attached electronics is dropping Corning Comments at 13, n 33. BellSouth notes that competitive LECs have "a mandatory right to access the rights-of-way of [incumbent LECs] and presumptive rights to access other utility rights-of-way " BellSouth Comments at 68-69

[809] Corning Comments at 5, HTBC Comments at 42 (asserting that competitive LECs and incumbent LECs are on equal footing for deploying FTTH loops), Corning Reply at 12, Letter from Jeffrey S Linder, Counsel for Corning, (continued)

carriers are not impaired if we refrain from unbundling these loops.[810] Thus, we conclude that incumbent LECs do not have a first-mover advantage that would compound any barriers to entry in this situation. In addition, we conclude that incumbent LECs have no advantages concerning the sunk costs of greenfield FTTH loops – both incumbent LECs and competitive LECs are faced with the same issue in their deployment of such loops. As a result of our analysis, we do not require incumbent LECs to provide unbundled access to new FTTH loops for either narrowband or broadband services.[811]

276. We recognize that one FTTH deployment scenario, *i e* , overbuild deployment in which an incumbent LEC constructs fiber transmission facilities parallel to or in replacement of its existing copper plant, merits slightly different treatment than greenfield FTTH deployments. Although the record indicates that this scenario is largely theoretical, at least today, the evidence suggests that impairment would not exist for two reasons. First, as with greenfield deployments, competitive and incumbent LECs largely face the same obstacles in deploying overbuild FTTH loops, although incumbent LECs still enjoy an established customer base. Both competitive LECs and incumbent LECs must obtain materials, hire the necessary labor force, and construct the fiber transmission facilities. Second, we note that the revenue opportunities associated with deploying any type of FTTH loop are far greater than for services provided over copper loops. Besides providing narrowband services like voice, fax, and dial-up Internet access, competitive LECs could also deploy a wide-array of video and other broadband applications over such FTTH loops.[812] In fact, broadband platforms enabled by the deployment of FTTH loops will likely

(Continued from previous page) ———————————

to Marlene H Dortch, Secretary, FCC, CC Docket No 01-338, Attach 1 at 2 (filed Feb 6, 2003) (Corning Feb 6, 2003 *Ex Parte* Letter), Letter from Larry Aiello, President and Chief Executive Officer, Corning Cable Systems, to Marlene H Dortch, Secretary, FCC, CC Docket No 01-338 at 3 (filed Feb 3, 2003) (noting that competitive LECs have deployed 68% of the existing FTTH deployment to date) (Corning Feb 3, 2003 *Ex Parte* Letter), Letter from Derek R Khlopin, HTBC, to Marlene H Dortch, Secretary, FCC, CC Docket No 01-338 at 4 (filed Jan 14, 2003) (arguing that competitive LECs are not impaired without access to FTTH loops) (HTBC Jan 14, 2003 *Ex Parte* Letter), Letter from Timothy J Regan, Senior Vice President, Corning, to Marlene H Dortch, Secretary, FCC, CC Docket No 01-338 , Attach 2 at 7 (filed Jan 29, 2003) (Corning Jan. 29, 2003 FTTH *Ex Parte* Letter) Corning estimates that competitive LECs have deployed FTTH loops to 44,890 homes, that small incumbent LECs have deployed FTTH loops to 3,600 homes, that the BOCs have deployed FTTH loops to some 400 homes, and that municipalities have deployed FTTH loops to about 18,100 homes Corning Jan 29, 2003 FTTH *Ex Parte* Letter, Attach. at 7.

[810] Corning Jan. 29, 2003 FTTH *Ex Parte* Letter at 6-7

[811] By FTTH loop, we mean a loop consisting entirely of fiber optic cable between the main distribution frame (or its equivalent) and the demarcation point at the customer's premises We recognize that other "fiber-in-the-loop" network architectures exist, such as "fiber to the curb" (FTTC), "fiber to the node" (FTTN), and "fiber to the building" (FTTB). *See* Telcordia, Inc , NOTES ON FIBER-IN-THE-LOOP (FITL), SR-Notes-Series-10, Issue 1 at 5-1 to 6-17 (Jul 2001) Our definition of FTTH loops excludes such intermediate fiber deployment architectures For purposes of our unbundling rules, we consider any loop consisting of fiber optic and copper cable to be a hybrid loop

[812] *See* Corning Comments at 2, HTBC Comments at 15-16 (describing services that can be offered over FTTH loops), *CSMG Study* at 10 (describing key revenue drivers for FTTH loops), 18-24 (comparing revenue opportunities for xDSL-based networks and FTTH networks), Corning Nov 26, 2002 *Ex Parte* Letter at 28

enable a variety of new services and applications, competing directly with the market-leading cable broadband offerings and the broadband offerings potentially provided by other technological platforms, such as satellite and wireless, thereby weakening the case for unbundling. Thus, the potential rewards for deploying overbuild FTTH loops are distinctly greater than those associated with deploying copper loops and thus present a different balance when weighed against the barriers to entry.

277. We agree with Corning and Verizon, however, that in a FTTH overbuild situation we must ensure continued access to an unbundled transmission path suitable for providing narrowband services to customers served by FTTH loops.[813] The record indicates that deployment of overbuild FTTH loops could act as an additional obstacle to competitive LECs seeking to provide certain services to the mass market. By its nature, an overbuild FTTH deployment enables an incumbent LEC to replace and ultimately deny access to the already-existing copper loops that competitive LECs were using to serve mass market customers. In this regard, incumbent LECs potentially have an entry barrier within their sole control (*i e* , the decision to replace pre-existing copper loops with FTTH) In order to ensure continued narrowband access in this situation, incumbent LECs have the option to either (1) keep the existing copper loop connected to a particular customer after deploying FTTH,[814] or (2) in situations where the incumbent LEC elects to retire the copper loop, it must provide unbundled access to a 64 kbps transmission path over its FTTH loop.[815] Under the first option, we do not require incumbent LECs to incur relief and rehabilitation costs for that loop unless a competitive LEC requests unbundled access to it and such loop is placed back into service. We conclude that these measures counteract any obstacles competitive LECs face in overbuild FTTH situations much like other provisions of the Act offset certain entry barriers. We note that this is a very limited requirement intended only to ensure continued access to a local loop suitable for

[813] Letter from Timothy J Regan, Senior Vice President, Corning, to Marlene H Dortch, Secretary, FCC, CC Docket No 01-338 at 2 (filed Feb 5, 2003) (Corning Feb 5, 2003 FTTH Overbuild *Ex Parte* Letter), Verizon Jan 17, 2003 *Ex Parte* Letter at 7 (asserting that incumbent LECs should only have to provide unbundled access to a 64 kbps transmission path over their fiber transmission facilities)

[814] Corning Feb 5, 2003 FTTH Overbuild *Ex Parte* Letter at 2 (proposing policy recommendations related to overbuild FTTH), Corning Feb. 6, 2003 *Ex Parte* Letter at 5, Letter from Timothy J Regan, Senior Vice President, Corning, to Marlene H. Dortch, Secretary, FCC, CC Docket No 01-338 at 2 (filed Feb 13, 2003) (proposing overbuild FTTH policies) (Corning Feb 13, 2003 *Ex Parte* Letter), Letter from Leonard G Ray, Government Relations Committee Chairman, FTTH Council, to Marlene H Dortch, Secretary, FCC, CC Docket No 01-338 at 2-3 (filed Feb 13, 2003)

[815] *See* Letter from Timothy J Regan, Corning, to Marlene H Dortch, Secretary, FCC, CC Docket No 01-338, Attach. 3 at 1 (providing key definitions), Verizon Jan. 17, 2003 *Ex Parte* Letter at 7 (asserting that incumbent LECs should only have to provide unbundled access to a 64 kbps transmission path over their fiber transmission facilities) A key part of the HTBC proposal is ensuring that competitive LECs maintain access to "all existing non-packet loop capabilities over hybrid fiber/copper facilities " Letter from Derek R. Khlopin, HTBC, to Marlene H Dortch, Secretary, FCC, CC Docket No 01-338, Attach 1 at 1 (filed Jan 24, 2003) (HTBC Jan 24, 2003 Khlopin *Ex Parte* Letter). As an example, HTBC states that "DS-1s provided over TDM facilities would remain subject to a Section 251 impairment analysis." *Id*

providing narrowband services to the mass market in situations where an incumbent LEC has deployed overbuild FTTH and elected to retire the pre-existing copper loops.

278. As noted above, section 706 informs our policymaking as we determine what unbundling rules, if any, should apply to FTTH loops.[816] All parties agree that FTTH loops meet the definition of advanced telecommunications capability,[817] and so we determine that promoting the deployment of FTTH loops is particularly important in light of our section 706 mandate. Simply put, delivering broadband service is impossible without a transmission path to the customer's premises that supports broadband capabilities. While copper loops enable carriers to deliver xDSL-based broadband services, FTTH loops significantly enhance the broadband capabilities a carrier can deliver to consumers. Thus, we determine that, particularly in light of a competitive landscape in which competitive LECs are leading the deployment of FTTH, removing incumbent LEC unbundling obligations on FTTH loops will promote their deployment of the network infrastructure necessary to provide broadband services to the mass market.[818]

279. We further agree with Corning that our FTTH policy adopted herein should not adversely affect competitive LECs for several reasons.[819] First, competitive LECs have demonstrated that they can self-deploy FTTH loops and are doing so at this time. Second, competitive LECs can continue to use resale as a means for serving mass market customers after incumbent LECs deploy FTTH loops Finally, competitive LECs can continue to have unbundled access to existing copper facilities, to the extent such facilities are available.

280. For these reasons, we disagree with AT&T that we should further study issues surrounding the deployment of FTTH loops used to serve the mass market.[820] The record contains sufficient information concerning the current deployment of FTTH loops and the economic barriers surrounding such deployment, as well as a number of studies and projections of future FTTH deployment.[821]

281. *Retirement of Copper Loops.* We decline to impose a blanket prohibition on the ability of incumbent LECs to retire any copper loops or subloops they have replaced with FTTH

---

[816] Section 706(a) of the Telecommunications Act of 1996 *See* Corning Comments at 10-11 (arguing that the Commission should consider section 706 in crafting its unbundling framework), HTBC Comments at 43-44

[817] *See, e g*, Corning Comments at 2, 11-13, HTBC Comments at 5

[818] Corning Comments at 3, 10-14; SBC Reply at 55-60, Letter from Jeffrey S Linder, Counsel for Corning, to Marlene H Dortch, Secretary, FCC, CC Docket No 01-338, Attach at 6 (filed Jan 31, 2003) (estimating that unbundling relief will increase FTTH deployment by a factor of 6 2)

[819] *See* Corning Feb 6, 2003 *Ex Parte* Letter at 5

[820] AT&T Reply at 74 (advocating that the Commission study FTTH deployment issues further before determining what unbundling requirements, if any, apply to FTTH loops used to serve the mass market)

[821] *See* Corning Nov. 26, 2002 *Ex Parte* Letter, Attach at 29-33 (describing revenue opportunities), 42-45 (describing competitive LEC ability to self-deploy FTTH loops), *CSMG Study* at 10-14 (providing overview of study conclusions)

loops. Several parties also propose extensive rules that would require affirmative regulatory approval prior to the retirement of any copper loop facilities.[822] We find that such a requirement is not necessary at this time because our existing rules, with minor modifications, serve as adequate safeguards.[823] Pursuant to the Act and the Commission's rules, incumbent LECs must provide public notice of any network change that will affect a competing carrier's performance or ability to provide service.[824] Because the retirement of copper loop plant is a network modification that affects the ability of competitive LECs to provide service,[825] we clarify that incumbent LECs must provide notice of such retirement in accordance with our rules. Thus, incumbent LECs must disclose among other things the planned date for retiring a copper loop and a description of the reasonably foreseeable impact of the planned changes.[826] Such notifications will ensure that incumbent and competitive carriers can work together to ensure the competitive LECs maintain access to loop facilities.

282. Consistent with the proposals of Corning and HTBC, we modify our network modification rules with respect to the retirement of copper loops.[827] Specifically, when a copper loop is retired and replaced with a FTTH loop, we allow parties to file objections to the incumbent LEC's notice of such retirement. Consistent with our existing network disclosure rules, such oppositions must be filed with the Commission and served on the incumbent LEC within nine business days from the release of the Commission's public notice.[828] Unless the copper retirement scenario suggests that competitors will be denied access to the loop facilities

---

[822] Allegiance Comments at 25, California Commission Comments at 18 (proposing rule requiring incumbent LEC to maintain copper plant), Letter from Timothy J Regan, Corning, to Marlene H Dortch, Secretary, FCC, CC Docket No 01-338 at 9 (filed Nov 27, 2002) (Corning Nov 27, 2002 *Ex Parte* Letter) (arguing that incumbent LECs should have the option of retiring or selling copper plant where FTTH is deployed), HTBC Comments at 36-37 (proposing measures regarding incumbent LEC retirement of legacy copper plant), TIA Comments at 17-18 (proposing rule to prohibit incumbent LECs from retiring copper loops unless they allow access to broadband facilities); AT&T Reply at 216-19 (asserting that a home-run copper loop may be of inferior quality)

[823] *See* Verizon Jan 17, 2003 *Ex Parte* Letter at 7 (arguing that a duty to maintain two networks would impose additional costs)

[824] 47 U S C § 251(c)(5), 47 C F R §§ 51 325- 335. This disclosure requirement applies to the retirement of both feeder plant and distribution plant

[825] *See, e g*, Sprint Comments at 45 (arguing that a competitive LEC could be stranded after an incumbent LEC upgrades its loop plant), Supra Comments at 10-13

[826] *See* 47 C F R. § 51 327

[827] Corning Feb 6, 2003 *Ex Parte* Letter at 7 (proposing a 90-day application process before the Commission with respect to the retirement of any copper loops), Letter from Derek R. Khlopin, HTBC, to Marlene H. Dortch, Secretary, FCC, CC Docket Nos 01-338, 96-98, 98-147 at 3 (filed Jan 23, 2003) (HTBC Jan 23, 2003 *Ex Parte* Letter) (stating that HTBC's proposal would prohibit incumbent LECs "from retiring the existing copper loop absent permission from the Commission.")

[828] Objections to both short and long-term notices should be made in accordance with section 51.333(c) of the Commission's rules Moreover, incumbent LECs may respond to such objections in accordance with section 51 333(d) of the Commission's rules *See* 47 C F R § 51.333(c)-(d)

required under our rules, we will deem all such oppositions denied unless the Commission rules otherwise upon the specific facts and circumstances of the case at issue within 90 days of the Commission's public notice of the intended retirement.

283. We note that, with respect to network modifications that involve copper loop retirements, the rules we adopt herein differ in two respects from the notification rules that apply to other types of network modifications.[829] First, we establish a right for parties to object to the incumbent LEC's proposed retirement of its copper loops for both short-term and long-term notifications as outlined in Part 51 of the Commission's rules. By contrast, our disclosure rules for other network modifications permit oppositions only for instances involving short-term notifications.[830] Second, we establish a mechanism to deny such objections automatically unless the Commission rules otherwise within 90 days of the Commission's public notice of the intended retirement. As a practical matter, this mechanism redefines the short-term notice rules for a subset of network modifications, *i e.*, retirement of copper loops that are replaced by FTTH loops, and means that incumbent LECs must file their disclosures for copper loop retirements at least 91 days prior to their planned retirement date.

284. As a final matter, we stress that we are not preempting the ability of any state commission to evaluate an incumbent LEC's retirement of its copper loops to ensure such retirement complies with any applicable state legal or regulatory requirements. We also stress that we are not establishing independent authority based on federal law for states to review incumbent LEC copper loop retirement policies We understand that many states have their own requirements related to discontinuance of service, and our rules do not override these requirements. We expect that the state review process, working in combination with the Commission's network disclosure rules noted above, will address the concerns noted by Corning and others regarding the potential impact of an incumbent LEC retiring its copper loops.

(ii) Hybrid Loops

285. Hybrid loops represent an important step towards the deployment of a fiber-based network capable of supporting a wide array of advanced telecommunications and other services. Several incumbent LECs note that they pursue their construction and network modification projects in incremental ways – first, deployment of fiber in the feeder plant and associated equipment like DLC systems (often with line cards capable of providing xDSL services), followed by fiber-to-the-curb, followed by FTTH.[831] In light of this practice, we view our task with respect to hybrid loops as determining an unbundling approach that addresses impairment, but also aligns business incentives with the explicit congressional goal of promoting the rapid deployment of advanced services.

---

[829] These modified network notification requirements apply only to the retirement of copper loops and copper subloops, but not to the retirement of copper feeder plant

[830] *See* 47 C F R § 51 333(c)-(d).

[831] *See* Verizon Nov 22, 2002 *Ex Parte* Letter at 1

286. In making our unbundling determination for hybrid loops, we consider both impairment and, through our section 251(d)(2) "at a minimum" authority, additional factors. As noted above, we find that competitive LECs are impaired on a national basis without unbundled access to a transmission path when seeking to provide service to the mass market. We further find that this impairment at least partially diminishes with the increasing deployment of fiber In addition, we retain the flexibility to determine the unbundling approach that best addresses the impairment in a manner that advances other goals of the Act. In this regard, balanced against impairment, we evaluate three primary factors to determine the most appropriate unbundling requirements for hybrid loops. First, we consider the costs of unbundling, *i.e* , whether refraining from unbundling requirements will stimulate facilities-based investment and promote the deployment of advanced telecommunications infrastructure. Second, we consider the effect of alternatives to mandating unbundled access to the hybrid loops of incumbent LECs. In particular, we consider whether unbundled access to subloops, spare copper loops, and the non-packetized portion of incumbent LEC hybrid loops, as well as remote terminal collocation, offer suitable alternatives to an intrusive unbundling approach. Finally, we consider the state of intermodal competition in crafting our unbundling approach. As explained further below, after balancing these three primary factors against our impairment findings, we adopt a national approach that relieves incumbent LECs of unbundling requirements for the next-generation network capabilities of their hybrid loops, while at the same time ensures requesting carriers have access to the transmission facilities they need to serve the mass market.

287. We discuss our unbundling rules for hybrid loops below. These rules vary depending upon whether a competitive LEC seeks access for the provision of broadband or narrowband services. Therefore, our discussion is separated into two parts in order to clearly reflect this important distinction.

288. *Broadband Services.* We decline 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.[832] AT&T, WorldCom, Covad, and others urge the Commission to extend our unbundling requirements to the packet-based and fiber optic portions of incumbent LEC hybrid loops. We conclude, however, that applying section 251(c) unbundling obligations to these next-generation network elements would blunt the deployment of advanced telecommunications infrastructure by incumbent LECs and the incentive for competitive LECs to invest in their own facilities, in direct opposition to the express statutory goals authorized in section 706. The rules we adopt herein do 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

[832] As noted above in our description of the record evidence, incumbent LECs have deployed, and are continuing to deploy, a substantial amount of "hybrid loops," *i e* , local loops consisting of both copper and fiber optic cable (and associated electronics, such as DLC systems) Incumbent LECs appear to be at various stages of fiber deployment and have chosen a number of FITL architectures (*e g* , FTTC, FTTN) and hybrid loops Thus, we treat such intermediate deployments of fiber as hybrid loops because they consist of both copper and fiber optic cable

information.[833] Moreover, the rules we adopt herein do 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.[834]

289. Although packetized fiber capabilities will not be available as UNEs, incumbent LECs remain obligated, however, to provide unbundled access to the features, functions, and capabilities of hybrid loops that are not used to transmit packetized information. Thus, as discussed more specifically in the Enterprise Loops section, consistent with the proposals of HTBC, SBC, and others, incumbent LECs must provide unbundled access to a complete transmission path over their TDM networks to address the impairment we find that requesting carriers currently face.[835] This requirement ensures that competitive LECs have additional means with which to provide broadband capabilities to end users because competitive LECs can obtain DS1 and DS3 loops, including channelized DS1 or DS3 loops and multiple DS1 or DS3 loops for each customer.

290. Section 706 requires the Commission to encourage deployment of advanced telecommunications capability by using, among other things, "methods that remove barriers to infrastructure investment."[836] Unbundling access to hybrid loops in the manner adopted herein – that is, limiting the requesting carrier's access to the TDM portion of the hybrid loop and precluding unbundled access to the packet-based networks (and associated fiber transmission facilities) of incumbent LECs – promotes our section 706 goals in two ways. First, it limits access to the (in many cases) newly deployed fiber transmission facility, and thereby gives incumbent LECs an incentive to deploy fiber (and associated next-generation network equipment, such as packet switches and DLC systems) and develop new broadband offerings for

---

[833] *See* Letter from Robert Holleyman, HTBC, to Marlene H Dortch, Secretary, FCC, CC Docket No 01-338 (filed Jan 24, 2003) (HTBC Jan 24, 2003 *Ex Parte* Letter), Letter from Veronica O'Connell, Director, HTBC, to Marlene H. Dortch, Secretary, FCC, CC Docket No. 01-338 (filed Feb 7, 2003) (HTBC Feb 7, 2003 *Ex Parte* Letter), HTBC Feb 14, 2003 *Ex Parte* Letter Because we decline to require unbundling of packet-switching equipment, we deny WorldCom's petitions for reconsideration and clarification requesting that we unbundle packet-switching equipment, DSLAMs, and other equipment used to deliver DSL service MCI WorldCom Petition for Reconsideration, CC Docket No 96-98 at 2-18 (filed Feb 17, 2000) (MCI WorldCom Feb 17, 2000 Petition for Reconsideration), MCI WorldCom Feb 17, 2000 Petition for Clarification at 2, 13.

[834] *See* HTBC Feb. 14, 2003 *Ex Parte* Letter at 1-4.

[835] HTBC Feb 7, 2003 *Ex Parte* Letter at 2 (advocating a requirement to unbundle "non-packet loop capabilities" only), SBC Jan 24, 2003 *Ex Parte* Letter at 12-13 (describing proposal to ensure competitive LECs have unbundled access to TDM and non-packet capabilities of SBC's networks), Letter from Jonathan J Boynton, Associate Director, SBC, to Marlene H. Dortch, Secretary, FCC, CC Docket No 01-338 at 5 (filed Jan 15, 2003) (SBC Jan 15, 2003 Broadband *Ex Parte* Letter) (explaining that competitive LECs will have continued unbundled access to "non packet fiber" feeder plant combined with copper distribution plant)

[836] Section 706(a) of the Telecommunications Act of 1996 *See* Corning Comments at 10-11 (arguing that the Commission should consider section 706 in crafting its unbundling framework), CompTel Comments at 26 (arguing that the Commission should use section 706 to expand unbundling obligations), HTBC Comments at 42-45; SBC Reply at 95-96

mass market consumers free of any unbundling requirements.[837] Although incumbent LECs have been deploying fiber feeder plant for some time, such deployment was generally limited to the purpose of increasing network efficiency for the provision of narrowband services rather than enhancing network capabilities to deliver broadband services. In addition, fiber feeder deployment (and the broadband capabilities attendant to such deployment) is far from ubiquitous. Moreover, incumbent LECs have not widely deployed the next-generation networking equipment (*e g.*, DLC systems with xDSL-capable line cards) needed to deliver broadband services to mass market customers served by hybrid loops.[838] Second, by prohibiting access to the packet-based networks of incumbent LECs, we expect that our rules will stimulate competitive LEC deployment of next-generation networks. Because competitive LECs will not have unbundled access to the packet-based networks of incumbent LECs, they will need to continue to seek innovative access options, including the deployment of their own facilities necessary for providing broadband services to the mass market.

291. In making our unbundling determination, we are also guided by the availability of other loop alternatives within the networks of incumbent LECs. In particular, we determine that unbundled access to incumbent LEC copper subloops adequately addresses the impairment competitive LECs face so that intrusive unbundling requirements on incumbent LEC packetized fiber loops facilities is not necessary. Unbundled access to subloops also better promotes our section 706 goals than unbundling incumbent LEC packetized fiber loops. In particular, subloop access promotes competitive LEC investment in next-generation network equipment (*e g* , packet switches, remote DSLAMs, etc.) and transmission facilities (*e g* , fiber loop facilities built to points in incumbent LEC networks closer to the home). Furthermore, unbundled subloop access furthers our goal of promoting innovation because it enables competitive LECs to differentiate their product and service offerings from those of the incumbent LEC. In addition to subloop unbundling, as discussed more fully below, we require incumbent LECs to continue providing unbundled access to the TDM-based features, functions, and capabilities of their hybrid loops where impairment exists. As discussed above, in addition to subloop unbundling, the availability of TDM-based loops, such as DS1s and DS3s, provide competitive LECs with a range of options for providing broadband capabilities. We therefore find that competitive LECs retain alternative methods of accessing loop facilities in hybrid loop situations and disagree with WorldCom and others concerning the appropriate unbundling requirements for the next-generation broadband features, functions, and capabilities of hybrid loops.[839]

---

[837] *See* Corning Jan 29, 2003 *Ex Parte* Letter at 12 (estimating that FTTH deployment will reach 31% of U.S households if no unbundling requirements apply to incumbent LECs, but only 5% of U S households if unbundling requirements apply); *CSMG Study* at 26-28, 30 (concluding that incumbent LECs will deploy more FTTH loops if relieved from unbundling obligations).

[838] Indeed, some incumbent LECs contend that the regulatory environment has deterred their deployment of such equipment *See, e g* , SBC Reply at 96-104

[839] WorldCom Dec 12, 2002 Next-Generation Networks *Ex Parte* Letter at 3 (arguing that, without unbundled access to hybrid loops, competitive LECs will not be able to serve certain customers)

292. We are also informed in our analysis by the state of intermodal competition for broadband service.[840] As noted above, cable companies have made significant inroads in providing broadband service to the mass market, but these same companies have made less progress in the market for traditional narrowband services. For example, cable companies have widely deployed broadband service in the form of high-speed Internet access offered via cable modem service, but cable telephony deployment is still in its infancy. According to a Commission staff report, more consumers continue to obtain their high speed Internet access by cable modem service than by xDSL, and the rate of growth for cable modem subscribership continues to outpace the rate of growth for xDSL subscribership (*i e*, since the period June to December 2001, cable modem subscribership for high speed Internet access increased 55 percent versus an increase of only 35 percent for xDSL-based subscribership).[841] A primary benefit of unbundling hybrid loops – that is, to spur competitive deployment of broadband services to the mass market – appears to be obviated to some degree by the existence of a broadband service competitor with a leading position in the marketplace.[842] We therefore tailor our unbundling requirements to most effectively address those services that are not yet fully subject to competition (*i e.*, narrowband services in the mass market) rather than the broadband services that are currently provided in a competitive environment.

293. Several parties have advocated drawing a bright line between "old" and "new" investment in network architectures and using such a division to articulate our unbundling requirements.[843] Others contend that we should make no such distinction.[844] Based on our

---

[840] *See* SBC Reply at 95, Allegiance Feb 13, 2003 *Ex Parte* Letter at 2 (asserting that the Commission should consider the existence of an intermodal competitor with a leading position in the market).

[841] *High Speed Services December 2002 Report* at Table 2 (noting that cable companies provide 6 8 million lines capable of providing at least 200 kbps in both direction, compared to only 1.8 million xDSL lines) The *High Speed Services December 2002 Report* notes the percentage change of growth For coaxial cable services providing at least 200 kbps in both directions, cable companies provided 4 394 million lines as of December 2001. This number increased to 6.819 million lines by June 2002 By comparison, wireline carriers provided 1 369 million such lines as of December 2001 and a total of 1 852 million such lines by June 2002 Thus, not only do cable companies provide more high speed lines capable of providing at least 200 kbps in both directions than xDSL-based carriers, but cable companies continue to outpace xDSL-based carriers in terms of the rate of growth of such subscribership *See id* at Table 2; *see also id* at Table 1 (noting that cable companies provide 9 1 million cable modem-based lines compared to 5.1 million ADSL-based lines provided by LECs), *see also* Covad Siwek/Sun Decl at paras 58-59 As a result, cable companies' leading position in providing broadband services to the mass market appears to be increasing rather than leveling off.

[842] Allegiance Feb 13, 2003 *Ex Parte* Letter at 2 (asserting that the Commission should consider the existence of an intermodal competitor with a leading position in the market).

[843] *See, e g*, Alcatel Comments at 15-17, SBC Reply at 109, Verizon Jan 10, 2003 *Ex Parte* Letter at 6-7 (proposing a line drawn on voice-grade versus broadband capability), Verizon Nov. 22, 2002 *Ex Parte* Letter at 4

[844] AT&T Reply at 216-19 (advocating "unified loops" theory and arguing that home-run copper is not sufficient to address impairment); Covad Reply at 46-54, WorldCom Reply at 111-13 (advocating in support of unbundling all the features, functions, and capabilities of loops, including those provided by means of DLC systems and packet-switching equipment), Letter from Jonathan Askin, General Counsel, ALTS, to Marlene H Dortch, Secretary, FCC, CC Docket No 01-338 at 5 (filed Feb 13, 2003) (ALTS Feb 13, 2003 *Ex Parte* Letter) (arguing that the Commission should not limit access to capacity on any fiber-fed loop plant), Letter from Jonathan Askin, General (continued. ..)

evaluation of impairment, as informed by the two factors noted above, we determine that drawing such a bright line is practical, if the line is drawn between legacy technology and newer technology. In fact, we conclude that such a line is best drawn based on technological boundaries rather than transmission speeds, bandwidth, or some other factor – the technical characteristics of packet-switched equipment versus TDM-based equipment, for example, are well-known and understood by all members of the industry.

294. We stress that the line drawing in which we engage does not eliminate the existing rights competitive LECs have to obtain unbundled access to hybrid loops capable of providing DS1 and DS3 service to customers.[845] These TDM-based services – which are generally provided to enterprise customers rather than mass market customers – are non-packetized, high-capacity capabilities provided over the circuit switched networks of incumbent LECs. To provide these services, incumbent LECs typically use the features, functions, and capabilities of their networks as deployed to date – *i e* , a transmission path provided by means of the TDM form of multiplexing over their digital networks – or certain capabilities of multi-use integrated equipment (*e.g* , integrated line cards deployed in DLC systems).[846] 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. In this regard, we prohibit 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. To ensure competitive LECs receive the transmission path within the parameters we establish, we determine that any incumbent LEC practice, policy, or procedure that has the effect of disrupting or degrading access to the TDM-based features, functions, and capabilities of hybrid loops for serving the customer is prohibited under the section 251(c)(3) duty to provide unbundled access to loops on just, reasonable, and nondiscriminatory terms and conditions.[847]

295. Finally, in balancing potential impairment against our obligations under section 706, we conclude that the costs associated with unbundling these packet-based facilities outweigh the potential benefits. A number of parties have argued that unbundling requirements deter the incentive of incumbent LECs to take risks and deploy fiber-based networks because

(Continued from previous page) ———————————

Counsel, ALTS, to Marlene H Dortch, Secretary, FCC, CC Docket No 01-338 at 3 (filed Jan. 31, 2003) (ALTS Jan. 31, 2003 *Ex Parte* Letter) (advocating in support of unbundling requirements on fiber-fed loop plant)

[845] HTBC Feb 7, 2003 *Ex Parte* Letter at 2; SBC Jan 24, 2003 *Ex Parte* Letter.

[846] In their submissions in this proceeding, incumbent LECs demonstrate that they typically segregate transmissions over hybrid loops onto two paths, *i e* , a circuit-switched path using TDM technology and a packet-switched path (usually over an ATM network) *See, e g* , SBC Jan. 15, 2003 *Ex Parte* Letter at 4 (providing diagram to illustrate that its network architecture consists of a TDM-based portion and a packet-switched portion).

[847] Notwithstanding our prohibition against disrupting or degrading unbundled access to the TDM capabilities of hybrid loops, incumbent LECs may remove copper loops from their plant so long as they comply with our Part 51 network notification requirements, as amended by this Order, and any applicable state law

they would face reduced returns on their investment.[848] We recognize that, particularly in the realm of next-generation network capabilities, unbundling requirements could have the unintended effect of blunting innovation because such an approach would largely lock competitive LECs to the technological choices of the incumbent LECs. We therefore consider the effect of other approaches, such as the subloop access and remote terminal collocation requirements, discussed above, on stimulating the deployment of advanced telecommunications infrastructure. For these reasons, we conclude that it is consistent with our section 706 mandate to promote investment in infrastructure by refraining from unbundling incumbent LECs' next-generation network facilities and equipment.

296. *Narrowband Services.* With respect to providing unbundled access to hybrid loops for a requesting carrier to provide narrowband service,[849] we require incumbent LECs to provide an entire non-packetized transmission path capable of voice-grade service (*i e* , a circuit equivalent to a DS0 circuit) between the central office and customer's premises Pursuant to this requirement, competitive LECs will be able to obtain access to UNE loops comprised of the feeder portion of the incumbent LEC's loop plant, the distribution portion of the loop plant, the attached DLC system, and any other attached electronics used to provide a voice-grade transmission path between the customer's premises and the central office.[850] Consistent with the access requirements for broadband services noted above, we limit the unbundling obligations for narrowband services to the TDM-based features, functions, and capabilities of these hybrid loops. Incumbent LECs may elect, instead, to provide a homerun copper loop rather than a TDM-based narrowband pathway over their hybrid loop facilities if the incumbent LEC has not removed such loop facilities.[851]

297. We recognize that providing unbundled access to hybrid loops served by a particular type of DLC system, *e g* , Integrated DLC systems, may require incumbent LECs to implement policies, practices, and procedures different from those used to provide access to loops served by Universal DLC systems.[852] These differences stem from the nature and design of

---

[848] *See* Corning Comments at 7-9

[849] Narrowband services include traditional voice, fax, and dial-up modem applications over voice-grade loops

[850] As discussed below, we do not require incumbent LECs to maintain or retain copper loops if they have deployed fiber replacements. Incumbent LECs have the option of either providing competitive LECs with unbundled access to a voice-grade channel over a hybrid loop or, to the extent a copper loop exists, the existing copper loop.

[851] As Qwest points out, when incumbent LECs construct new loop plant, they frequently overlay fiber facilities that supplement existing loops Qwest Comments at 45; Alcatel Comments at 16 (noting that, when incumbent LECs deploy fiber loops, competitive LECs would continue to maintain access to legacy copper transmission facilities) Thus, the construction of new facilities does not in itself alter a competitive LEC's ability to use the incumbent's network Qwest Comments at 45. Qwest explains that it "does not proactively remove copper facilities in the case of an overlay" so that requesting carriers should be able to continue providing service in these circumstances Qwest Comments at 45-46.

[852] McLeodUSA Dec 18, 2002 *Ex Parte* Letter at 10-11, Letter from Joan Marsh, Director, Federal Government Affairs, AT&T, to Marlene H Dortch, Secretary, FCC, CC Docket Nos 01-338, 96-98, 98-147 at 2-3 (filed Dec 4, 2002) (AT&T Dec 4, 2002 *Ex Parte* Letter) (describing operational issues related to providing unbundled access to (continued.)

Integrated DLC architecture. Specifically, because the Integrated DLC system is integrated directly into the switches of incumbent LECs (either directly or through another type of network equipment known as a "cross-connect") and because incumbent LEC's typically use concentration as a practice for engineering traffic on their networks, a one-for-one transmission path between an incumbent's central office and the customer premises may not exist at all times. Even still, we require incumbent LECs to provide requesting carriers access to a transmission path over hybrid loops served by Integrated DLC systems.[853] We recognize that in most cases this will be either through a spare copper facility or through the availability of Universal DLC systems.[854] Nonetheless even if neither of these options is available, incumbent LECs must present requesting carriers a technically feasible method of unbundled access.[855]

(Continued from previous page) ———————————

loops served by DLC systems using a GR-303 interface, *i e* , integrated DLC systems, and proposing some solutions), McLeodUSA Nov 15, 2002 *Ex Parte* Letter at 1

[853] *See* SBC Jan 15, 2003 *Ex Parte* Letter at 3, SBC Jan 24, 2003 *Ex Parte* Letter, Attach 2 at 3-4

[854] *See* Letter from Jim Lamoureux, Senior Counsel, SBC, to Marlene H Dortch, Secretary, FCC, CC Docket No. 01-338 at 1 (filed Dec 10, 2002) (SBC Dec 10, 2002 *Ex Parte* Letter) (describing DLC deployment in SBC's region) SBC explains that, for 99 88% of SBC's lines served over Integrated DLC, competitive LECs have access to Universal DLC or spare copper facilities as alternatives to the transmission path over SBC's Integrated DLC system *Id.*

[855] We recognize that it is technically feasible (though not always desirable for either carrier) to provide unbundled access to hybrid loops served by Integrated DLC systems Incumbent LECs can provide unbundled access to hybrid loops served by integrated DLC systems by configuring existing equipment, adding new equipment, or both *See* McLeodUSA Dec 18, 2002 *Ex Parte* Letter 10-11 Qwest explains, for example, that it can provide a UNE loop over Integrated DLC systems by using a "hairpin" option, *i e* , configuring a "semi-permanent path" and disabling certain switching functions. *See* Qwest Nov 13, 2002 *Ex Parte* Letter at 23 (describing "hairpin" solution to providing UNE loop over Integrated DLC system), *see also* Telcordia, Inc., NOTES ON THE NETWORKS, SR-2275, Issue 4, 12.13 2 1 (Oct 2000) (describing means for incumbent LECs to provide unbundled loops to competitive LECs over integrated DLC systems). In addition, we understand that some Integrated DLC systems can simulate Universal DLC systems *See* Telcordia, Inc., NOTES ON FIBER-IN-THE-LOOP (FITL), SR-Notes-Series-10, Issue 1, 2 3 (Jul. 2001) (noting that many modern Integrated DLC systems "can operate in UDLC mode "). Frequently, unbundled access to Integrated DLC-fed hybrid loops can be provided through the use of cross-connect equipment, which is equipment incumbent LECs typically use to assist in managing their DLC systems. McLeodUSA Nov. 15, 2002 DLC systems *Ex Parte* Letter at 10-11 (describing use of cross-connect equipment to provide unbundled loops over Integrated DLC systems), *Pronto Modification Order*, 15 FCC Rcd at 17565-66, App B, C (showing that SBC typically uses a cross-connect in its network to establish the connection between the feeder loop plant and its circuit and packet switches), Verizon July 19, 2002 *Ex Parte* Letter at 3 (showing that Verizon typically uses central office terminations and cross-connects) McLeodUSA explains that an incumbent LEC can configure most Integrated DLC systems to assign requesting carriers "individual interface groups" that assist in establishing a complete transmission path between the central office and the customer's premises. In this way, incumbent LECs can provide Integrated DLC-fed hybrid loops on an unbundled basis McLeodUSA Dec 18, 2002 *Ex Parte* Letter at 10 In addition, McLeodUSA further explains that manufacturers either already account for an incumbent LEC's regulatory obligations in designing equipment (and software used to upgrade that equipment) or are planning to do so *Id* at 11 n 15

b. Enterprise Market Loops

(i) Record Evidence

298. The record contains a wealth of evidence to inform our enterprise market loop analyses. First, it reflects that competitive LECs have deployed fiber that enables them to reach customers entirely over their own loop facilities.[856] When competitive LECs self-deploy fiber they predominantly do so at the OCn-level.[857] In addition, the record shows that competitors have built fiber loops to buildings that carry a significant portion of the competitive traffic in certain MSAs.[858] In contrast, the record contains little evidence of self-deployment, or availability from alternative providers, for DS1 loops.[859] As for DS3 loops, evidence of self-deployment and wholesale availability is somewhat greater than for DS1s and is directly related to location-

[856] Both competitive LECs and incumbent LECs report that approximately 30,000, *i e*, between 3% to 5%, of the nation's commercial office buildings are served by competitor-owned fiber loops *See, e g*, ALTS *et al* Comments at 52 (citing to WorldCom Comments, CC Docket Nos 96-98 at 7 (filed June 11, 2001) (WorldCom June 11, 2001 High-capacity Comments)), Sprint Comments at 23-24, WorldCom Comments at 74-76, *see also BOC UNE Rebuttal Report* at iv, 44, Letter from Ruth Milkman, Counsel for WorldCom, to Marlene H Dortch, Secretary, FCC, CC Docket Nos 01-338, 96-98, 98-147 at 3 (filed Oct 30, 2002) (discussing high-capacity transmission facility deployment) (WorldCom Oct 30, 2002 *Ex Parte* Letter), AT&T Comments at 152 (citing proprietary information), Cbeyond *et al* Comments, CC Docket 96-98 at 23 (filed June 11, 2001) (Cbeyond *et al* June 11, 2001 High-capacity Comments) (citing confidential information in attached Affidavit of Michael P Duke, KMC Telecom, Inc (KMC Duke June 11, 2001 High-capacity Aff.) at para 5), NuVox *et al* Comments, Affidavit of Nicholas D Jackson, TDS Metrocom, Inc (TDS Jackson Aff.) at para 6, El Paso *et al.* Comments at 16. Competitive carriers indicate that most of these commercial office buildings are carrier hotels or large office buildings *See, e g*, ALTS *et al* Comments at 52, WorldCom June 11, 2001 High-capacity Comments at 9, El Paso *et al* Comments at 16 Some commenters indicate that other facilities-based competitive LECs may have self-deployed high-capacity loops, but have not submitted comments in this proceeding *See, e g*, SBC Comments at 102, Verizon Comments at 117

[857] *See, e g*, ALTS *et al* Comments at 52, CCG July 17, 2002 CLEC Survey *Ex Parte* Letter at 6-7, WorldCom Comments at 76, WorldCom Fleming Decl at para 10, NewSouth Reply at 17

[858] *See, e g*, *BOC UNE Rebuttal Report* at 45 (relating this figure to a typical Tier-I MSA but stating that New York, San Francisco, Washington, D C, and Los Angeles account for 40% of all data revenue nationwide)

[859] Based on the record as a whole, for DS1 loops and some DS3 loops, overbuilding to enterprise customers that require services over these facilities generally does not present sufficient opportunity for competitors to recover their costs and, therefore, may not be economically feasible *See, e g*, Covad Reply at 56, AT&T Jan 14, 2003 *Ex Parte* Letter at para 3 n 5, Letter from Joan Marsh, Director, Federal Government Affairs, AT&T, to Marlene H Dortch, Secretary, FCC, CC Docket Nos. 01-338, 96-98, 98-147, Attach B (filed Nov. 25, 2002) (AT&T Nov. 25, 2002 *Ex Parte* Letter) (providing loop build/no-build cost analysis); WorldCom Comments at 7, WorldCom Fleming Decl. at para 10, Allegiance Reply at 38, NewSouth Reply at 17. In limited cases where evidence exists that a competitive LEC is serving customers via their own DS1 loops, the record suggests this is largely because these competitive LECs have *already* self-provisioned OCn level capacity to that specific location and other deployment barriers have not precluded them from using that capacity to serve other customers at lower loop capacity levels at that same location *See* Letter from Joan Marsh, Director, Governmental Affairs, AT&T, to Marlene H Dortch, Secretary, FCC, CC Docket No 01-338, at para 2 (AT&T Jan 14, 2003 *Ex Parte* Letter), WorldCom June 11, 2001 High-capacity Comments at 8 (citing confidential information) and Attach B, Proprietary and Confidential Declaration of Jay Slocum (WorldCom Slocum Decl) at paras. 3-6

specific criteria.[860] Indeed, competitive LECs agree that at a three DS3 loop capacity level of demand, it is economically feasible to self-deploy,[861] and record evidence reveals that both AT&T and WorldCom have self-provisioned DS3 circuits to many customer locations.[862]

299. The record also contains extensive, albeit contradictory, evidence regarding the degree to which competitors rely on the incumbent LEC's facilities versus their own to provision loops to their customers. According to the BOC UNE Fact Report 2002, market statistics show that competitive LECs are now serving between 13 and 20 million business lines off their own switches – yet they have obtained only about 1.5 million unbundled loops to serve business customers.[863] The BOCs conclude that competitive LECs are, therefore, serving the remaining 85-95 percent of those 13-20 million self-switched business lines using "alternative facilities" instead of unbundled loops.[864] In addition, the BOCs state that virtually all of the high-capacity unbundled loops that competitive LECs have purchased in the BOC territories are DS1 loops and that competitive LECs have purchased only 140 unbundled DS3 loops, and not a single unbundled loop above a DS3 level.[865] The BOCs reason that these figures reflect that competitive LEC fiber networks are now so extensive in urban markets that they readily can be – and routinely are – extended as needed to pick up additional traffic from new customers in

---

[860] *See, e g*, WorldCom Fleming Decl at para 10 (when customer demand is projected at several DS3s or optical level capacity a self-build decision is made), WorldCom Comments at 7 (customers in a building must commit to at least three DS3 circuits before it is economically viable to extend fiber to that building); AT&T Comments at 134 (a competitive LEC can only self-deploy to a location with enormous demand, the smallest of which would be at the OC3 level), AT&T Nov 25, 2002 *Ex Parte* Letter at 3 (the amount of committed traffic to support construction of loops for large business customers is about three DS3s, *i e*, an OC3), and Attach B at 9 (at least three DS3s worth of demand is required before a facility build can generally be proven as financially prudent) The record also contains some evidence that DS3 loop services may be available from alternative providers other than the incumbent LECs in some buildings where competitive capacity to the building has already been provisioned at the OCn level *See* Sprint Comments at 23-24, Letter from John E Benedict, Senior Attorney, Sprint, to Marlene H Dortch, Secretary, FCC, CC Docket 01-338, 96-98, 98-147, Attach at 1 (filed Oct. 16, 2002) (Sprint Oct. 16, 2002 *Ex Parte* Letter), WorldCom Comments at 16, KMC Duke June 11, 2001 High-capacity Aff at para 5 (citing confidential information), SBC Reply at 143 (citing AT&T Comments at 150 n 10 (citing confidential information)), WorldCom Slocum Decl at paras 3-6, AT&T Reply at 185 (citing CCG July 17, 2002 CLEC Survey *Ex Parte* Letter at 6 & Table 3), NuVox *et al* Comments at 7

[861] *See supra* note 860.

[862] *See* SBC Reply at 143 (citing AT&T Comments at 150 n 10 (confidential information)), WorldCom Slocum Decl at paras 3-6; *see also* CCG Jul 17, 2002 CLEC Survey *Ex Parte* Letter (indicating that competitive loop capacity has been deployed into buildings but not indicating at what capacity level customers are served in those buildings)

[863] BOC UNE Fact Report 2002 at IV-1 through IV-4

[864] The BOCs also claim that competitive LECs have deployed approximately 1,800 fiber "networks" in the 150 largest MSAs BOC UNE Fact Report 2002 at I-3.

[865] BOC UNE Fact Report 2002 at IV-6. Specifically, the BOC UNE Fact Report 2002 states that competitive LECs have purchased a total of 72,000 high-capacity loops UNEs – all but 140 of which are DS1s *Id*

adjacent buildings, or down the block, and on outward from there.[866] According to the BOCs, once a competitive LEC deploys its initial fiber ring, extending that fiber incrementally to new customers is comparatively inexpensive.[867]

300. Competitive LECs strongly disagree with the BOCs' figures on line deployment, claiming these numbers are far less reliable than the data the Commission itself collects to measure competitive LEC deployment and the level of local competition.[868] Competitive carriers point to our own statistics which reveal that competitive LECs serve fewer than 9 million business lines nationwide, *i.e.*, not the 13 to 20 million lines that the incumbent LECs claim.[869] They further claim that this discrepancy is due in large part to the BOCs' inclusion of special access lines as alternative facilities in the BOC UNE Fact Report 2002.[870] Further, these commenters correctly note that the Commission staff's *Local Competition Report*, which calculates approximately 8 9 million voice-grade equivalent (VGE) lines for competitive LECs, explicitly indicates that it does not count special access lines as competitive LEC self-provisioned or "alternative provided" lines.[871] The BOCs acknowledge the inclusion of special access lines in their data, thus accounting for the approximate 15.8 million VGE differential from the Commission's *Local Competition Report*.[872]

301. Finally, the record indicates that various types of alternative transmission technologies to high-capacity local loops, *i.e.*, fixed-wireless, unlicensed-wireless, and satellite facilities, have been deployed in limited circumstances at certain locations.[873] The record, however, does not indicate the extent to which these alternative transmission technologies have

---

[866] *See* BOC UNE Fact Report 2002 at IV-4

[867] *Id*

[868] *See, e g*, El Paso *et al* Comments at 16-18 & n 68 (citing numerous other competitive LEC comments)

[869] AT&T Reply, Declaration of C Michael Pfau (AT&T Pfau Reply Decl) at paras 2, 12-14 (describing how the incumbent LECs' methods for determining the number of competitive loops deployed substantially overstates the actual number by including, *inter alia*, leased special access circuits and other "flawed" assumptions) *See* Covad Reply 55, AT&T Reply at 182-85, NuVox *et al* Reply at 42; WorldCom Comments at 76 (arguing that even in the most competitive market in the country, incumbent LECs have seven times more fiber than competitive LECs do)

[870] *See, e g*, AT&T Pfau Reply Decl at paras 14 (indicating that his experience recognizes that a much greater proportion of circuits are bought as special access).

[871] *See Local Competition June 2002* at 1 n 2, <http://www fcc gov/wcb/iatd/stats html>.

[872] S*ee BOC UNE Rebuttal Report* at 45 (acknowledging that special access lines are, indeed, included in their numbers). In evaluating the extent to which competitive LECs have self-provisioned, the Commission has instructed competitive carriers to exclude local services provisioned over special access facilities in their reported data *See supra* note 871 Because the Commission places little weight on the availability of special access in its impairment analysis, we do not rely on evidence that includes such lines.

[873] *See, e g*, BellSouth Comments at 42-43, SBC Comments at 91, Verizon Comments at 118.

been deployed or where they are available on a wholesale basis.[874] Nevertheless, it appears that, in certain circumstances, such technologies have been used by competitive LECs as alternatives to incumbent LEC unbundled high-capacity loops.[875] Incumbent LECs report that competitive carriers can often deploy fixed wireless connections more quickly and cheaply than fiber, and that free space optics, *i e* , laser-guided high-bandwidth connections to a fiber backbone, is now a viable technology.[876] Competitive LECs, however, question the extent to which this deployment is widespread and point to certain technical limitations of such technologies.[877]

(ii) Impairment Analysis

(a) Operational and Economic Barriers to Serving the Enterprise Market

302. Enterprise market customers demand reliable services that include customized products, significant customer care, and enhanced security features.[878] Moreover, they prefer a single provider capable of meeting all their needs at each of their business locations which may be in multiple locations in different parts of the city, state or country.[879] The economics of serving a particular enterprise customer at each of its business' facilities may be very different depending on the location of the facility.[880] Small to medium-sized business customers generally demand services at the DS1, and to a lesser extent, DS3 capacities.[881] Competitive LECs meet

---

[874] *See, e g* , ALTS *et al* Comments at 45, Allegiance Comments at 19-22, Allegiance Reply at 36, AT&T Fea/Giovannucci Reply Decl at 21 n 19, WorldCom June 11, 2001 High-capacity Comments at 13-14, Covad Comments at 49-50, Sprint Comments at 24-25, TDS Jackson Aff at para 9

[875] *See Local Telephone Competition December 2002* Report, *see also* Allegiance Comments at 20-21, Sprint Comments at 25, Verizon Comments at 118

[876] *See, e g* , Verizon Comments at 118 (stating that fixed wireless and free space optics is available for high-capacity links), SBC Reply at 91 (fixed wireless and satellite are broadband options for small business users)

[877] *See, e g* , Sprint Comments at 24-25 (indicating its significant experience with fixed wireless and noting its limitations and delayed development), TDS Jackson Aff. at para 9 (indicating wireless loop alternatives are too costly, not available in TDS markets, and are not sufficiently robust platforms for TDS services), WorldCom June 11, 2001 High-capacity Comments, Attach D, Affidavit of A Daniel Kelley & Richard A Chandler (WorldCom Kelley & Chandler June 11, 2001 High-capacity Aff) at paras 38-45 (arguing that there have been abortive attempts by competitors to provide high-capacity access to business customers using several fixed wireless technologies). We note that fixed wireless alternatives require Commission issued licenses and are subject to the availability of limited spectrum resources

[878] *See, e g* , GCI Reply at 20.

[879] *See, e g* , WorldCom Comments at 13-18, Covad Reply at 57.

[880] *Id* The loop capacity impairment approach we adopt today accommodates the need to serve a single enterprise customer at multiple locations because it recognizes that it may only be economical to build at the primary location where the loop capacity demanded is very high, enabling the competitive LEC to obtain unbundled lower capacity loops to serve the customer's other business locations

[881] *See, e g* , NewSouth Reply at 16 (DS1 loops serve smaller businesses and DS3 and OCn serve larger businesses), NuVox *et al.* Reply at 39-41 (T1 facilities serve innovative bundled service offerings efficiently to small (continued..)

these demands by providing packages of services, carrying both voice and data traffic, sold under month-to-month or short-term contracts.[882] In contrast, larger enterprise customers demand extensive services using multiple DS3s or OCn loops typically offered under long-term arrangements which guarantee a substantial revenue stream over the life of the contract [883]

303. Because the cost to self-deploy local loops at any capacity is great,[884] and the cost to deploy fiber does not vary based on capacity,[885] a competitive LEC that plans to self-deploy its own facilities must target customer locations where there is sufficient demand from a potential customer base, usually a multiunit premises location, to generate a revenue stream that could recover the sunk construction costs of the underlying loop transmission facility, including laying the fiber and attaching the requisite optronics to light the fiber.[886] For competitive LECs deploying a very high-capacity loop facility to a particular customer location, the revenue commitment relative to the cost of constructing that loop facility may result in a positive profit margin for that single customer location, making it economically feasible from a profitability perspective, to self-provision in that particular case.[887] Even when the customer demand at a certain location may support self-deployment from a pure cost recovery perspective, however, there are other obstacles that must be overcome before such self-deployment can effectively occur.[888] These other barriers include the inability to obtain reasonable and timely access to the customer's premises both in laying the fiber to the location and getting it into the building

(Continued from previous page) ———————————

and medium business customers), Allegiance Reply at 35-36 (a significant segment of business customers are small and medium-sized enterprises that use DS1 capacity services)

[882] *See, e g*, ITC^Deltacom Aug 16, 2001 Petition at 1-2, NewSouth Comments at 5, Affidavit of Edward J. Cadieux, NuVox (NuVox Cadieux Jan 24, 2003 Aff) at paras 4-5, *in* Letter from Steven A Augustino, Counsel for NuVox *et al*, to William Maher, Chief, Wireline Competition Bureau, FCC, CC Docket No. 01-338, 96-98, 98-147 (filed Jan 24, 2003), *see also* Letter from Kimberly Scardino, Senior Counsel, WorldCom, to Marlene H Dortch, Secretary, FCC, CC Docket Nos 01-338, 96-98, 98-147 at 3 (filed Jan 31, 2003) (WorldCom Jan 31, 2003 *Ex Parte* Letter).

[883] *Id*

[884] In discussing the general economic characteristics of loop deployment above, we noted that loop construction costs do not vary by the capacity of the loop and that the ability to recover the high fixed and sunk costs is the key factor to considering impairment We also observed that loop impairment is closely related to the demands of the individual customer served by such loop and the capacity level of the loop provided *See supra* Part VI A 3

[885] *See supra* Part VI A 3, *see also* Letter from Stephen W. Crawford, General Counsel, El Paso Global Networks, to Marlene H Dortch, Secretary, FCC, CC Docket Nos 01-338, 96-98, 98-147 at 1 (filed Feb 5, 2003) (El Paso Feb 5, 2003 *Ex Parte* Letter)

[886] *See, e g*, Allegiance Comments at 23, WorldCom Comments at 76, AT&T Reply at 145, *see also* TDS Jackson Aff at para 8.

[887] *Id*; *see also* TDS Jackson Aff at paras 8-10.

[888] *See, e g*, El Paso *et al* Comments at 20-21

thereafter,[889] as well as convincing customers to accept the delays and uncertainty associated with deployment of alternative loop facilities.[890]

304. The record reflects that constructing local loops generally takes between 6-9 months without unforeseen delay.[891] Competitive LECs describe numerous ways in which further delay affecting construction decisions and deployment occurs. These delays can be attributable to securing rights-of-way from local authorities which is necessary before competitive LECs can dig up streets to lay fiber. Often, carriers must engage in lengthy negotiations with local authorities over the ability to use the public rights-of-way.[892] Similarly, obtaining building and zoning permits adds further delay as local authorities often conduct extensive inquiries into the planned construction activity of the competitive carrier.[893] Moreover, commenters note that many local jurisdictions impose construction moratoriums which prevent the grant of a franchise agreement to construct new fiber facilities in the public rights-of way.[894]

305. In addition to delays associated with gaining access to rights-of-ways and permits from local or municipal authorities, competitive LECs face additional barriers with regard to serving multiunit premises due to difficulties and sometimes outright prohibitions in gaining building access.[895] Although multiunit premises could present substantial economic opportunities for competitors, if the entity or individual controlling access to the premises does not allow a competitor to reach its customer residing therein (or places unreasonable burdens on the competitive LEC as a condition of entry), the competitive LEC may be unable to serve its

---

[889] *See, e g*, ALTS *et al* Comments at 56 (discussing other barriers competitive LECs face in self-deployment), AT&T Reply at 174-79

[890] *See, e g*, Sprint Comments at 23, AT&T Reply at 175 Competitive LECs argue that they can not feasibly construct loop facilities and justify the fixed and sunk costs that self-provisioning will entail in advance of securing firm customer commitments guaranteeing the likelihood of cost recovery *See, e g*, NuVox *et al* Comments at 74, AT&T Reply at 176-77, Supra Comments at 7 This barrier to entry can be exacerbated when states adopt service quality rules that require local service providers to be in a position to provision service within a specified number of days after a customer signs up for service *See, e g*, Ohio Admin Code Ch 4901 § 1-5-20 (C); 220 ILCS 5 § 13-712, 83 ILAC § 730 540.

[891] *See, e g*, ALTS *et al* Comments at 58, WorldCom Comments at 75 (citing WorldCom Fleming Decl).

[892] Because of the expense and delay associated with filing a preemption petition, carriers rarely avail themselves of section 253(c) of the Act. *See* 47 U S C § 253(c)

[893] *See, e g*, ALTS *et al* Comments at 23-24. Incumbent LECs argue, however, that actual competitive LEC deployment undermines these arguments *See, e g*, SBC Reply at 156

[894] *See, e g*, ALTS *et al* Comments at 42, 50, 56, 58, *see also* New York Department Comments at 4. Incumbent carriers, however, generally argue that competitive LECs are not impaired by rights-of-way costs and delays BellSouth argues that mandatory access to rights-of-way means that there are not generally extreme delays caused by disputes, and competitive LECs can turn to the accelerated docket if need be BellSouth Comments at 68-69

[895] *See, e g*, AT&T Reply at 175 (stating that the time to negotiate building access arrangements can be up to 18 months), *see also* WorldCom Oct 25, 2002 Building Access *Ex Parte* Letter

customer via its own facilities,[896] even where a competitive carrier may be ready, willing, and otherwise able to self-deploy the loop.[897]

306. In conducting our impairment analysis, we give substantial weight to the cost of constructing a loop facility in relation to the ability of the competitive carrier to recover those costs over time, *i.e.*, where the traffic volume and associated revenue potential from the loop facility allow a carrier to earn a return necessary to sustain its operations at that location. We do, however, consider other factors affecting competitive LEC loop deployment, including access to public and private rights-of-way and multiunit premises access, that incumbent LECs have not or do not similarly face as a result of their first-mover advantage. Altogether, these factors directly influence the ability of competitive carriers to raise capital to deploy service to customers using their own loop facilities in a timely manner. The record reflects that these barriers can be overcome at certain loop capacity levels and certain service locations as we explain below.[898]

(b) General Framework

307. We organize our analysis of high-capacity loops based on capacity level because it is a more reliable indicator of the economic abilities of a requesting carrier to utilize third-party alternatives, or to self-deploy. At the same time, we recognize that operational and economic concerns will vary depending on the geographic market served. We find that the extent of competitive deployment of high-capacity loop facilities can vary tremendously by geographic area More specifically, the barriers to entry requesting carriers face are most precisely identified on each geographic route serving a particular customer location. Where our record permits, however, we distill general characteristics of high-capacity loop deployment on a national level sufficient to make nationwide determinations of impairment and non-impairment. Where the record indicates impairment and that only with more granular evidence could a finding of non-impairment be made, we establish triggers to identify non-impairment based on customer location-specific evidence.

---

[896] *See, e g*, AT&T Reply at 178-79. Verizon argues that, in the interim, competitive LECs can purchase special access services or use wireless or "free-space optics" loop in the interim during construction of the loop Verizon Comments at 120-23. Competitive LECs, however, question the extent to which these wireless modes are available for use on an interim basis *See supra* Part VI A 4 a (iii)(b) As for Verizon's suggestion that the use of special access services is sufficient, the Commission has stated it does not factor the availability of incumbent LEC's special access services into its loop impairment analysis *See supra* Part V.B 1 d (ii)

[897] *See, e g.*, ALTS *et al.* Comments at 56-58; WorldCom Oct 25, 2002 Building Access *Ex Parte* Letter, AT&T Reply at 175 We address building access-related barriers to loop deployment in greater detail below in our subloop and NID unbundling analyses, particularly, with respect to the Inside Wire Subloop We expect that the subloop and NID unbundling rules that we adopt today will substantially mitigate the adverse impact of many of the building access-related barriers requesting carriers face with respect to serving customers in multiunit premises, particularly where the incumbent LEC's network extends beyond the minimum point of entry at the premises and the wiring in the building is owned and controlled by the incumbent LEC Moreover, the Commission still has an open proceeding, WT Docket No. 99-217, related to building access *See Competitive Networks Order*, 15 FCC Rcd 22983

[898] *See supra* para. 298. *see also* Allegiance Comments at 23, ALTS *et al* Comments at 58.

308. In conducting our impairment analyses for the various types of high-capacity loops, we first consider evidence of whether competitive LECs have self-deployed such loop facilities, on either an intermodal or intramodal basis, to provide retail services to enterprise market customers.[899] In our analysis, we recognize that a variety of alternative high-capacity loop transmission technologies, in various stages of development and use, are offered to enterprise customers in certain locations as potential alternatives to their traditional high-capacity loops, *i e.*, different types of fixed-wireless, *e g.*, 38 GHz, LMDS, MMDS, and 24 GHz; satellite facilities; and unlicensed wireless.[900] As we have indicated above,[901] evidence of self-deployment demonstrates better than any other kind of evidence what business decisions competitive carriers have *actually* made regarding the feasibility to deploy facilities without relying on the incumbent LEC. This evidence shows us, as a practical matter, that competitive LECs have been able to surmount barriers to entry with respect to that particular loop deployment. We then consider the extent of this deployment, whether it occurs or could occur on a nationwide basis, or is more limited in scope. Next we look at the extent to which wholesale alternatives to the incumbent LEC's unbundled loops are available to competitive LECs to provision high-capacity loops to their customers. We consider whether these alternatives, including alternative transmission technologies, are available ubiquitously or only in certain places.

309. We note that our consideration of alternative loop technologies in the enterprise market analysis differs from our consideration of intermodal alternatives in our mass market analysis Different approaches are warranted because of the differences in how these technologies are deployed in these markets based on their suitability to individual customers, as well as the likelihood these technologies could be self-provisioned or made available to competitive carriers on a wholesale basis.[902] In the enterprise market, companies are able to target individual buildings and customers and determine which technology is the optimal means of reaching each customer. On the other hand, in the mass market where revenues are small, customers are typically served in large groups, using uniform technologies and mass marketing and provisioning techniques to minimize the cost of serving each customer.[903] As such, creating mechanisms to identify intermodal alternatives on an individual customer basis in the mass market is impractical, whereas it is feasible, in certain cases, in the enterprise market.

---

[899] *Iowa Utils Bd*, 525 U S at 389 (noting that the Commission must consider the availability of elements "outside the incumbent's network" when applying the "impair" standard) *See also* ITTA Jan 29, 2003 *Ex Parte* Letter, Attach at 1 (noting that the question is whether elements are available from sources other than incumbent LEC)

[900] *See. e g.*, BellSouth Comments at 42-43, SBC Comments at 91, Verizon Comments at 118, *see also* ALTS *et al* Comments at 45; Allegiance Comments at 19-22, Allegiance Reply at 36; AT&T Fea/Giovannucci Reply Decl at 21.

[901] *See supra* Part V B

[902] *See supra* Part V B 1 d (ii), *see also supra* Part VI A 4 a (iv)

[903] Thus, those technologies that can only be used for accessing certain customers and require equipment installation at the customer location, such as fixed wireless, have only proven to be economically viable for customers found in the enterprise market

310. We find that certain types of alternative loop technologies could be made available on a wholesale basis to competitive carriers for providing high-capacity loop services to particular building locations in the enterprise market. Providers of viable intermodal alternatives to mass market customers have shown no inclination to provide access to competing carriers to serve their customers, nor would we expect them to.[904] With respect to the ability of a competitive LEC to self-provision high-capacity loops using alternative loop technologies, there are substantial differences between the mass market and the enterprise market. For example, one of the mass market's major alternative loop technologies, cable telephony, is only available to cable TV companies that, because of their unique economic circumstances of first-mover advantages[905] and scope economies,[906] have access to the customer that other competitive carriers lack. Other technologies, such as fixed wireless, have not proven to be viable or deployable on a mass market scale. This contrasts with the enterprise market, where the record reflects that alternative technologies are available to some degree at certain locations that might be used by competitive carriers to provide high-capacity loops to enterprise customers.

(c) Capacity-based Impairment Findings

(i) Dark Fiber Loops

311. We find on a national basis that requesting carriers are impaired at most customer locations without access to dark fiber loops. Dark fiber, unlike "lit" fiber, is unused fiber within an existing fiber optic cable that has not yet been activated through optronics to render it capable of carrying communications services.[907] Users of unbundled dark fiber loops, similar to users of dark fiber transport,[908] provide the electronic equipment necessary to activate the dark fiber strands to provide services.[909] While the underlying capacity level of a strand of dark fiber is comparable in total capacity to an OCn loop, we address dark fiber loops separately from OCn loops due to economic and operational characteristics that distinguish dark fiber from "lit"

---

[904] A provider that has privileged access to a single mass market customer potentially will lose the customer if it provides wholesale access to a potential competitor.

[905] These companies had the advantage of beginning with exclusive franchises and a captive market. These advantages are not available to other entrants.

[906] Scope economies exist when the cost of providing a service is lower when combined with other services. The cost of providing cable telephony to customers is lower for cable TV companies because they also provide video services to those customers.

[907] *See supra* note 628 (definition of dark fiber)

[908] *See infra* Part VI C.4 c (i)

[909] By itself, dark fiber has virtually unlimited capacity. It is the electronics that define the capacity. *See* El Paso Feb 5, 2003 *Ex Parte* Letter at 2, *see also* AT&T Comments at 130, Letter from Thomas Jones, Counsel for Conversent Communications, to Marlene H. Dortch, Secretary, FCC, CC Docket Nos. 01-338, 96-98, 98-147 at 1-2 (filed Dec. 24, 2002) (Conversent Dec. 24, 2002 *Ex Parte* Letter)

fiber.[910] We make our determination of impairment based on the high sunk costs associated with deploying high-capacity loop facilities and lack of evidence showing alternatives at specific customer locations.

312. Dark fiber exists in a carrier's network as unused fiber available because that carrier has deployed fiber in the first instance for the express purpose of lighting certain strands of it to serve a particular customer location.[911] The "dark" fiber strands, however, remain unlit. Dark fiber loop construction, like loops generally, involves substantial fixed and sunk costs. The primary costs associated with fiber deployment lie in the substantial sunk costs associated with physically laying the fiber cable.[912] In addition, there are other barriers that must be overcome before deployment can effectively occur.[913] These other barriers include the inability to obtain reasonable and timely access to the customer's premises both in laying the fiber to the location and getting it into the building thereafter,[914] as well as convincing customers to accept the delays and uncertainty associated with deployment of alternative loop facilities.[915] It is only when a competitive LEC has sufficient demand for "lit" fiber to a particular customer location to enable it to recover the fixed and sunk costs of the fiber deployment that it is economically feasible for that competitor to deploy fiber to that location.[916] When a fiber build decision is made, carriers

[910] For example, competitive providers that use unbundled dark fiber claim that it can offer a higher level of service than "lit" transmission because unbundled dark fiber integrates more efficiently into their networks by reducing the number of failure points and by providing the competing carrier with greater ability to test for quality and maintenance *See* Conversent Comments at 7, Letter from Scott Sawyer, Vice President - Regulatory Affairs, Conversent Communications, to Marlene H Dortch, Secretary, FCC, CC Docket Nos 01-338, 96-98, 98-147 at 3 (filed Oct. 10, 2002) (Conversent Oct 10, 2002 *Ex Parte* Letter) Other competitive carriers indicate that dark fiber gives them greater control over their own network components which is an important aspect of their competitive service offerings *See* Letter from Lawrence R. Freedman, Counsel for Norlight, to Marlene Dortch, Secretary, FCC, CC Docket Nos 01-338, 96-98, 98-147 at 3 (filed Dec. 30, 2002) (Norlight Dec 30, 2002 *Ex Parte* Letter). In the *UNE Remand Order*, we recognized that the characteristics of dark fiber do not vary between loop and transport deployment Because dark fiber is more extensively used in transport, we discuss its characteristics in more detail below in our discussion of dark fiber transport and do not repeat such discussion here other than to indicate that the characteristics of dark fiber described therein pertain to dark fiber loops as well *See infra* Part VI C 4 c (i). Any operational or provisioning requirements associated with incumbent LEC provisioning of unbundled dark fiber transport apply equally to provisioning unbundled dark fiber loops *See id.*, para 385 (discussing issues associated with dark fiber access and granting states the flexibility to establish reasonable limitations and technical parameters)

[911] Competitive carriers indicate that they, unlike the incumbent LEC, can not build fiber loop plant until they have secured a substantial customer base and revenue stream *See* Letter from Robert J. Aamoth, Counsel for Dominion Telecom, to Michael K Powell, Chairman, FCC, CC Docket No 01-338 at 4 (filed Jan 28, 2003) (Dominion Jan 28, 2003 Aamoth *Ex Parte* Letter), *see also* El Paso *et al.* Comments at 9

[912] *See supra* Part VI.A 3 (discussing loop construction costs), *see also* El Paso Feb 5, 2003 *Ex Parte* Letter at 1

[913] *See, e g*, El Paso *et al* Comments at 20-21

[914] *See, e g*, ALTS *et al* Comments at 56 (discussing other barriers competitive LECs face in self-deployment); AT&T Reply at 174-79

[915] *See supra* note 890

[916] *See infra* Part VI A 4 b (i) (stating that evidence that the specific level of demand must be OCn or 3 DS3s of capacity into a particular customer location to justify competitive loop deployment), *see also supra* note 911

take advantage of the fact that they are already incurring substantial fixed costs to obtain the rights-of way, dig up the streets, and trench the cable, to lay more fiber than they immediately need. Once the significant fiber construction cost is incurred,[917] the record reflects that it is relatively easy and inexpensive to install fiber strands in excess of current demand at that time to maximize the use of the conduit and avoid the need to incur duplicate costs to retrench the same location in the future if demand for additional fiber facilities occurs.[918] As such, incumbent LECs are the largest source of intracity dark fiber nationwide as a result of their "first-mover" fiber deployment to the majority of customer locations.[919] This sharply contrasts with the availability of competitive dark fiber loops, which is necessarily limited by the economic barriers inherent in deploying alternative fiber loops, generally, except to certain customer locations.[920]

313. Because it is generally not economically feasible to deploy duplicate fiber loop facilities, the record reflects that a number of facilities-based competitive LECs rely on incumbent LEC unbundled dark fiber to provision "last-mile" services to small and medium-sized customers, particularly in rural, unserved, or underserved areas of the country.[921] These users of unbundled dark fiber provide the necessary optronics[922] and collocations that are preconditions to activating the fiber to serve customers. These carriers extensively deploy their own network facilities, *e g.*, switches, transport, and the necessary optronics to light dark fiber to enable the provision of competitive high-capacity local service to end users in direct competition with the incumbent LEC.[923] These competitive LECs argue that they seek to construct their own fiber loops all the way to the customer if economically feasible to self-deploy, but that in many areas the level of demand is not sufficient to warrant overbuilding the dark fiber already available

---

[917] *See supra* Part VI A 3 (discussing loop construction costs), *see also* El Paso *et al.* Comments at 20-21

[918] *See, e g*, El Paso *et al* Comments at attached TPUC testimony at 8 (indicating an industry average of a "mere" $1 00 per foot to increase fiber placement from a 72 fiber strand cable to the next standard 144 size fiber strand cable), *see also* Norlight Dec 30, 2002 *Ex Parte* Letter at 5.

[919] *See* Norlight Dec 30, 2002 *Ex Parte* Letter at 5 (the first carrier to lay fiber to a particular location will lay significantly more than it will need because the incremental cost of burying additional fibers is negligible, requiring competitors to construct duplicate facilities where there is already excess capacity in place is precisely the inefficiency the *USTA* court instructed the Commission to avoid)

[920] *See supra* note 905.

[921] *See, e g*, Dominion Jan 28, 2003 Aamoth *Ex Parte* Letter at 4 (dark fiber loops are especially critical because they are often located in areas where few or no competitors presently serve customers, eliminating unbundled dark fiber loops would deprive hundreds of businesses in Tier II and III cities from receiving competitive service), Norlight Dec. 30, 2002 *Ex Parte* Letter at 5 (in smaller rural markets where dark fiber exists there typically is no demand or expected growth in demand to warrant additional facilities), Norlight Comments at 2-4 (Norlight serves Tier II and III cities where the incumbent LEC is the only option other than cost prohibitive self-deployment to extend competitive service to customers).

[922] We note that the cost of electronics, such as those used to activate dark fiber, are not sunk costs like fiber construction costs because they can be moved from one location to another location upon exit from a particular location

[923] *See, e g*, Norlight Dec 30, 2002 *Ex Parte* Letter at 2

from incumbent LECs.[924] Because it is not economically feasible to self-deploy to many enterprise market customer locations, particularly less densely populated areas, unbundled dark fiber loops enable competitive carriers to build facilities-based networks to serve customers at those locations[925] with the least reliance on the incumbent LEC's facilities.[926] We find that dark fiber loops allow competing carriers to provide services without incurring many of the high sunk costs of self-deploying the loop facility, but still require significant investment in collocation and optronics. We expect that unbundling of dark fiber loops will encourage construction of alternative facilities because it will provide facilities-based carriers the means of obtaining the last-mile facility necessary to serve customers over competitive networks comprised largely of facilities other than the incumbent LEC's. The availability of dark fiber loops increases the ability of facilities-based competitive LECs to reduce their reliance on unbundled "lit" high-capacity loops at locations where dark fiber loops are available to them, encouraging investment in the optronics necessary to light the fiber.[927] Moreover, unbundling dark fiber enables the Commission to limit unbundling obligations with respect to certain high-capacity "lit" loops as we discuss below.

314. In most areas, competing carriers are unable to self-deploy and have no alternative to the incumbent LEC's facility.[928] However, the record indicates that competitive LECs have been able to self-deploy fiber to some customer locations, although the record does not reveal the specific locations of such deployment.[929] For this reason, we delegate to the states the authority to collect and analyze more specific evidence of loop deployment on a customer location basis, applying a uniform national trigger that measures self-provisioning to determine customer

---

[924] *Id* at 5 Carriers also note that in these more rural areas it actually may be less costly to both in time and dollars to self-deploy fiber than in more urban areas, but the level of demand to a customer location may simply be too low to justify the cost of installing duplicative facilities *Id* at 3

[925] *See, e g* , Dominion Jan. 28, 2003 Aamoth *Ex Parte* Letter at 2, Norlight Dec 30, 2002 *Ex Parte* Letter at 5

[926] *See, e g* , Letter from Joshua M Bobeck, Counsel for El Paso Global Networks, to Marlene H Dortch, Secretary, FCC, CC Docket No. 01-338, 96-98, 98-147 at 2 (filed Oct 4, 2002) (El Paso Oct 4, 2002 *Ex Parte* Letter) (dark fiber is the UNE that is closest to 100% facilities-based competition)

[927] *See* Letter from Stephen W. Crawford, General Counsel, El Paso Networks, and Scott Sawyer, Vice President and Counsel, Conversent Communications, to Marlene H. Dortch, Secretary, FCC, CC Docket Nos 01-338, 96-98, 98-147, Attach at 1 (filed Nov. 26, 2002) (El Paso/Conversent Nov 26, 2002 *Ex Parte* Letter)

[928] *See supra* note 856, *see also* Letter from Brad E Mutschelknaus, Counsel for OnFiber Communications, to Marlene H Dortch, Secretary, FCC, CC Docket No. 01-338, 96-98, 98-147 at 2 (filed Feb. 6, 2003) (OnFiber Feb 6, 2003 *Ex Parte* Letter) (asserting that the vast expense associated with deploying dark fiber precludes self-provisioning and prevents any kind of alternative market from developing)

[929] *See supra* note 856; *see also* Letter from Patrick J Donovan, Counsel for El Paso Networks LLC, to Marlene H Dortch, Secretary, FCC, CC *Docket* No 01-338 (filed Jan 22, 2003) (El Paso Jan 22, 2003 *Ex Parte* Letter), Letter from Ann D Berkowitz, Project Manager – Federal Affairs, Verizon, to Marlene H. Dortch, Secretary, FCC, CC Docket Nos 01-338, 96-98, 98-147 at 19 (filed Jan 31, 2003) (discussing competition for special access) (Verizon Jan 31, 2003 Special Access *Ex Parte* Letter), Norlight Dec 30, 2002 *Ex Parte* Letter at 2

locations where competitive carriers are not impaired without access to incumbent LEC unbundled dark fiber loops.[930]

(ii) OCn Loops

315. We find that requesting carriers are not impaired on a nationwide basis without access to unbundled "lit" OCn loops because the barriers relating to the deployment of OCn "lit" loops can be overcome through self-deployment at the OC3 and above level, the use of unbundled dark fiber, or the use of "lit" DS3s.[931] Record evidence reflects competitive deployment of loops at the OCn level and competitive carriers confirm they are often able to economically deploy these facilities to the large enterprise customers which use them.[932] Further, there does not appear to be any evidence of demand for incumbent LEC OCn level unbundled loops.[933] Competitive LECs have deployed OCn capacity to some commercial buildings nationwide, including Tier II and Tier III markets.[934] We find this evidence of deployment

---

[930] *See infra* Part VI A 4 b (ii)(d) (discussing in detail the state reviews on a customer-location specific basis applying the defined Self-Provisioning Trigger and Competitive Wholesale Facilities Trigger)

[931] OCn circuits range from OC3 to OC192 The smallest common OCn capacity circuit, an OC3, is comparable in capacity to 3 DS3s, 84 DS1s, or 2016 voice-grade loops Our impairment finding for OCn level loops differs from our finding for dark fiber loops as the economics of deploying "lit" fiber at the OCn level differs from deploying dark fiber at a comparable capacity level While the construction-related costs in laying the fiber are the same, the ability to recover these sunk costs differs if considered as distinct types of loop facilities As we noted in our discussion of dark fiber loops above, dark fiber is unused deployed fiber along a particular route that is not associated with a specific potential revenue stream from a known customer at the time of construction. *See supra* para 312 A competitive LEC does not deploy dark fiber to use in self-provisioning high-capacity local service to customers *unless* that competitive LEC already has sufficient customer demand at a "lit" fiber level, *i e* , at the OCn or 3 DS3 level, to recover the sunk costs of the fiber construction *See supra* note 911, *see also* Dominion Jan 28, 2003 Aamoth *Ex Parte* Letter at 4 In other words, competitive carriers can not economically deploy dark fiber on a stand-alone basis for self-deployment purposes without an associated "lit" fiber demand While carriers deploying OCn fiber loops must necessarily first deploy dark fiber and then attach the requisite optronics to activate the fiber for service capability at the OCn level, carriers deploying fiber to meet a particular customer demand for OCn capacity are viewed as deploying an OCn loop to serve that customer rather than deploying dark fiber to serve that customer

[932] *See, e g* , WorldCom Fleming Decl at para 10 (when customer demand is projected at several DS3s or optical level capacity a self-build decision is made), Letter from Ruth Milkman, Counsel for WorldCom, to Marlene H Dortch, Secretary, FCC, CC Docket No. 01-338, 96-98, 98-147, Attach at 5 (filed Oct. 7, 2002) (WorldCom Oct. 7, 2002 *Ex Parte* Letter) (for self-deployment to be feasible, the demand must be for at least multiple DS3s), AT&T Comments at 134 (a competitive LEC can only self-deploy to a location with enormous demand, *i e* , the smallest of which would be at the OC3 level), AT&T Nov 25, 2002 *Ex Parte* Letter at 2 (the amount of committed traffic to support construction of loops for large business customers is about 3 DS3s, *i e* , an OC3), and Attach B at 9 (at least 3 DS3s worth of demand is required before a facility build can generally be proven as financially prudent).

[933] *See supra* para 299 (BOCs state that not a single unbundled loop above a DS3 level has been purchased)

[934] *See* KMC Duke June 11, 2001 High-capacity Aff at para 3 (naming the Tier III markets they serve with their own facilities), CCG July 17, 2002 CLEC Survey *Ex Parte* Letter (explaining that the six metropolitan areas chosen to represent competitive LEC loop buildout – Albany, Augusta, Boston, Chicago, Corpus Christi, and Portland – represent a broad cross section of populations and business concentrations), *see also* WorldCom Oct 30, 2002 *Ex Parte* Letter

persuasive in demonstrating that competitive LECs can often overcome the barriers associated with loop deployment at the OCn level.

316. Commenters indicate that services offered over OCn loops produce revenue levels which can justify the high cost of loop construction, providing the opportunity for competitive LECs to offset the fixed and sunk costs associated with the loop construction. Large enterprise customers purchasing services over OCn loops[935] enter into long-term contracts committing to revenue streams and associated early termination charges that provide the ability for carriers to recover their substantial non-recurring "set-up" or construction costs.[936] Customers obtaining services at the OCn level also understand that transitioning such services to a new provider is not an overnight process. Because of their level of business planning sophistication, as a practical matter, they begin the process of seeking a new or alternative service provider well in advance of their actual need for the service.[937] Accordingly, they are more receptive to the inherent provisioning delays associated with constructing these high-capacity loops to meet their particular needs than smaller business customers served by lower capacity loops.[938] Competitive carriers deploying fiber at the OCn capacity level are therefore able to accommodate provisioning delays and additional expense at the start of the construction process, mitigating obstacles to self-deploying they may face in gaining access to public and private rights-of-way.[939]

317. Furthermore, enterprise customers requiring OCn level capacity are often located in multiunit premises where they may have the ability to exert greater influence over building

---

[935] We recognize that large enterprise customers may also have remote business locations that do not require the capacity of an OCn loop We reiterate that we do not tailor our rules to restrict or limit unbundling based on the size or class of the customer served A large enterprise customer's particular loop capacity demand at a given service location is determined by multiple factors unique to that customer's needs at that specific location, rather than the size of that customer Merely because large enterprise customers are typically the only type of customer that purchase OCn capacity loops does not equate to the fact that OCn loops are the only type of loop such customers demand

[936] *See supra* note 932; *see also* Declaration of Alfred E. Kahn and William E. Taylor, RM No 10593 at 32-33 (discussing generally how long-term contracts and associated termination penalties are used to ensure cost recovery) *in* Verizon Jan 31, 2003 Special Access *Ex Parte* Letter Long-term contracts are used to minimize risk exposure and stabilize construction costs over time when the seller incurs heavy sunk costs as part of a transaction *Id*

[937] If this customer's competitive OCn loop is to be provisioned at their current business location, we understand they will generally begin the process of looking at alternative service providers months in advance of the expiration date of their current contract for service, which will usually include a provision for month-to-month service thereafter for as long as needed If service is to be provided at a brand new location that the customer is moving to, or having built, at an OCn level of capacity, decisions regarding which service provider will provision that service will similarly be made months before occupancy Each of these scenarios mitigates the impact of the lead time to build new loops with respect to serving these customers

[938] *See, e g*, Sprint Comments at 23, WorldCom Fleming Decl at paras. 9-10

[939] To the extent these initial obstacles are in the form of unreasonably high costs for rights-of-way access, competitive LECs deploying fiber to serve customers at the OCn level are better able to overcome these barriers as the revenues associated with OCn capacity service contracts are quite high. *See generally* AT&T Comments at 134; WorldCom Comments at 76, *see also* TDS Jackson Aff at para 8

access because: (1) their operations are so substantial that they own the premises outright; (2) they control the access to the premise; or (3) they have sufficient influence over the landlord/building owner to overcome building access impairments the competitive provider may encounter due to the amount of leased occupancy space for which this enterprise customer has committed.[940]

318. Competitive carriers requiring OCn capacity "lit" loops to serve customers will also have the ability to purchase dark fiber, including unbundled dark fiber loops, and attach their own optronics to activate such loops to serve their customers at those locations where unbundled dark fiber is available. In circumstances where competitive LECs may be unable to self-deploy the underlying OCn fiber loop, the record demonstrates that there is no impairment with respect to obtaining and attaching the requisite optronics necessary to light dark fiber at the OCn level to provide service. Based on record evidence that self-deployment of the loop transmission facility at the OCn level is generally feasible, it necessarily follows that the lesser cost of self-providing just the optronics to light the fiber at the OCn level is economically feasible. While we recognize that dark fiber may not be available at every customer location nationwide, a competitive carrier may also access "lit" loops. Because the record demonstrates, however, that competitive carriers routinely self-deploy when customer demand is three DS3s (or optical capacity) as discussed further below, we limit the availability of "lit" DS3 loops to a maximum of two unbundled DS3 loops per carrier at each customer location.[941]

319. Finally, as we have noted, at least in the BOC regions, the record reflects that competitive LECs have not obtained unbundled loops at the OCn level.[942] Thus, there are few, if any, transition issues with regard to OCn loops. In the event a competitive LEC of which we are not aware is currently providing service over an unbundled OCn loop, the transition scheme that we have adopted herein governs such situation.[943]

(iii) DS3 Loops

320. We make a national finding that requesting carriers are impaired on a customer-location-specific basis without access to unbundled DS3 loops. The inability to recover the significant fixed and sunk construction costs of DS3 loops, coupled with the additional barriers to loop deployment associated with accessing rights-of-way; obtaining and paying for building access; and other service provisioning delays impair the ability of requesting carriers to self-provision single DS3 loops.[944] Unlike deployment at even the lowest OCn level, the record

[940] *See, e g*, AT&T Reply at 174-77.

[941] *See infra* para 321

[942] *See supra* para 299.

[943] *See supra* Part VIII D (addressing the transition process adopted herein)

[944] *See supra* Part VI A 3 for a discussion of the general economic characteristics of loop deployment Because the cost of constructing a fiber loop facility does not vary to any significant degree with loop capacity, to economically justify a particular loop construction expenditure, a competitive carrier must have some reasonable expectation of being able to recover its cost over time

indicates that a single DS3 loop, generally, can not provide a sufficient revenue opportunity to overcome these barriers.[945] Because our impairment analysis rests most heavily on the ability of a self-deploying carrier to recover its sunk and fixed costs, the inability to recover such costs at a single DS3 level results in impairment. In finding impairment based on the inability to recover sunk costs, we find that the other economic and operational barriers faced by competitive LECs in self-deploying loops generally, *i e.*, difficulties in acquiring municipal and private rights-of-ways as well as gaining building access from owners of multiunit premises,[946] exist for competitive LECs with respect to single DS3 loop deployment.[947]

321. Despite the economic barriers that a competitive LEC faces in deploying single DS3 loops, the record indicates that some carriers have been able to overcome these barriers when providing multiple DS3s to a specific customer location.[948] Because the record does not, however, provide sufficient evidence to determine the specific factors that make such deployment feasible at these locations, we are unable to conclude with any precision exactly where requesting carriers would not be similarly impaired without access to unbundled DS3 loops.[949] Similarly, the record reflects a small but potentially growing wholesale alternative DS3 loop market.[950] Once again, however, the record in this proceeding does not specify exactly

---

[945] *See supra* note 860 The potential revenue stream associated with a customer commitment for a single DS3 loop is far less than the revenue stream associated with an OCn loop, yet the cost to construct the loop facility is the same At the smallest OCn level, *i e* , OC3, there are 2,016 voice-grade equivalent lines A single DS3 is equivalent to 672 voice-grade equivalent lines A simple comparison of the relative voice-grade equivalent lines demonstrates that a customer commitment in terms of potential revenue stream for a DS3 is many times smaller than that of an OC3 loop Accordingly, it takes a longer period of time for a competitive LEC to recover its costs of deploying a single DS3 loop facility

[946] *See, e g* , AT&T Reply at 174-79 (discussing other barriers linked to the incumbent LECs' historical monopoly that preclude competitive loop deployment independent of cost factors), *see also* NuVox *et al* Comments at 74, KMC Duke Aff at paras. 7-9 (citing proprietary information). SNiP LiNK Polito Aff at paras. 3-7, Sprint Comments at 22, Letter from Ruth Milkman, Counsel for WorldCom, to Marlene H Dortch, Secretary, FCC, CC Docket Nos 01-338, 96-98, 98-147 at 2 (filed Oct 25, 2002) (discussing building access barriers) (WorldCom Oct 25, 2002 Building Access *Ex Parte* Letter), ALTS *et al* Comments at 56

[947] *See supra* Part VI A 3 for evidence of the existence of the other operational barriers to DS3 loop capacity deployment

[948] The record indicates that some competitive carriers have economically self-deployed DS3 capacity loops to certain customer locations where the aggregate demand for DS3 capacity at those locations is *three* or more. *See supra* note 860; *see also* Letter from David L Lawson, Counsel for AT&T to Marlene H. Dortch, Secretary, FCC, CC Docket Nos 01-338, 96-98, 02-33 at 1 n 2 (filed Feb 3, 2003) (AT&T Feb 3, 2003 Lawson *Ex Parte* Letter) (citing AT&T Nov 25, 2002 *Ex Parte* Letter indicating competitors can economically self-deploy at 3 DS3s worth of traffic)

[949] Indeed, we note that competitive carriers do not have an incentive to volunteer such information in our record. The record does provide sufficient information to enable us to impose a limitation on the number of DS3 unbundled loops that a requesting carrier can obtain to any single customer location *See infra* para 324.

[950] *See* AT&T Comments at 150 n 110 (citing confidential information that indicates that some of its DS3 level loop capacity is obtained from non-incumbent LEC sources)

where this deployment has occurred. Therefore, as discussed below, we delegate to the states the authority to collect and analyze more specific evidence of DS3 loop deployment on a customer location-specific basis, applying uniform national triggers that measure self-provisioning or wholesale alternative availability to determine customer locations where competitive carriers are not impaired without access to incumbent LEC unbundled DS3s.[951]

322. If, as the incumbent LECs argue, "a small number of buildings in each metropolitan area typically account for a large fraction of the traffic,"[952] we expect that the triggers that we adopt today will provide incumbent LECs substantial relief from their unbundling obligations while simultaneously ensuring that competitive carriers get unbundled high-capacity loop access only where they are unable to economically self-deploy or use alternative facilities.[953]

323. In finding that competitive carriers are impaired without unbundled access to DS3 loops, we disagree with incumbent LECs' claims that market evidence of DS3 deployment in certain situations demonstrates that, in *all* situations, traffic and revenue potential justify a nationwide finding of DS3 non-impairment. The limited record evidence we have of self-deployment does not permit such broad extrapolation.

324. *Limitation on Multiple Unbundled DS3 Loops.* Finally, consistent with our finding of no impairment at the OCn loop capacity level, and because the record confirms that it is economically possible to self-deploy at a three DS3 loop level to a particular customer location, we limit an incumbent LEC's unbundling obligation to a total of two DS3s per requesting carrier to any single customer location.[954] We find that as a carrier approaches customer demand for three DS3s of capacity at a particular customer location, it is feasible for that carrier to self-deploy its own high-capacity facilities. Our unbundled DS3 loop quantity

---

[951] *See infra* Part VI.A 4.b.(ii)(d) (discussing in detail the state reviews on a customer-location specific basis applying the defined Self-Provisioning Trigger and Competitive Wholesale Facilities Trigger)

[952] *BOC UNE Rebuttal Report* at 45

[953] One commenter indicates that 200 to 300 out of 15,000 multiunit premises in a typical Tier-I MSA generate 80% of the data revenues *Id* Verizon indicates a Tier I MSA is typically defined as an MSA with a population of one million or more. *See* Verizon Jan 31, 2003 Special Access *Ex Parte* Letter at 13 n 62

[954] We note that our unbundled DS3 loop cap is smaller than the unbundled DS3 transport cap *See infra* Part VI C 4 c (ii) The unbundled DS3 loop cap is based on record evidence indicating the feasibility of DS3 loop self-deployment at a 3 DS3 level. Indeed, AT&T's record evidence indicates economic feasibility at about 2 75 DS3s or 77 DS1s worth of traffic. *See* AT&T Jan 14, 2003 *Ex Parte* Letter at 4 (citing AT&T Nov 25, 2002 *Ex Parte* Letter, Attach. B) Once a competitive carrier's customer demand at a location exceeds 2 DS3 loops, the competitive carrier should plan to self-deploy DS3 capacity to that customer location. The record evidence for the self-provisioning feasibility level for DS3 transport varies, but because it generally is within a higher range than for DS3 loops, establishing the DS3 transport limit at a higher number is appropriate

limit is location specific, maintaining consistency with our impairment conclusions about OCn capacity loop deployment,[955] as well as DS3 loop deployment.

(iv) DS1 Loops

325. We find that requesting carriers generally are impaired without access to unbundled DS1 loops.[956] The record contains little evidence of competitive LECs' ability to self-deploy single DS1 capacity loops[957] and scant evidence of wholesale alternatives for serving customers at the DS1 level.[958] Commenters expressly state that a competitive carrier would not construct its own DS1 or lower capacity loops.[959] Indeed, incumbent LECs recognize a distinction between provisioning DS1 level loops and other higher capacity loops.[960] The record shows that requesting carriers seeking to serve DS1 enterprise customers face extremely high economic and operational barriers in deploying DS1 loops to serve these customers.[961]

---

[955] We have noted that the lowest common OCn capacity standard, OC3, is equivalent to three DS3 circuits in terms of capacity *See supra* note 931.

[956] DS1 loops will be available to requesting carriers, without limitation, regardless of the technology used to provide such loops, *e g*, two-wire and four-wire HDSL or SHDSL, fiber optics, or radio, used by the incumbent LEC to provision such loops and regardless of the customer for which the requesting carrier will serve unless otherwise specifically indicated *See supra* Part VI A 4 a (v) (discussing FTTH) The unbundling obligation associated with DS1 loops is in no way limited by the rules we adopt today with respect to hybrid loops typically used to serve mass market customers *See supra* Part VI A 4 a (v)(b)(i)

[957] We note that at least two competitive LECs have provided evidence that indicates that they self-provide some DS1 capacity loops to certain customer locations *See supra* note 859 It is important to note, however, that this evidence of self-provisioning has been possible where that same carrier is already self-provisioning OCn or a 3 DS3 level of loop capacity to that same customer location Thus, this evidence does not support the ability to self-deploy stand-alone DS1 capacity loops nor does it impact our DS1 impairment finding *See* AT&T Comments at 150 n 10 (citing confidential information), WorldCom Slocum Decl at paras 3-6

[958] *See* Covad Reply at 56 (discussing no alternative DS1 capacity providers), NewSouth Comments at 13-17, NewSouth Reply at 17; WorldCom Comments at 74, AT&T Jan 14, 2003 *Ex Parte* Letter at 2, WorldCom Oct 30, 2002 *Ex Parte* Letter, AT&T Feb 3, 2003 Lawson *Ex Parte* Letter at 13 The record indicates that even competitive carriers that have deployed their own loop facilities do not have the back office support systems in place that are necessary to offer any excess capacity on a wholesale basis to other competitive LECs *See, e g*, KMC Duke Aff at para 13 (discussing what systems are necessary to wholesale service to other carriers)

[959] *See* AT&T Jan 14, 2003 *Ex Parte* Letter at 3 n 5; Covad Comments at 47, Allegiance Reply at 38

[960] SBC Comments at 100-01, SBC Reply at 156 (recognizing that impairment may exist for certain DS1 loops and proposing a carve-out)

[961] *See supra* Part VI A 4 b (ii)(a) for a discussion of the economic and operational barriers to DS1 loop capacity deployment The record indicates that many competitive carriers providing DS1 capacity loops to enterprise market customers serve the small to medium-sized segment of this market which is characterized as typically underserved by incumbent LECs Indeed, many of these competitive LECs, which are themselves small to medium size businesses, have entered the competitive telecommunications market specifically to serve these smaller business customers requiring primarily DS1 level capacity The DS1 loop unbundling rule we adopt today recognizes the dependency that smaller business customers and carriers have on DS1 capacity loops and accommodates those needs consistent with our impairment framework. *See also* NuVox Cadieux Jan 24, 2003 *Ex Parte* Aff (for general discussion of (continued)

Customers demanding services over DS1 loops possess significantly different economic characteristics for competitive carriers than large enterprise market customers. In particular, small and medium enterprise customers served by DS1 loops provide much lower revenue opportunities than large enterprise market customers and, generally, resist long-term contract obligations.[962] These factors lead to a greater potential to change providers on a more frequent basis, *i.e.*, churn, resulting in the inability of competitive LECs to rely on a long-term DS1 revenue stream, as they can with much higher loop capacity demands. Taken together, these factors make it economically infeasible for competitive LECs to deploy DS1 loops, which require the same significant sunk and fixed construction costs as higher capacity loops.

326. While DS1 loops are typically used to serve small to medium-sized business customers associated with the enterprise market, they are also used to serve customers associated with the mass market. Although we recognize different characteristics between these two markets, *e g.*, enterprise customers are more concentrated in urban locations, in multiunit premises, and demand greater variety and higher quality services than mass market customers, the economics of constructing DS1 loop facilities to serve these different customer classes are not significantly different. The average revenue available per customer in either of these markets is very low relative to larger enterprise market customers using higher capacity loops.[963] While we recognize that retail business customer rates are typically higher than residential rates, the record reflects that the revenues generated from small and medium enterprise customers are not sufficient to make self-deploying DS1 loops economically feasible from a cost recovery perspective.[964] As we have stated, our impairment findings rely most heavily on the economic feasibility of competitive LECs to self-deploy and recover sunk costs.[965] Competitive LECs do not have the ability to recover sunk costs in self-deploying DS1 loops. Furthermore, the other economic and operational barriers faced by competitive LECs in self-deploying loops generally, *e g.*, the inability to obtain reasonable and timely access to the customer's premises both in laying the fiber to the location and bringing it into a building thereafter,[966] as well as convincing customers to accept the delays and uncertainty associated with deployment of alternative loop

(Continued from previous page)

serving small to medium business customers with DS1 capacity), NuVox *et al* Comments, attached Profiles & Affidavits, Covad Reply at 54, NewSouth Reply at 16-17, Allegiance Reply at 36-38

[962] *See, e g*, NewSouth Reply at 18 (discussing the lower traffic volumes and revenue potential that can be generated from a DS1); *see also* TDS Jackson Aff at para. 10

[963] This fact can be most easily demonstrated by simply comparing voice-grade line equivalents, *i e*, a single DS1 is equivalent to 24 voice-grade lines whereas 3 DS3s (the number of DS3 capacity loops where self-provisioning begins to be economically feasible) is equivalent to 2016 voice-grade equivalents

[964] *See supra* note 962

[965] *See supra* para 206

[966] *See. e g*, AT&T Reply at 174-79, ALTS *et al* Comments at 56 (discussing, generally, some of the other barriers competitive LECs face to self-deployment)

facilities exist with DS1 loop self-deployment.[967] Indeed, because the ability to absorb the additional "costs" associated with these other economic and operational barriers over time becomes increasingly more difficult at lower loop capacity levels, these barriers impact the ability to self-deploy at a DS1 level to an even greater extent than at higher loop capacity levels.[968]

327. Because the record does not demonstrate that carriers can economically self-provision at the DS1 level, we do not delegate to the states the authority to consider DS1 loop impairment on a location-specific basis based on a self-provisioning trigger.[969] On the other hand, although the record indicates little evidence of wholesale alternative DS1 loop capacity, evidence of alternative providers at the DS3 and higher capacity levels suggests that there may be specific locations where competitive carriers have deployed fiber and could offer excess capacity at the DS1 loop level. Thus, we recognize the possibility that non-incumbent LEC DS1 loop alternatives may be available now or in the near future at particular customer locations. As explained below, we delegate to the states the authority to collect and analyze more specific evidence of wholesale alternatives to DS1 loops on a customer location-specific basis, applying a uniform national trigger that measures the availability of wholesale competitive alternatives to determine customer locations where competitive carriers are not impaired without access to incumbent LEC unbundled DS1s.[970]

(d) Location-Specific Review Conducted By States Applying Federal Triggers

328. In making affirmative impairment findings on a nationwide basis for dark fiber loops, DS3 loops, and DS1 loops, we recognize that limited alternative deployment has occurred at particular customer locations not specified in our record for certain of these high-capacity loop types which could lead to a finding of no impairment for that loop type at that location. Thus, for these loop types, a more granular impairment analysis should be applied on a customer-by-customer location basis. To that end, we delegate to states a fact-finding role to identify where competing carriers are not impaired without unbundled high-capacity loops pursuant to two triggers. If a state commission finds that the federal triggers for a finding of non-impairment have been satisfied for a specific type of high-capacity loop at a particular customer location, the incumbent LEC will no longer be required to unbundle that loop type at that location according to the transition schedule adopted by the state commission.[971] Incumbent LECs must make the unbundled high-capacity loops for which we find impairment on a nationwide basis available to

[967] *See supra* Part VI.A 3 , Part VI A 4.b(ii)(a) for evidence of the existence of the other operational barriers to DS1 loop capacity deployment.

[968] *See supra* para 315 (discussing the ability to absorb these costs at the OCn loop level).

[969] *See infra* Part VI A 4 b(ii)(d) (discussing in detail the state reviews on a customer-location specific basis) and para 334 (describing why states will not apply the Self-Provisioning Trigger to DS1)

[970] *See infra* Part VI A 4 b(ii)(d) (discussing in detail the Competitive Wholesale Facilities Trigger)

[971] *See infra* Part VIII D (discussing the transition process)

qualifying requesting carriers except at those customer locations where a state commission's granular review has confirmed that no impairment exists and unbundling is no longer required. In the event a state commission declines to exercise the authority we delegate to it, a party may petition this Commission to conduct such analysis.[972]

329. We establish two different types of triggers to identify the specific customer locations where there may be no impairment for the high-capacity loops we identify below and the incumbent LEC unbundling obligation can be eliminated at that customer location: 1) where a specific customer location is identified as being currently served by two or more unaffiliated competitive LECs with their own loop transmission facilities at the relevant loop capacity level (Self-Provisioning Trigger); or 2) where two or more unaffiliated competitive providers have deployed transmission facilities to the location and are offering alternative loop facilities to competitive LECs on a wholesale basis at the same capacity level (Competitive Wholesale Facilities Trigger). Although both triggers focus on whether there are two alternative loop providers at a particular customer location, they are different because the Competitive Wholesale Facilities Trigger can be satisfied by alternative loop providers that have deployed their own facilities *or* by alternative providers that are using unbundled network elements but otherwise satisfy the "wholesaling" requirement of the Competitive Wholesale Facilities Trigger. For example, unbundled dark fiber loops obtained from the incumbent LEC and activated by the alternative provider through attaching its own optronics to offer wholesale "lit" loop capacity may be used to satisfy the Competitive Wholesale Facilities Trigger to remove the unbundling obligation for DS3 and DS1 loops at a particular customer location. Unbundled dark fiber loops, however, may not be used to satisfy the Self-Provisioning Trigger. It is possible, however, that the Self-Provisioning Trigger could, in some circumstances, overlap with the Competitive Wholesale Facilities Trigger. On the other hand, the Competitive Wholesale Facilities Trigger will capture loop alternatives even where barriers have prevented competitive LECs from entirely deploying their own facilities[973] These triggers, tailored to respond to specific record evidence demonstrating that self-deployment is economically feasible or competitive alternatives are available at particular customer locations, will identify those locations where a more granular analysis is required to overcome the finding of impairment.[974]

---

[972] *See supra* Part V E 2 (discussing the role of the states)

[973] *See infra* paras 333, 340 Thus, while a particular customer location may not satisfy the Self-Provisioning trigger because one or both of the alternative providers "lights" unbundled dark fiber to self-provide loops to customers at that location, these providers could satisfy the Competitive Wholesale Facilities Trigger at that location to eliminate loop unbundling requirements

[974] We establish the number of competitors to the incumbent LEC necessary to satisfy each trigger for high-capacity loops subject to a finding of impairment at two in order to ensure that multiple competitive entry at each location is feasible *See USTA*, 290 F 3d at 427. Limiting our high-capacity loop triggers to only one competitor runs the risk of failing to accommodate unusual circumstances unique to that single provider that may not reflect the ability of other competitors to similarly deploy Establishing a higher number, for example three, would likely render our high-capacity loop triggers meaningless for the many customer locations where the potential aggregate customer demand would never support more than two competitive alternatives to the incumbent LEC Moreover, establishing the trigger at too high a number could discourage competitive buildout because would-be competitive facilities-based (continued .)

330. We establish the number of competitors to the incumbent LEC necessary to satisfy each trigger for high-capacity loops subject to a finding of impairment at two in order to ensure that multiple competitive entry at each location is feasible.[975] We choose a lower threshold for our high-capacity loops self-provisioning trigger than we did for the self-provisioning triggers for transport and switching (*i.e.*, two versus three) for two reasons. First, we are taking into consideration the more limited ability of the market to support multiple carriers providing their own loops to a particular location, compared to the demand available to support multiple carriers using their own self-provisioned transport and switching. Unlike both transport and switching, few customers can be served over a single loop facility, and the traffic of multiple customers is generally not aggregated over loops. Thus, establishing a higher number, for example three, would likely render our high-capacity loop triggers meaningless for the many customer locations where the potential aggregate customer demand would never support more than two facilities-based competitive alternatives to the incumbent LEC.[976] Second, we are concerned that this limited demand could provide a greater disincentive to build out any alternative loops if the trigger were set at three. The more limited demand for loops means that there is a lesser likelihood that a third competitive provider would build out to a particular location. This, in turn, creates a greater disincentive for the first and second providers to build out to the location, because if the trigger were set at three, they will likely have to compete against unbundled incumbent LEC loop facilities at TELRIC-based prices for a significant period of time.

331. We choose these specific triggers because we find that: (1) evidence of actual deployment indicates barriers to entry can be overcome, and (2) the availability of competitive wholesale alternatives eliminates impairment for competitive LECs. Eliminating unbundling obligations where no impairment exists furthers the goals of the Act by ensuring that the availability of unbundled network elements at cost-based rates does not discourage the deployment of facilities by competitive LECs where such deployment is economically feasible.

(i) Self-Provisioning Trigger

332 *Trigger Defined.* Where two or more competitive LECs have self-provisioned loop transmission facilities, either intermodal[977] or intramodal facilities, to a particular customer location at the loop capacity level for which the state impairment analysis is being conducted,

(Continued from previous page)

providers would know that two additional competitors would have to first deploy their own facilities before unbundled loop facilities at TELRIC-based prices would no longer be available at that location.

[975] *See USTA*, 290 F 3d at 427.

[976] Moreover, limiting our high-capacity loop triggers to only one competitor runs the risk of failing to accommodate unusual circumstances unique to that single provider that may not reflect the ability of other competitors to similarly deploy

[977] *See supra* Part V B 1 d (ii) (describing intermodal alternatives generally, and factors affecting differences in the extent to which various intermodal alternatives are considered), Part VI A 3 *supra* (describing how intermodal alternatives are considered for loops generally), paras 308-309 *supra* (describing how intermodal alternatives are considered for enterprise market loops).

competitive LECs are not impaired without access to unbundled incumbent LEC loops at that capacity level at those particular customer locations.[978] This determination involves a finding that there are two competitive LECs that have existing facilities in place serving customers at that location over the relevant loop capacity level.[979] If the state commission makes a finding of no impairment based on the application of the Self-Provisioning Trigger, it is not necessary to separately apply the Competitive Wholesale Facilities Trigger.

333. *Trigger Applied.* In conducting its proceeding with respect to the Self-Provisioning Trigger, the state commission must verify that the two competitive providers identified to satisfy this trigger are unaffiliated with the incumbent LEC and each other.[980] In addition, the facilities these competitors use must be their *own facilities* and not facilities owned or controlled by one of the other two providers to the premises, *i e* , the incumbent LEC and the other competitive provider. To be clear, a competitive LEC using the special access facilities of the incumbent LEC or the transmission facilities of the other competitive provider in the building would *not* satisfy the definition of a self-provisioning competitor for purposes of satisfying the trigger. We find, however, that when a competitive carrier has obtained dark fiber on a long-term indefeasible-right-of-use (IRU) basis, that dark fiber facility can be counted as a separate, unaffiliated facility for self-provisioning determination purposes.[981]

334. *Special Considerations For Dark Fiber and DS1 Loops.* When applying the Self-Provisioning Trigger to eliminate an incumbent LEC's requirement to unbundle dark fiber loops at a particular customer location, the mere existence of two unaffiliated competitive providers (in addition to the incumbent LEC) that have deployed fiber to that location, *whether or not they are offering dark fiber to other carriers to serve end-user customers at that location*, will satisfy the Self-Provisioning Trigger for dark fiber loops and require a finding of no impairment at that

[978] If two or more competitive LECs have been able to economically self-deploy at a particular location at the loop capacity level being considered by the state, based on information contained in the record, we determine that the barriers to self-deployment at that customer location for that loop capacity level are likely able to be similarly overcome by other competitive entrants.

[979] For example in applying the Self-Provisioning Trigger to DS3 loops, the state commission must determine that two or more competitive LECs provide DS3 loops *over their own facilities* to customers at that particular customer location.

[980] We use the term affiliated and affiliate as the Act defines "affiliate " Section 3 of the Act defines the term "affiliate" as "a person that (directly or indirectly) owns or controls, is owned or controlled by, or is under common ownership or control with, another person For purposes of this paragraph, the term 'own' means to own an equity interest (or the equivalent thereof) of more than 10 percent " 47 U S C § 153(1).

[981] For purposes of the "own facilities" prong of the Self-Provisioning Trigger, a competitive carrier that has obtained dark fiber transmission facilities from the incumbent LEC on a long-term IRU basis will be considered to operate its own unaffiliated facilities We believe that dark fiber IRU type contracts protect against short-term gaming by the incumbent LEC Moreover, we do not want to foreclose incumbent LECs from negotiating long term dark fiber leases with competitive LECs. To be clear, however, because we want to be certain of the independent ownership of the loop transmission facilities, we find that loop transmission facilities transferred on an IRU basis is limited only to dark fiber and does not include "lit" fiber IRUs obtained from the incumbent LEC or the other provider

location. Therefore, we do not apply a wholesale trigger to unbundled dark fiber loops because such trigger would necessarily overlap with the Self-Provisioning Trigger.[982] Because there is little record evidence demonstrating that carriers construct facilities to serve customers exclusively at the DS1 level, as well as the lack of economic evidence showing such self-deployment is possible, the Self-Provisioning Trigger *will not* be applied to DS1 loops.

335. *State Analytical Flexibility.* In applying the Self-Provisioning Trigger to high-capacity loops, we find that actual competitive deployment is the best indicator that requesting carriers are not impaired, and therefore emphasize that this quantitative trigger is the primary vehicle through which non-impairment findings will be made. We recognize, however, that this high-capacity loop trigger measures only the existence of *actual* deployed competitive alternatives at a customer location rather than whether that particular customer location *could* be economically served by competitive carriers through deployment of alternative loop transmission facilities. Thus, when conducting its customer location specific analyses, a state must consider and may also find no impairment at a particular customer location even when this trigger has not been facially met *if* the state commission finds that no material economic or operational barriers at a customer location preclude competitive LECs from economically deploying loop transmission facilities to that particular customer location at the relevant loop capacity level. In making a determination that competitive LECs *could* economically deploy loop transmission facilities at that location at the relevant capacity level, the state commission must consider various factors affecting the ability to economically deploy at that particular customer location. These factors include: 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; availability/feasibility of similar quality/reliability alternative transmission technologies at that particular location.

336. In other circumstances, by contrast, state commissions may believe notwithstanding satisfaction of this trigger for a particular customer location, that continued access to unbundled loops at the capacity level under analysis should be maintained at the customer location because impairment, in fact, remains due to the existence of a barrier to further competitive facilities deployment at that location. An example of such a situation might be where a municipality has imposed a long-term moratorium on granting additional rights-of way permits along the routes necessary to serve the particular customer location.[983] In these circumstances, a state commission may file a petition for waiver with the Commission to maintain the incumbent LEC's unbundling obligation at that location until the barrier identified in the waiver petition no longer exists.

---

[982] Because dark fiber loops are not typically retail offerings like "lit" loops, it is necessary to modify somewhat the application of the Self-Provisioning Trigger for dark fiber loops to ensure that the granular state analyses include all those locations where at least two alternative carriers to the incumbent LEC have deployed fiber

[983] This example is provided for illustrative purposes only and is not meant to be exclusive or dispositive

(ii) Competitive Wholesale Facilities Trigger

337. *Trigger Defined.* Where competitive LECs have two alternative choices (apart from the incumbent LEC's network) to purchase wholesale high-capacity loops, including intermodal alternatives, at a particular premises, we conclude that impairment does not exist at that location for that type of high-capacity loop.[984] Specifically, where the relevant state commission determines that two or more unaffiliated alternative providers, including alternative transmission technology providers that offer an equivalent wholesale loop product at a comparable level of capacity, quality, and reliability, have access to the entire multiunit customer premises, and offer the specific type of high-capacity loop over their own facilities on a widely available wholesale basis to other carriers desiring to serve customers at that location, then incumbent LEC loops at the same loop capacity level serving that particular building will no longer be unbundled.[985] Similar to including dark fiber IRUs as facilities that satisfy the "own facilities" prong of the Self-Provisioning Trigger,[986] dark fiber IRUs also satisfy the "own facilities" prong of the Competitive Wholesale Facilities Trigger. Furthermore, in addition to dark fiber IRUs, we also include the use of dark fiber obtained on any other lease/purchase basis, *including obtaining it from the incumbent LEC on an unbundled basis*,[987] as long as the alternative provider has attached its own optronics to "light" the dark fiber in order to make "lit" fiber loops available to competitive LECs on a wholesale basis.[988]

338. *Trigger Applied.* In evaluating the two competitive wholesale loop providers, states should not undertake a financial viability analysis with respect to each provider. However, there should be some reasonable expectation that these providers are operationally capable of

---

[984] For example, in applying the Competitive Wholesale Facilities Trigger to DS3 loops, the state must find that two alternative providers to the incumbent LEC offer wholesale DS3 loops to competitive LECs at that particular customer location

[985] While the record indicates little evidence of wholesale DS1 loop capacity presently, evidence of some alternative providers at the DS3 and higher capacity levels suggests that there may be specific locations where competitive carriers have deployed fiber and might offer unused capacity at the DS1 loop level Because we expect our loop unbundling rules to encourage greater facilities-based deployment where it is economically feasible it is not unreasonable to accommodate the possibility that non-incumbent LEC DS1 loop alternatives may be available now or in the near future at particular customer locations By accommodating this possibility in the trigger mechanism we craft today, we seek to ensure that our DS1 loop unbundling rules are not in conflict with *USTA*

[986] S*ee supra* note 981

[987] By counting wholesale loop offerings over dark fiber UNEs, an incumbent LEC could be relieved of its unbundling obligation at a specific loop capacity level at certain customer locations even where no other "alternative" fiber has been deployed, but where alternatives to incumbent LEC unbundled "lit" loops are nevertheless available

[988] Similarly, as we determine in our dark fiber transport requirements, when applying this trigger to dark fiber loop impairment, the state may ensure that dark fiber wholesalers have sufficient quantity of dark fiber available *See infra* para 416

continuing to provide wholesale loop capacity to that customer location.[989] We recognize that, while the record indicates that there are presently a limited number of alternative wholesale loop providers serving multiunit premises, we anticipate that a competitive wholesale market will continue to develop, particularly where competitive LECs have already deployed fiber and seek to derive revenue from excess capacity. We expect this granular trigger to encourage alternative high-capacity transmission providers to deploy more facilities and offer them on a wholesale basis, creating a more robust competitive market for high-capacity loop facilities to many areas nationwide.

(iii) State Action Under Both Triggers

339. We expect states to complete their initial reviews applying the triggers and other analysis discussed above within nine months from the effective date of this Order. Unbundled DS1, DS3, and dark fiber loops will remain available to all customer locations until the state commission determines that unbundled loops at particular capacities serving specific customer locations are no longer required. States that conduct this review need only address specific customer locations for which there is relevant evidence in the proceeding that the customer location satisfies one of the triggers or the potential deployment analysis specified in this Part [990] To the extent that a state commission does not complete its proceedings in this nine month period,[991] aggrieved parties may file a petition with this Commission demonstrating a state's failure to act pursuant to the procedures we outline today.[992] We expect that states will require an appropriate period for competitive LECs to transition from any unbundled loops that the state finds should no longer be unbundled.

340. After completion of their initial reviews, we expect state commissions to conduct further granular reviews, pursuant to the procedures the state commissions adopt, to identify additional customer locations that satisfy the triggers. Such proceedings shall be completed

[989] We note that carriers operating under chapter 11 bankruptcy are still capable of providing service while they reorganize their operations Relatedly, in the case of a chapter 7 liquidation, the physical transmission facility assets of a competitive provider will continue to exist at that location as the purchaser of those assets will likely provide similar wholesale service or use such facilities to self-provide retail service Under either scenario, the triggers which resulted in a finding of no impairment at that location will continue to be met. *See infra* Part VI C 4 (discussing similar financial viability issues with respect to wholesale transport providers).

[990] *See supra* para 335

[991] By "complete," we mean that a state commission, upon receiving sufficient evidence, has an affirmative obligation to review the relevant evidence associated with any customer location submitted by an interested party, and to apply the trigger and any other analysis specified in this Part to such evidence

[992] As discussed above, if a state fails to act, we set forth procedures for the Commission to step into the role of the state *See supra* Part V E. (discussing the role of the states)

within six months of the filing of a petition or other pleading submitted in accordance with the prescribed state commission procedures.[993]

(e) Other Loop Unbundling Proposals.

341. Commenters have proposed various alternatives to the method we have adopted herein for conducting our loop impairment analysis and reaching our resulting conclusions. To the extent the methods we use and the conclusions we reach differ from those proposed, we expressly decline to incorporate them herein. We note, however, that we agree with the proposals of SBC and other commenters that the Commission distinguish among loop types and make capacity-based distinctions. The analysis we have undertaken has, indeed, distinguished not only among the various loop capacities, *e g.*, DS0, DS3, OCn, but also the type of loop technology where appropriate, *e g.*, "lit" fiber, dark fiber, copper, as well as the customer market class typically served by such loops. Through our approach, we recognize the different economic characteristics of serving customers demanding services provided over different loop capacity levels, eliminating or limiting unbundling obligations accordingly.[994] We disagree with SBC,[995] Verizon,[996] and BellSouth[997] to the extent each proposes that we base our loop unbundling analyses and conclusions consistent with our special access pricing flexibility rules.[998] Evidence of competitive LECs' ability to self-deploy local loop facilities or have wholesale non-incumbent LEC alternative loop facilities available to them is the proper inquiry in our loop impairment analysis. This analysis serves a host of statutory goals beyond the goal of the *Pricing Flexibility Order,* which is limited to protecting consumers from anticompetitive pricing. While each of

[993] Subsequent to the initial review, states have the flexibility to adopt reasonable and timely procedures for the periodic collection and evaluation of evidence indicating the satisfaction of the loop triggers at additional customer locations to remove unbundling obligations For example, a state may decide to include self-reporting information regarding alternative loop deployment in an annual or semi-annual report, either as an independent obligation or as part of the competitive carriers' periodic filing obligations Alternatively, a state may decide to accept evidence of alternative deployment through petitions filed during prescribed filing windows or through rulemaking proceedings Regardless of the procedures adopted, however, states that conduct further reviews must complete their evaluation of the evidence and reach a determination within six months of the filing of a petition or other pleading filed pursuant to the state procedures.

[994] As we have noted above, we expect that the triggers that we adopt today for use by the states will provide incumbent LECs substantial relief from their unbundling obligations while simultaneously ensuring that competitive carriers get unbundled high-capacity loop access only where they are unable to economically self-deploy or use alternative facilities. *See supra* para 322.

[995] *See, e g* , SBC Comments at 101 (proposing a DS1 trigger at two or more fiber-based collocators, serving 15,000+ business lines, and $150,000 or more per month in special access revenues and no unbundling at all above the DS1 level)

[996] *See, e g* , Verizon Comments at 119-20 (proposing, generally, the elimination of high-capacity loop unbundling where the incumbent LEC has obtained pricing flexibility for special access circuits).

[997] *See, e g* , BellSouth Comments at 67 n 240 (stating it makes no sense to find impairment where BellSouth has obtained pricing flexibility for special access circuits).

[998] *See Pricing Flexibility Order*, 14 FCC Rcd at 14221.

these pricing flexibility proposals vary somewhat, they are consistent in arguing that wherever and whenever incumbent LECs have received pricing flexibility for special access services, unbundled high-capacity loops, to some degree, should not be required.[999] Incumbent LECs have received special access pricing flexibility in numerous MSAs throughout their regions, based almost exclusively on meeting the *Pricing Flexibility Order's* triggers based on special access revenues.[1000] As we note below in our transport unbundling analysis, because the special access revenue triggers require only a single collocated competitor to purchase substantial amounts of special access in a concentrated area, this test provides little, if any, indication that even that competitor has been able to widely, if at all, self-deploy alternative loop facilities in that area.[1001] Evidence of self-deployment of transport facilities is not necessarily evidence of the economic ability of a competitive LEC to self-deploy loops. Moreover, the presence of a single competitive LEC's collocated transport facility as a trigger for purposes of protecting consumers from anticompetitive pricing, *i e.*, the purpose of our pricing flexibility rules, is not sufficient evidence that facilities-based competitive entry into a market at the local loop level is economically feasible. Under a special access pricing flexibility trigger, such as suggested by incumbent LECs, DS1 loops would no longer be unbundled in many large geographic areas nationwide. This conclusion would clearly contravene our unbundling mandate due to the pervasive competitive LEC impairment at the DS1 loop level resulting from an economic inability to self-deploy and limited available wholesale alternatives Similarly, we reject geographic zone distinctions for analyzing impairment for high-capacity local loops.[1002] Like we find in rejecting a pricing flexibility approach, the record simply does not contain evidence that loop impairment/non-impairment determinations can be appropriately made on a zone basis due

[999] Phase I pricing flexibility related to special access revenue is triggered on an MSA basis when wire centers accounting for at least 30% of (non-channel termination) special access revenues have at least one competitor that has collocated using non-incumbent transport. Phase II pricing flexibility related to special access revenues is triggered on an MSA basis when wire centers accounting for at least 65% of (non-channel termination) special access revenues have at least one competitor that has collocated using non-incumbent transport

[1000] *See* Letter from Jake E Jennings, NewSouth, to Marlene H Dortch, Secretary, FCC, CC Docket Nos. 01-338, 96-98 at 2 (filed Dec 12, 2002) (NewSouth Dec 12, 2002 *Ex Parte* Letter) (describing details of where and how BellSouth has received special access pricing flexibility), *see also* BellSouth Oct 15, 2002 Transport and Loop *Ex Parte* Letter, Attach at 5 (stating that BellSouth has received Phase I and Phase II special access pricing flexibility in 100% of its national top 150 MSAs), Verizon Dec 17, 2002 *Ex Parte* Letter at 7 (stating that Verizon has pricing flexibility in 37% of its wire centers), Letter from Cronan O'Connell, Vice President – Federal Regulatory, Qwest, to Marlene H. Dortch, Secretary, FCC, CC Docket Nos 01-338, 96-98, 98-147, Attach. at 5 (filed Oct 11, 2002) (Qwest Oct 11, 2002 Transport *Ex Parte* Letter) (stating that Qwest has been granted pricing flexibility in 33 of its 45 MSAs, many of which are not national top 100 MSAs)

[1001] Covad Reply at 57-58 (arguing SBC's proposal of two or more fiber-based collocators is no indication that competitive networks serve any more than a limited number of buildings in the area, much less the wire center's entire service area).

[1002] Incumbent LECs argue that the Commission should consider geographic distinctions, such as MSAs or even individual wire centers, for some or all UNEs, where there are differing levels of alternatives *See, e g*, BellSouth Reply at 11-12 (arguing that the appropriate geographic market for the impairment analysis is the MSA) Competitive carriers, however, argue that there is no geographic area or market anywhere in the United States today where a geographic consideration would find no-impairment for any UNE *See, e g*, NuVox *et al.* Comments at 53.

to the location-specific factors which impact impairment determinations at most high-capacity loop levels.

342. Finally, several commenters argue that the Commission should remove or modify its unbundling obligations for incumbent LECs based on evidence of adequate incumbent LEC performance in provisioning network elements.[1003] These parties argue that incumbent LECs should be required to demonstrate certain levels of compliance with existing unbundling performance measurements, such as section 271 performance metrics, for a commercially reasonable period of time prior to any removal of an unbundling obligation.[1004] Commenters suggest such a rule would provide incentives to incumbent LECs to comply with their performance obligations.[1005] The record, however, does not reveal that incumbent LEC performance has a significant, if any, direct relationship to the ability of competitive LECs to economically self-deploy local loops. Rather, the record demonstrates that competitive LEC deployment is primarily driven by general economic considerations. While these economic considerations are influenced by factors which the incumbent LEC did not, or does not, similarly face, *i e.*, its historical ability to maximize scale economies and benefit from first–mover advantages, these factors are not so related to performance measurement compliance that consideration of such compliance would inform our impairment analysis.

B. Subloops For Multiunit Premises Access and NIDs

1. Background

343. In the *Triennial Review NPRM*,[1006] the Commission sought comment on whether it should maintain unbundling requirements for subloops[1007] and NIDs.[1008] A subloop is a smaller included segment of an incumbent LEC's local loop plant, *i e.*, a portion of the loop from some

---

[1003] *See, e g*, CompTel Comments at 86-87, NARUC Comments at 10

[1004] *See, e g*, CompTel Comments at 86-87, Maine CLEC Coalition Comments at 5-7, *see also* Pennsylvania Commissioner Wilson Comments at 8 (arguing that although the Commission should not remove unbundling obligations based on UNE or special access performance data, the states should have the authority to do so)

[1005] *Id*

[1006] *Triennial Review NPRM*, 16 FCC Rcd at 22803, para 48

[1007] Subloops were first included in the list of specific UNEs in the *UNE Remand Order* as a means of providing competitive carriers "maximum flexibility to interconnect their own facilities" to various accessible points within the incumbent LEC's outside loop plant closer to a customer's premises. Subloops were defined as "any portion of the loop that is technically feasible to access at terminals in the incumbent LEC's outside plant, including inside wire " *UNE Remand Order*, 15 FCC Rcd at 3801, para 234, *see also* 47 C F R. § 51 319(a)(2)

[1008] NIDs were included in the initial set of UNEs and defined as "a cross-connect device used to connect loop facilities to inside wiring " *Local Competition Order*, 11 FCC Rcd at 15697, para 392 The Commission later modified the definition of a NID to be more flexible and technology neutral, recognizing that its rules enabled methods other than just a cross-connect device for interconnecting customer premises wiring with the incumbent LEC's loop distribution plant. *UNE Remand Order*, 15 FCC Rcd at 3790, para. 207, *see also* 47 C F.R § 51 319(b)

conversion.[1962] Competitors have commented broadly that no termination liabilities should apply to any conversions from special access to UNEs.[1963] While much of their focus appears directed toward those penalties triggered by long-term contracts, including stand-alone loop facilities, we are not persuaded to grant them relief from termination liabilities for special construction.[1964]

VIII. REMAINING ISSUES

A. Section 271 Issues

1. Background

649. As detailed above, section 251 of the Act is the source of incumbent LECs' unbundling obligations. Section 251(c)(3) requires all incumbent LECs (including BOCs) to provide "nondiscriminatory access to network elements on an unbundled basis at any technically feasible point on rates, terms, and conditions that are just, reasonable, and nondiscriminatory."[1965] Section 251(d)(2) directs the Commission to determine whether access to particular proprietary elements is *necessary* and whether the unavailability of non-proprietary elements would *impair* a competitor's ability to provision service.[1966] These section 251 obligations are referenced and incorporated as obligations of BOCs under section 271(c)(2)(B)(ii) of the Act.[1967]

650. Section 271 establishes both the procedures by which a BOC may apply to provide interLATA services in one of its in-region states and the substantive standards by which that application must be judged. In particular, section 271(c)(2)(B) of the Act specifies the "competitive checklist" of access and interconnection requirements that BOCs must meet before

---

[1962] Accordingly, the incumbent LEC concerns about lack of compensation are misplaced *See, e g*, Qwest Comments at 40 ("Qwest agrees to undertake this construction only because the CMRS providers promised to compensate Qwest the tariffed price for these circuits Qwest would not have constructed, nor would it have been obligated under the Commission's rules to construct, the circuits at the non-compensatory rates demanded by the CMRS providers ") (citations omitted)

[1963] *See, e g*, NuVox *et al* Reply at 52 ("As part of this [fresh look] proposal, all special access circuits (whether equivalent to standalone UNEs, EELs or some other UNE combination) should be subject to conversion without termination penalties or imposition of nonrecurring charges other than a cost-based conversion charge designed exclusively to recover administrative expenses associated with converting associated billing from special access to UNE billing "), ALTS *et al.* Comments at 103 ("Furthermore, the FCC should mandate that no termination liability charges are to be assessed to CLECs converting circuits to UNE pricing ")

[1964] We address the specific issue of granting "fresh look" relief for conversions of EELs ordered during the vacatur of the Commission's combination rules in Part VIII C below.

[1965] 47 U S C § 251(c)(3).

[1966] *Id* § 252(d)(2). We note that to the extent an incumbent LEC is providing network elements pursuant to section 251(c)(3), section 252(d)(1) further requires that it provide such elements at rates that are nondiscriminatory and cost-based. *Id* § 252(d)(1)

[1967] *Id* § 271(c)(2)(B)(ii)

they are allowed to offer in-region long-distance services.[1968] Four of these checklist items relate to network elements in earlier orders the Commission has deemed to be UNEs under the standards of section 251(c)(3). In particular, checklist items 4 through 6 and 10 require. "[l]ocal loop transmission from the central office to the customer's premises, unbundled from local switching or other services;"[1969] "[l]ocal transport from the trunk side of a wireline local exchange carrier switch unbundled from switching or other services;"[1970] "[l]ocal switching unbundled from transport, local loop transmission, or other services,"[1971] and "[n]ondiscriminatory access to databases and associated signaling necessary for call routing and completion."[1972]

651. In the *Triennial Review NPRM*, the Commission sought comment on how the access requirements specified in the section 271 competitive checklist relate to the unbundling requirements derived from sections 251(c)(3) and 251(d)(2). The Commission first noted its conclusion in the *UNE Remand Order* that BOCs must continue to provide access to those network elements described in checklist items 4-6 and 10, even if such access is not mandated under section 251 (and checklist item 2).[1973] The Commission also concluded, in that Order, that market prices should be permitted to prevail for such network elements, rather than requiring forward-looking prices.[1974] The *Triennial Review NPRM* sought additional comment on these conclusions, on "how to evaluate a checklist item where there is no unbundling requirement for the network element that corresponds to that checklist item, and on the appropriateness of evaluating a tariffed service that corresponds to that network element."[1975]

652. Some commenters seek to alter the Commission's determination in the *UNE Remand Order* that section 271 establishes a separate BOC access obligation for network elements no longer listed under section 251(c)(3) and its conclusion that the marketplace, rather than our TELRIC methodology, should determine the price for delisted network elements under section 271. For example, Verizon argues that once the Commission has determined that a network element is not necessary under section 251(d)(2), the corresponding checklist item

---

[1968] *Id* § 271(c)(2)(B).

[1969] *Id* § 271(c)(2)(B)(iv)

[1970] *Id* § 271(c)(2)(B)(v)

[1971] *Id.* § 271(c)(2)(B)(vi)

[1972] *Id.* § 271(c)(2)(B)(x)

[1973] We note that section 271(c)(2)(B)(ii)'s requirement that BOCs provide nondiscriminatory access to network elements is referred to herein as checklist item 2.

[1974] *UNE Remand Order*, 15 FCC Rcd at 3906, para 473, *see also Triennial Review NPRM*, 16 FCC Rcd at 22814, para. 72

[1975] *Triennial Review NPRM*, 16 FCC Rcd at 22814, para. 72, *see also Bell Atlantic New York 271 Order*, 15 FCC Rcd at 4126-27, para 340.

should be construed as being satisfied.[1976] Several competitive carriers counter that section 271 requires BOCs to provide access to loops, switching, transport, and signaling regardless of impairment under section 251.[1977] Z-Tel further argues that competitors are entitled to access to loops, switching, transport, and signaling at TELRIC rates, even if the Commission were to remove these items from the list of UNEs under section 251.[1978] For the reasons outlined below, we reaffirm that BOCs have an independent obligation, under section 271(c)(2)(B), to provide access to certain network elements that are no longer subject to unbundling under section 251, and to do so at just and reasonable rates.

2. Discussion

653. *Independent Access Obligation.* For reasons set forth below, we continue to believe that the requirements of section 271(c)(2)(B) establish an independent obligation for BOCs to provide access to loops, switching, transport, and signaling regardless of any unbundling analysis under section 251.

654. First, the plain language and the structure of section 271(c)(2)(B) establish that BOCs have an independent and ongoing access obligation under section 271. Checklist item 2 requires compliance with the general unbundling obligations of section 251(c)(3) and of section 251(d)(2) which cross-references section 251(c)(3).[1979] Checklist items 4, 5, 6, and 10 separately impose access requirements regarding loop, transport, switching, and signaling,[1980] without mentioning section 251. Had Congress intended to have these later checklist items subject to section 251, it would have explicitly done so as it did in checklist item 2.[1981] Moreover, were we to conclude otherwise, we would necessarily render checklist items 4, 5, 6, and 10 entirely redundant and duplicative of checklist item 2 and thus violate one of the enduring tenets of

---

[1976] Verizon Comments at 66-67 Verizon argues, in the alternative, that the Commission should forbear from applying checklist items (4) through (6) and (10) "once the corresponding elements no longer need to be unbundled under section 251(d)(2)." Verizon Petition for Forbearance of the Verizon Telephone Companies Pursuant to Section 160(c), CC Docket 01-338 at 3 (filed July 29, 2002) We do not address Verizon's forbearance petition in this *Triennial Review* proceeding Rather, we will address the petition separately consistent with the procedures outlined in section 10 of the Act.

[1977] ALTS *et al.* Comments at 117-18; NuVox *et al.* Comments at 115-16, CompTel Comments at 20, UNE-P Coalition Comments at 17, Z-Tel Comments at 4-15

[1978] Z-Tel Comments at 7, *see also* UNE-P Coalition Reply at 37 (noting that the "Coalition agrees with Z-Tel . ")

[1979] *See* 47 U S C. § 271(c)(2)(B)(ii)

[1980] *See* 47 U S C § 271(c)(2)(B)(iv), (v), (vi), (x)

[1981] *Bates v U S*, 522 U S. 23, 29-30 (1997) (stating that "[w]here Congress includes particular language in one section of a statute but omits it in another section of the same Act, it is generally presumed that Congress acts intentionally and purposely in the disparate inclusion or exclusion ") (internal quotation marks omitted). As such, our decision is entitled to deference because the interpretation involves matters about which the Act is silent. *Chevron*, 467 U S at 843

statutory construction: to give effect, if possible, to every clause and word of a statute.[1982] Verizon asserts that an interpretation of the Act that recognizes the independence of sections 271 and 251(d)(2) places these sections in conflict with each other.[1983] We disagree. Verizon's reading of section 271 would provide no reason for Congress to have enacted items 4, 5, 6, and 10 of the checklist because checklist item 2 would have sufficed.

655. Second, it is reasonable to interpret section 251 and 271 as operating independently. Section 251, by its own terms, applies to *all* incumbent LECs, and section 271 applies only to BOCs, a subset of incumbent LECs.[1984] In fact, section 271 places specific requirements on BOCs that were not listed in section 251. These additional requirements reflect Congress' concern, repeatedly recognized by the Commission and courts, with balancing the BOCs' entry into the long distance market with increased presence of competitors in the local market.[1985] Before the 1996 Act's passage, the BOCs, the local progeny of the once-integrated Bell system, were barred by the terms of the MFJ from entering certain lines of business, including providing interLATA services.[1986] The ban on BOC provision of long distance services was based on the MFJ court's determination that such a restriction was "clearly necessary to preserve free competition in the interexchange market."[1987] The protection of the interexchange market is reflected in the fact that section 271 primarily places in each BOC's hands the ability to determine if and when it will enter the long distance market. If the BOC is unwilling to open its local telecommunications markets to competition or apply for relief, the interexchange market remains protected because the BOC will not receive section 271 authorization. The same historical underpinning, however, is not relevant to section 251, which is a mandatory provision designed to ensure a minimum level of openness in the local market. Therefore, we reject Verizon's claim that any interpretation of section 271 that recognizes its independence from section 251 would improperly single out BOCs for treatment different from other incumbent LECs.[1988] As explained above, recognizing an independent obligation on BOCs under section

[1982] *See United States v Menasche*, 348 U S 528, 538-39 (1955)

[1983] Verizon Comments at 67; Verizon Reply at 54-55.

[1984] This fact alone demonstrates that section 271 is not dependent on section 251 because a more limited set of carriers was made subject to the demands of section 271. It is consistent with norms of statutory construction that section 251 as a general statutory provision does not control the more specific section 271 *See Gozlon-Peretz v United States*, 498 U S 395 (1991) (a specific provision controls over one of a more general application).

[1985] Section 271 is the direct progeny of the Modification of Final Judgment (MFJ) that contained the terms of the settlement of the Department of Justice's antitrust suit against AT&T *See United States v Western Elec. Co*, 552 F Supp. 131 (D.D.C. 1982), *aff'd sub nom*, *Maryland v United States*, 460 U S 1001 (1983). The MFJ sought to avoid the emergence of an unregulated telecommunications monopoly by imposing specific line-of-business restrictions that explicitly barred the BOCs from providing service for calls that occurred between LATAs Although the Telecommunications Act of 1996 generally superseded the MFJ, section 271 conditionally continued the interLATA line-of-business restriction in the form of the competitive checklist.

[1986] The MFJ contained the terms of the settlement of the Department of Justice's antitrust suit against AT&T *See id*

[1987] *Id* at 188

271 would by no means be inconsistent with the structure of the statute. Section 271 was written for the very purpose of establishing specific conditions of entry into the long distance that are unique to the BOCs. As such, BOC obligations under section 271 are not necessarily relieved based on any determination we make under the section 251 unbundling analysis.[1989]

656. *Prices, Terms and Conditions.* It is a different question, however, as to what pricing standard applies to network elements that are unbundled by BOCs solely because of the requirements set forth in section 271. Where there is no impairment under section 251 and a network element is no longer subject to unbundling, we look to section 271 and elsewhere in the Act to determine the proper standard for evaluating the terms, conditions, and pricing under which a BOC must provide the checklist network elements. Contrary to the claims of some commenters, TELRIC pricing for checklist network elements that have been removed from the list of section 251 UNEs is neither mandated by statute nor necessary to protect the public interest. Rather, Congress established a pricing standard under section 252 for network elements unbundled pursuant to section 251 *where impairment is found to exist.* Here, however, we are discussing the appropriate pricing standard for these network elements where there is no impairment. Under the no impairment scenario, section 271 requires these elements to be unbundled, but not using the statutorily mandated rate under section 252. As set forth below, we find that the appropriate inquiry for network elements required only under section 271 is to assess whether they are priced on a just, reasonable and not unreasonably discriminatory basis – the standards set forth in sections 201 and 202.[1990]

657. By their own terms, neither section 252(d)(1) nor section 271(c)(2)(B) requires that the section 252(d)(1) pricing standard be applied to checklist network elements. Section 252(d)(1) provides the pricing standard "for network elements for purposes of [section 251(c)(3)],"[1991] and does not, by its terms, apply to network elements that are required only under section 271. Indeed, section 252(d)(1) is quite specific that it only applies for the purposes of implementation of section 251(c)(3) – meaning only where there has been a finding of impairment with regard to a given network element. Moreover, as noted above, while checklist item 2 provides that a BOC must provide access to UNEs "in accordance with the requirements of sections 251(c)(3) and 252(d)(1)," the checklist items establishing the specific, separate network element obligations do not contain this language. We disagree with Z-Tel's argument that the cross-reference in checklist item 2 should be read into the later checklist items, and is

(Continued from previous page)

[1988] Verizon Comments at 67, Verizon Reply at 54-55

[1989] We decline to require BOCs, pursuant to section 271, to combine network elements that no longer are required to be unbundled under section 251 Unlike section 251(c)(3), items 4-6 and 10 of section 271's competitive checklist contain no mention of "combining" and, as noted above, do not refer back to the combination requirement set forth in section 251(c)(3).

[1990] 47 U S C. §§ 201, 202

[1991] *Id* § 252(d)(1)

implicit in them.[1992] Reading this language into these provisions would change their plain meaning, and Z-Tel offers no indication that this is what Congress intended. Moreover, we reject Z-Tel's argument that the cross-references were omitted simply to conserve space or to avoid repetition.[1993] To the contrary, we find Congress' decision to omit cross-references particularly meaningful in this instance: half of the checklist items contain explicit cross-references to other statutory provisions, and it is reasonable to conclude that Congress would have inserted a cross-reference into items 4-6 and 10 had that been its intention.

658. We also decline to use section 271, as suggested by Z-Tel, to broaden the unbundling obligations of section 251. Z-Tel notes that section 251(d)(2) directs the Commission to consider "impair[ment]" "at a minimum" in determining which network elements must be unbundled, and thus argues that the Commission may require unbundling pursuant to section 251 and 252 even in the absence of an impairment finding.[1994] In analyzing section 252(d)(2) the D.C. Circuit in *USTA* determined that the "at a minimum" language potentially could justify the imposition of unbundling obligations under that provision even in the "absence" of impairment.[1995] However, the *USTA* decision contained key limitations to the exercise of such authority. In order to apply the "at a minimum" language in the absence of impairment, the *USTA* court required that the Commission "point to something a bit more concrete than its belief in the beneficence of the widest unbundling possible."[1996] Were we to accept Z-Tel's argument, we would again impose a virtually unlimited standard to unbundling, based on little more than faith that more unbundling is better, regardless of context. Checklist items 4 through 6 and 10 do not require us to impose unbundling pursuant to section 251(d)(2). Rather, the checklist independently imposes unbundling obligations, but simply does so with less rigid accompanying conditions.

659. In interpreting section 271(c)(2)(B), we are guided by the familiar rule of statutory construction that, where possible, provisions of a statute should be read so as not to create a conflict.[1997] So if, for example, pursuant to section 251, competitive entrants are found not to be "impaired" without access to unbundled switching at TELRIC rates, the question becomes whether BOCs are required to provide unbundled switching at TELRIC rates pursuant to section 271(c)(2)(B)(vi). In order to read the provisions so as not to create a conflict, we conclude that section 271 requires BOCs to provide unbundled access to elements not required to be unbundled under section 251, but does not require TELRIC pricing. This interpretation allows us to reconcile the interrelated terms of the Act so that one provision (section 271) does not

[1992] Letter from Christopher J Wright, Counsel for Z-Tel, to Marlene H Dortch, Secretary, FCC, CC Docket 01-338 at 11 (filed Dec 20, 2002) (Z-Tel Dec 20, 2002 *Ex Parte* Letter)

[1993] Z-Tel Dec. 20, 2002 *Ex Parte* Letter at 11

[1994] Z-Tel Comments at 17

[1995] *USTA*, 290 F 3d at 425.

[1996] *Id*

[1997] *See Washington Market Co v Hoffman*, 101 U S. 112 (1879).

gratuitously reimpose the very same requirements that another provision (section 251) has eliminated.

660. We reject arguments by Z-Tel and certain other competitive LECs that the proper way to reconcile any such conflict is to find that our section 251 impairment determinations with respect to unbundled local loops, switching and transport would apply only to non-BOC incumbent LECs.[1998] Z-Tel's argument posits that particular network elements enumerated in the section 271 checklist are the "core" elements, and thus concludes that while the standards in section 251 would still apply to all carriers as to any network elements not mentioned in the checklist, section 271 requirements (as construed by Z-Tel) would supercede section 251 standards as to the most critical network elements delineated by Congress. We think that this reading of the two provisions is illogical. BOCs control 85.9 percent of incumbent LEC local switched access lines.[1999] Of the remaining lines, 11.6 percent of the lines are served by certain rural telephone companies that section 251(f) expressly exempts from the unbundling obligations set forth in 251(c). So, under the Z-Tel interpretation of sections 251 and 271, Z-Tel would have section 251(c), which is arguably the most important market-opening provision of the Act, apply to a mere 2.5 percent of incumbent LEC lines on the issues and facilities that matter most to local competition.[2000] The section 271 checklist cannot be read to have such a broad effect – while it does set forth particular conditions Congress wished to impose on entry into the in-region interLATA market, Congress could not have intended the checklist to render section 251 itself superfluous.

661. Our recognition that pricing pursuant to section 252 does not apply to network elements that are not required to be unbundled is consistent with the Commission's general approach in the *UNE Remand Order*, and has been applied – apparently with no adverse effect – with respect to access to directory assistance and operator services. The Commission removed directory assistance and operator services from the list of UNEs in the *UNE Remand Order* [2001] These network elements, like loops, transport, switching and signaling databases, are separately listed in the competitive checklist.[2002] Accordingly, as explained in subsequent section 271 orders, access to directory assistance and operator services remains a condition of long distance entry – but the standard applicable to rates and conditions is not derived from sections 251 and 252.[2003] We note that no party has sought to overturn this aspect of the seventeen section 271 orders that have applied this analysis since directory assistance and operator services were removed from the list of section 251 UNEs, and no party has suggested in this proceeding that

[1998] Z-Tel Comments at 7-8.

[1999] *Federal Universal Service Support Mechanisms Fund Size Projections for the First Quarter 2003*, Submitted by the Universal Service Administrative Company (filed Nov 1, 2002)

[2000] *Id*

[2001] *UNE Remand Order*, 15 FCC Rcd at 3891-92, paras 441-42.

[2002] *See* 47 U S C § 271(c)(2)(B)(vii)(II)-(III)

[2003] *See, e g , SWBT Texas 271 Order*, 15 FCC Rcd at 18527, para 348

the Commission's interpretation of the statute has produced a perverse policy impact with respect to a BOC's provision of these network elements.

662. We note, however, that in the *UNE Remand Order* the Commission stated that "[i]f a checklist network element is unbundled, the applicable prices, terms and conditions are determined in accordance with sections 251 and 252. If a checklist network element does not satisfy the unbundling standards in section 251(d)(2), the applicable prices, terms and conditions for that element are determined in accordance with sections 201(b) and 202(a)."[2004] We reach essentially the same result here, but we clarify our reasoning below.

663. The Supreme Court has held that the last sentence of section 201(b), which authorizes the Commission "to prescribe such rules and regulations as may be necessary in the public interest to carry out the provisions of this Act," empowers the Commission to adopt rules that implement the new provisions of the Communications Act that were added by the Telecommunications Act of 1996.[2005] Section 271 is such a provision.[2006] Thus, the pricing of checklist network elements that do not satisfy the unbundling standards in section 251(d)(2) are reviewed utilizing the basic just, reasonable, and nondiscriminatory rate standard of sections 201 and 202 that is fundamental to common carrier regulation that has historically been applied under most federal and state statutes, including (for interstate services) the Communications Act.[2007] Application of the just and reasonable and nondiscriminatory pricing standard of sections 201 and 202 advances Congress's intent that Bell companies provide meaningful access to network elements.

664. Whether a particular checklist element's rate satisfies the just and reasonable pricing standard of section 201 and 202 is a fact-specific inquiry that the Commission will undertake in the context of a BOC's application for section 271 authority or in an enforcement proceeding brought pursuant to section 271(d)(6). We note, however, that for a given purchasing carrier, a BOC might satisfy this standard by demonstrating that the rate for a section 271 network element is at or below the rate at which the BOC offers comparable functions to similarly situated purchasing carriers under its interstate access tariff, to the extent such analogues exist. Alternatively, a BOC might demonstrate that the rate at which it offers a section 271 network element is reasonable by showing that it has entered into arms-length agreements with other, similarly situated purchasing carriers to provide the element at that rate.

[2004] *UNE Remand Order*, 15 FCC Rcd at 3905, para 470.

[2005] *Iowa Utils Bd*, 525 U S at 377-81

[2006] The Court found that this grant of authority was "unaffected by" the jurisdictional limitation regarding intrastate matters that was contained in section 2(b) of the 1934 Act *Id.* at 379. The Court found that since new sections 251 and 252 applied to interstate as well as intrastate matters, section 201(b) authorized the Commission to adopt rules implementing the full scope of those provisions *Id* at 379-81.

[2007] *See* 47 U.S C §§ 201(b), 202(a) Therefore, we reject the argument of Z-Tel that section 252(d)(1) is the only basis for the Commission to evaluate checklist elements not required to be unbundled under section 251

665. *Post Entry Requirements.* In the event a BOC has already received section 271 authorization, section 271(d)(6) grants the Commission enforcement authority to ensure that the BOC continues to comply with the market opening requirements of section 271. In particular, this section provides the Commission with enforcement authority where a BOC "has ceased to meet any of the conditions required for such approval."[2008] We conclude that for purposes of section 271(d)(6), BOCs must continue to comply with any conditions required for approval, consistent with changes in the law. While we believe that section 271(d)(6) established an ongoing duty for BOCs to remain in compliance, we do not believe that Congress intended that the "conditions required for such approval" would not change with time. Absent such a reading, the Commission would be in a position where it was imposing different backsliding requirements on BOCs solely based on date of section 271 entry, rather than based on the law as it currently exists. We reject this approach as antithetical to public policy because it would require the enforcement of out-of-date or even vacated rules.

666. Two commenters in this proceeding ask the Commission to adopt special procedural vehicles for re-examining section 271 authorizations, in light of potential rule changes that would change a BOC's obligations under section 251. First, Z-Tel asserts that the Commission must revisit every section 271 authorization to consider "[a]ny significant change to the availability of the UNE platform."[2009] Second, Talk America asks the Commission to adopt a procedure that would freeze in place a BOC's unbundling obligations under section 251, at least pending a review of potential backsliding under section 271(d)(6).[2010] Specifically, Talk America contends that, for a BOC that has previously received section 271 authorization, the "anti-backsliding" requirements of section 271(d)(6) would require it to continue providing unbundled local switching (and UNE-P) at TELRIC prices in the event it is no longer required to do so under section 251. Talk America suggests that any rule change that lessens a BOC's obligation to provide access to unbundled switching could decrease the level of facilities-based competition in either residential or business markets, thereby potentially causing a "backsliding" violation under section 271(d)(6) to the extent the BOC relied on UNE-P based competition to support its showing under section 271(c)(1)(A) (Track A). Accordingly, to address this risk of this type of "backsliding," Talk America would require BOCs to file a petition with the Commission – *before* they may be permitted to cease providing switching and UNE-P at TELRIC-based rates – demonstrating the existence of facilities-based competition from carriers that do not rely in any material part on the availability of unbundled local switching or UNE-P at TELRIC-based rates.[2011]

[2008] 47 U.S.C. § 271(d)(6)

[2009] Z-Tel Comments at 83-84

[2010] Letter from Brad A. Mutschelknaus, Counsel for Talk America and Broadview Networks, to Marlene H. Dortch, Secretary, FCC, CC Docket Nos. 01-338, 96-98, 98-147 at 15 (filed Dec. 6, 2002) (Talk America/Broadview Networks Dec. 6, 2002 *Ex Parte* Letter), *see also* Letter from Brad A. Mutschelknaus, Counsel for Talk America, to Marlene H. Dortch, Secretary, FCC, CC Docket 01-338 at 3 (filed Dec. 30, 2002) (Talk America Dec. 30, 2002 *Ex Parte* Letter).

[2011] Talk America Dec. 30, 2002 *Ex Parte* Letter at 3

667. We decline to adopt the extraordinary procedural steps requested by Z-Tel and Talk America. With respect to Talk America's proposal, by reexamining whether a BOC continues to qualify for "Track A" *before* conditions change in the market ignores the reality that competitors may take steps to retain customers served by UNE-P. For example, it is entirely possible that a competitive LEC may transition customers from UNE-P to an arrangement using unbundled loops combined with its own switching – thereby retaining the same level of facilities-based competition. Accordingly, the before-the-fact review proposed by Talk America would necessarily require speculation and would hold a BOC to a higher standard than under its initial section 271 application. Finally, there is no suggestion that the procedure proposed by Talk America is necessary to detect discrimination or bad conduct – indeed, the harm alleged by Talk America would result from a BOC's *compliance with* federal unbundling rules. Accordingly, we do not believe the public interest warrants adoption of this special procedural step. For similar reasons, we decline Z-Tel's request to "revisit" every section 271 authorization to consider changes regarding UNE-P.

B. Clarification of TELRIC Rules

1. Background

668. Section 252(d)(1) of the Act provides that rates for interconnection and unbundled elements shall be "based on the cost (determined without reference to a rate-of-return or other rate-based proceeding) of providing the interconnection or network element" and "may include a reasonable profit."[2012] In the *Local Competition Order*, the Commission adopted guidelines to be applied by state commissions when they are called on to arbitrate disputes regarding the prices for interconnection and UNEs pursuant to section 252(d).[2013] Specifically, the Commission adopted a forward-looking economic cost methodology, which it called "Total Element Long Run Incremental Cost" or "TELRIC." The Supreme Court affirmed the Commission's TELRIC rules in *Verizon v FCC*.[2014]

669. Based on the Commission's finding that prices in a competitive market will tend towards long-run incremental cost,[2015] the TELRIC methodology is designed to derive prices for particular elements in the incumbent LEC's network that "replicate[], to the extent possible," what the incumbent LEC would be able to charge in a competitive market.[2016] Specifically, TELRIC equates the current market value of the existing network of an incumbent telecommunications provider with the cost the incumbent LEC would incur today if it built a

---

[2012] 47 U S C § 252(d)(1)

[2013] *Local Competition Order*, 11 FCC Rcd at 15515, para 29. The Commission also concluded that rates for reciprocal compensation under section 252(d)(2) should be based on the same principles *Id.* at 16023, para 1054.

[2014] *Verizon*, 535 U S at 467

[2015] *Local Competition Order*, 11 FCC Rcd at 15845, para 675

[2016] *Id* at 15846, para 679

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Application by BellSouth Corporation,	)	
BellSouth Telecommunications, Inc., and	)	WC Docket No. 02 – 307
BellSouth Long Distance, Inc., for	)	
Authorization To Provide In-Region,	)	
InterLATA Services in Florida and Tennessee	)	
	)	
	)	

MEMORANDUM OPINION AND ORDER

Adopted: December 18, 2002 **Released:** December 19, 2002

By the Commission: Chairman Powell and Commissioner Copps issuing separate statements; Commissioner Adelstein not participating.

TABLE OF CONTENTS

I. INTRODUCTION

1. On September 20, 2002, BellSouth Corporation and its subsidiaries, BellSouth Telecommunications, Inc , and BellSouth Long Distance, Inc (collectively, BellSouth) filed an application pursuant to section 271 of the Communications Act of 1934, as amended,[1] for authority to provide in-region, interLATA service originating in the states of Florida and Tennessee.[2] We grant BellSouth's application in this Order based on our conclusion that BellSouth has taken the statutorily required steps to open its local exchange markets in these states to competition. BellSouth therefore becomes the first Bell Operating Company (BOC) to obtain section 271 authority for interLATA service throughout its region.[3]

2 In ruling on BellSouth's application, we wish to acknowledge the effort and dedication of the Florida Public Service Commission (Florida Commission) and the Tennessee

[1] We refer to the Communications Act of 1934, as amended, as the Communications Act or the Act *See* 47 U S C §§ 151 *et seq*

[2] *See Joint Application by BellSouth Corporation, BellSouth Telecommunications, Inc , and BellSouth Long Distance, Inc , for Provision of In-Region, InterLATA Services in Florida and Tennessee*, WC Docket No 02-307 (filed Sept 20, 2002) (BellSouth Application), *see also Comments Requested on the Joint Application by BellSouth Corporation for Authorization under Section 271 of the Communications Act to Provide In-Region InterLATA Service in the States of Florida and Tennessee*, WC Docket No 02-307, Public Notice, 17 FCC Rcd 17435 (Wireline Comp Bur. 2002)

[3] *See Joint Application by BellSouth Corporation, BellSouth Telecommunications, Inc , and BellSouth Long Distance, Inc , for Provision of In-Region, InterLATA Services in Alabama, Kentucky, Mississippi, North Carolina, and South Carolina*, WC Docket No 02-150, Memorandum Opinion and Order, 17 FCC Rcd 17595 (2002) (*BellSouth Multistate Order*), *Joint Application by BellSouth Corporation, BellSouth Telecommunications, Inc , and BellSouth Long Distance, Inc , for Provision of In-Region, InterLATA Services in Georgia and Louisiana*, CC Docket No 02-35, Memorandum Opinion and Order, 17 FCC Rcd 9018 (2002) (*BellSouth Georgia/Louisiana Order*)

BellSouth has committed itself to making capacity information available to competitive LECs in a form similar to that provided to the Commission [451]

h. Training, Technical Assistance, and Help Desk Support

131. As we did in the *BellSouth Georgia/Louisiana* and the *BellSouth Multistate Orders*, we find that BellSouth adequately assists competing carriers in their use of available OSS functions [452] We reject Network Telephone's assertion that BellSouth's "Care Team" service is inadequate because Network Telephone provides no evidence that BellSouth has failed to enable Network Telephone to understand, implement, and use all of the OSS functions available to them.[453] In fact, the record shows that from April 17–19, 2002, seventeen BellSouth employees traveled to Florida to meet with Network Telephone to discuss operational assistance issues.[454] An outcome of this meeting was the discussion of a single point of contact ("SPOC") for Network Telephone on operational issues. If Network Telephone believes that BellSouth has failed to uphold its responsibilities in these areas, it may either avail itself of the change management plan's dispute resolution process or initiate an enforcement proceeding. However, given the lack of substantiating evidence in this proceeding, we find that BellSouth's showing in this area is the same as, if not better than, that which we found sufficient to meet the requirements of section 271 in the *BellSouth Georgia/Louisiana* and the *BellSouth Multistate Orders*.

V. OTHER CHECKLIST ITEMS

A. Checklist Item 4 - Unbundled Local Loops

132. Section 271(c)(2)(B)(iv) of the Act requires that a BOC provide "[l]ocal loop transmission from the central office to the customer's premises, unbundled from local switching or other services "[455] Based on the evidence in the record, we conclude, as did the state commissions,[456] that BellSouth demonstrates that it provides unbundled local loops in accordance with the requirements of section 271 and our rules. As in past section 271 orders, our conclusion

---

[451] BellSouth Nov 20 *Ex Parte* Letter – #1 at 5-6

[452] *See BellSouth Multistate Order* 17 FCC at 17712-13, para 208, *BellSouth Georgia/Louisiana Order,* 17 FCC at 9132, para 198.

[453] Network Telephone Comments at 11-12 Network Telephone states that the Care Team cannot quickly provide answers to complicated questions, that deadlines are missed, that team members do not have the appropriate level of expertise, and that the Care Team does not have access to the appropriate personnel at BellSouth *Id* at 11

[454] *See* BellSouth Ruscilli/Cox Reply Aff at paras 54-58

[455] 47 U S C § 271(c)(2)(B)(iv) The Commission has defined the loop as a transmission facility between a distribution frame, or its equivalent, in an incumbent LEC central office, and the demarcation point at the customer premises Dark fiber and loop conditioning equipment are among the features, functions, and capabilities of the loop *UNE Remand* Order, 15 FCC Rcd at 3772-73, paras 166-67 n 301 *See* Appendix D at paras 48-52

[456] *See* Florida Commission Comments – Hearing at 123-24, Tennessee Authority Comments at 33-34

is based on our review of BellSouth's performance for all loop types, including voice grade loops, xDSL-capable loops, high capacity loops, and digital loops, as well as our review of BellSouth's hot cut, line-sharing, and line splitting processes. We note that, as of July 31, 2002, BellSouth states that it had provisioned 166,168 loops in Florida and 50,886 loops in Tennessee [457]

133. Consistent with our prior section 271 orders, we do not address in detail aspects of BellSouth's loop performance where there is little, if any, dispute in the record that BellSouth's performance complies with the parity and benchmark measures established in the relevant states.[458] As in past section 271 proceedings, in the course of our review we look for patterns of systemic performance disparities that have resulted in competitive harm or that otherwise have denied new entrants a meaningful opportunity to compete.[459] Although several parties have raised issues with respect to BellSouth's loop performance,[460] our own review of the record shows that BellSouth's performance overall has been satisfactory Thus, we do not engage in detailed discussion of BellSouth's loop performance. Instead we focus on concerns raised by commenters, where the record indicates significant discrepancies between BellSouth's performance for its competitors and BellSouth's performance for its own retail operations

134 *Voice Grade Loops.* We find, as did the state commissions,[461] that BellSouth provisions voice grade loops to competitors in a nondiscriminatory manner. BellSouth generally meets the benchmark and parity standards for order processing timeliness, installation timeliness, installation quality, and maintenance and repair timeliness and quality of voice grade loops in Florida and Tennessee, with few exceptions.[462] We find that the exceptions to BellSouth's

---

457 *See* BellSouth Application at 84

458 *See, e g , BellSouth Georgia/Louisiana Order*, 17 FCC Rcd at 9144, para 219, *Verizon Connecticut Order*, 16 FCC Rcd at 14151-52, para 9.

459 *See, e g , Verizon Massachusetts Order*, 16 FCC Rcd at 9055-56, para 122 We note that in its comments, AT&T lists various performance metrics missed by BellSouth Although AT&T relates some of these missed metrics to alleged competitive impact, much of what AT&T lists demonstrates nothing more than isolated instances, or instances of near-compliance that, as we have found in previous orders, have no competitive impact. Accordingly, we decline to make a finding of noncompliance based upon AT&T's unsubstantiated allegations *See generally AT&T* Norris Decl However, the draft order fully treats those portions of the Norris Declaration that correlate BellSouth performance data to any competitive impact alleged by AT&T in its comments *See also supra* n 201

460 *See, e g ,* Covad Comments at 25-29, KMC Comments at 15-17

461 *See* Florida Commission Comments – Hearing at 123-24, Tennessee Authority Comments at 33-34

462 *See, e g ,* Florida/Tennessee B 1 12 8 – B 1 12 9 (FOC Timeliness – Partially Mechanized – 10 Hours, 2 Wire Analog Loops), Florida/Tennessee B 2 18 8 – B 2 18 9 (% Missed Installation Appointments, 2 Wire Analog Loops), Tennessee B 2 19 8 – B 2 19 9 (% Provisioning Troubles Within 30 Days, 2 Wire Analog Loops), Tennessee B 3 1 8 – B 3 1.9 (Missed Repair Appointments, 2 Wire Analog Loops), Florida/Tennessee B 3 4 8 – B 3 4 9 (% Repeat Troubles Within 30 Days, 2 Wire Analog Loops)

generally nondiscriminatory performance are not competitively significant.[463] We therefore find that a finding of checklist compliance is warranted despite these exceptions. Should BellSouth's performance in this area deteriorate, we will pursue appropriate enforcement action.

135. *Hot Cut Activity* We find, as did the state commissions,[464] that BellSouth is providing voice grade loops through hot cuts in accordance with the requirements of checklist item 4.[465] As in the Georgia/Louisiana proceeding, Mpower alleges that BellSouth's failure to provide an adequate frame due time (FDT) process violates BellSouth's obligation to provide nondiscriminatory access to OSS and to unbundled loops.[466] The Commission did not find

---

[463] BellSouth missed several months under an order processing timeliness benchmark (95% within 3 hours) *See* Florida B 1 9 8 (FOC Timeliness – Mechanized, 2 Wire Analog Loops)(indicating misses in June, July and August) However, competitive LECs experienced an average of 95 08% within 3 hours for the relevant period Although BellSouth also missed parity from May-Sept in Florida under a provisioning timeliness metric (the order completion interval metric), we note that its performance under another measure of installation timeliness, the percent missed installation appointments metric, indicates parity performance throughout the relevant period *See* Florida B 2 1 9 1 4 (Order Completion Interval, 2 Wire Analog Loops Non-Design/Dispatch) (indicating a disparity from May-Sept), *see also* Florida B 2 18 (% Missed Installation Appointments, 2 Wire Analog Loops) In previous orders, we have found the percent missed installation appointments metric more persuasive under comparable circumstances *See, e g , Bell Atlantic New York Order,* 15 FCC Rcd at 4063-66, paras 205-10 BellSouth also suggests that some disparity under the order completion interval metric may be attributable to the fact that competitive LEC orders are scheduled based on the standard ordering guide which carries a minimum four-day interval, while the retail analogue for the majority of these orders is residence and business type plain old telephone service (POTS) orders that are scheduled on the due date calculator, and may be completed in less than a day BellSouth Varner Aff , Ex PM-2 at para 139 BellSouth missed parity in Florida for three months under a provisioning quality measure *See* Florida B 2 19 9 1 4 (% Provisioning Troubles Within 30 Days, 2 Wire Analog Loops) We give little weight to this reported performance failure, however, in light of BellSouth's explanation that the misses correspond to a small number of trouble reports that do not provide a valid comparison to the retail analogue The low competitive LEC volume of 9 in September makes it difficult to draw further conclusions regarding the data BellSouth Varner Aff , Ex. PM-2 at para 143 BellSouth also missed several months under a maintenance and repair measure *See* Florida B 3 2 9 1 (Customer Trouble Report Rate, 2 Wire Analog Loops, Non-Design/Dispatch) However, BellSouth still provided over 97% trouble-free services under this measurement, and the difference in the trouble report rate for competitive LEC lines was less than 1% higher than the BellSouth retail analogue. BellSouth Varner Aff , Ex PM-2 at para 148 Therefore, we find that that reported performance failure has little, if any, competitive impact Finally, we note that BellSouth missed three months in Florida under the missed appointments metric for non-dispatch orders *See* Florida B 3 1 9 2 (Missed Repair Appointments, 2 Wire Analog Loops, Non-Design/Non-Dispatch) BellSouth states that two of the six missed appointments in May were missed by less than thirty minutes each, and the other four were due to improper order close-out procedures associated with a multi-trouble order for the same customer BellSouth further states that two of the eighteen total missed appointments in July were closed as Tested OK/ Found OK, and fifteen of the remaining 16 missed appointments were the result of 2 multiple troubles BellSouth Varner Aff , Ex PM-2 at para 147 We are persuaded by BellSouth's explanations for these performance disparities and find that they have little, if any, competitive impact

[464] *See* Florida Commission Comments – Hearing at 123-24, Tennessee Authority Comments at 33-34

[465] *See generally* Appendices B and C

[466] *See* Mpower Comments at 12-13.

Mpower's arguments persuasive in the *BellSouth Georgia/Louisiana Order*,[467] and Mpower provides no new evidence to support its claim in the instant proceeding. Accordingly, we dismiss Mpower's allegations.

136. *Digital Loops*. We find, as did the state commissions,[468] that BellSouth's performance with respect to digital loops complies with checklist item 4.[469] We recognize, however, that BellSouth's performance in Florida with respect to one installation timeliness measure – the order completion interval metric (dispatch) – was out of parity from May through September.[470] BellSouth explains, however, that within the mix of competitive LEC orders under this measurement, more than half were for unbundled digital channel (UDC) circuits, which are designed circuits requiring approximately 10 days for completion as compared to the retail analogue which is heavily weighted toward ADSL circuits requiring approximately 4 days to complete.[471] Due to BellSouth's explanation, we do not find that the disparity in BellSouth's performance under this metric raises an issue of checklist noncompliance. In addition, the data under another installation timeliness metric – percent missed installation appointments – shows that BellSouth provisioned digital loops in a timely fashion during the relevant period.[472] In these circumstances, as in previous orders, we conclude that BellSouth's performance under the order completion interval metric has not denied competitive LECs a meaningful opportunity to compete in Florida.[473]

137. Contrary to the argument propounded by KMC, we conclude that BellSouth's provisioning and maintenance and repair performance for digital loops warrants a finding of checklist compliance.[474] Although BellSouth's installation quality measure for digital loops – the percentage of provisioning troubles within 30 days – was out of parity in Florida from May to

---

[467] *See BellSouth Georgia/Louisiana Order*, 17 FCC Rcd at 9146, para 222

[468] *See* Florida Commission Comments – Hearing at 123-24, Tennessee Authority Comments at 33-34

[469] BellSouth missed several months under an order processing timeliness benchmark (85% within 10 hours) *See* Florida B 1 12 14 (FOC Timeliness – Partially Mechanized – 10 Hours) (Other Design) This category comprises several loop types, including digital and high capacity loops However, competitive LECs experienced an average of 87 03% within 10 hours for the relevant period Thus, we do not find these misses to be competitively significant Should BellSouth's performance in this area deteriorate, we will pursue appropriate enforcement action

[470] The order completion interval metric measures the amount of time it takes BellSouth to actually provide service on the orders it receives from competitive LECs and its own customers *See* Florida B 2 1 18 1 1 (Order Completion Interval, Digital Loops <DS1/<10 Circuits/Dispatch) (indicating intervals of 8 89, 7 64, 7 77, 8 24, and 7 99 days for competitive LECs and 4 77, 3 69, 3 58, 3 27, and 3 17 days for BellSouth's retail operations)

[471] *See* BellSouth Varner Aff , Ex PM-2 at para 151 BellSouth also states that UDC circuits are not offered as retail products *Id*

[472] *See* Florida B 2 18 18 1 1 (% Missed Installation Appointments, Digital Loops <DS1/<10 Circuits/Dispatch)

[473] *See, e g , BellSouth Multistate Order*, 17 FCC Rcd at 17729-30 para 240

[474] KMC Comments at 15-17

September,[475] BellSouth demonstrates that the majority of these misses were caused by defective plant facilities, central office wiring problems, or incidents where trouble reports were resolved as "tested OK/found OK".[476] Specifically, BellSouth provides the number of total trouble reports for each month that would be classified under the above categories of troubles, and explains how troubles under these categories often do not reflect the quality of the installation performed by BellSouth.[477] BellSouth further states that it is retraining plant technicians on proper testing and order turn-up procedures.[478] We agree that several troubles reported under this measure appear to be attributed to causes other than BellSouth's provisioning process, and accordingly find that BellSouth's performance in this area satisfies checklist item 4.

138. Similarly, BellSouth's maintenance and repair performance for digital loops was generally in parity during the applicable period.[479] This performance constitutes checklist compliance notwithstanding that one measure of that performance – the customer trouble report rate – was out of parity in Florida and Tennessee throughout much of the relevant period.[480]

---

[475] *See* Florida B 2 19 18 1 1 (% Provisioning Troubles within 30 Days, Digital Loops<DS1/<10 Circuits/Dispatch) (indicating trouble rates from May to September of 7 22%, 6 61%, 6 99%, 8 28%, and 6 96% for competitive LECs, and rates of 4 63%, 4 63%, 5 18%, 4 81%, and 4 03% for BellSouth retail)

[476] *See* BellSouth Varner Aff, Ex PM-2 at para 154

[477] For example, BellSouth explains that incidents of defective plant facilities may occur after BellSouth has installed and tested the facility when a cable gets wet or foreign voltage finds its way onto the facility Letter from Kathleen B Levitz, Vice President – Federal Regulatory, BellSouth, to Marlene H Dortch, Secretary, Federal Communications Commission, WC Docket No 02-307 at 4 (filed Nov 13, 2002)(BellSouth Nov 13 *Ex Parte* Letter – #2) Furthermore, troubles that fall under the tested OK/found OK category would also not appear to indicate that there was an actual problem with the quality of the installation performed by BellSouth As BellSouth describes, the tested OK/found OK category includes competitive LEC reported troubles where a technician conducts tests in either the repair center, the central office or outside, and finds that the loop is operating without a problem *See* Letter from Kathleen B Levitz, Vice President – Federal Regulatory, BellSouth, to Marlene H Dortch, Secretary, Federal Communications Commission, WC Docket No 02-307 at 3 (filed Nov 18, 2002)(BellSouth Nov 18 *Ex Parte* Letter – #1) BellSouth shows that when tested OK/found OK reports are removed from the percent provisioning troubles in 30 days metric, the competitive LEC results from May-Sept are reduced to 6 4%, 5 8%, 6 2%, 7 4% and 5 8% respectively. *Id* at 2.

[478] *See* BellSouth Varner Aff, Ex PM-2 at para 154

[479] *See* BellSouth Varner Aff, Ex PM-33; BellSouth Varner Reply Aff, Ex PM-15, Letter from Kathleen B Levitz, Vice President – Federal Regulatory, BellSouth, to Marlene H Dortch, Secretary, Federal Communications Commission, WC Docket No 02-307 (filed Nov 21, 2002) (BellSouth Nov 21 *Ex Parte* Letter – #1) (listing BellSouth's disaggregated performance under the % Missed Repair Appointments, Maintenance Average Duration, and % Repeat Troubles within 30 Days metrics for digital and high capacity loops) We note that while BellSouth has provided disaggregated maintenance and repair data for digital loops, the Florida interim and Tennessee measurements do not have established metrics for this data Disaggregated metrics are included under the Florida permanent measurements

[480] *See Id* (listing BellSouth's disaggregated performance under the Customer Trouble Report Rate, Digital Loops<DS1/Dispatch in Florida/Tennessee) (out of parity in Florida and Tennessee from May through September), *id* (listing BellSouth's disaggregated performance under the Customer Trouble Report Rate, Digital (continued)

BellSouth states that in spite of this disparity, 95 percent of the competitive LEC circuits for dispatch and non-dispatch digital loop orders were trouble-free during the relevant period [481] Because the overall trouble report rate for digital loops that BellSouth provided competitive LECs was low during the relevant period, we find that these disparities lack competitive significance.[482] Moreover, contrary to KMC's assertions, BellSouth was consistently in parity, with very few repeat troubles, with regard to its measure for repeat troubles within 30 days of maintenance or repair of digital loops.[483]

139. *High Capacity Loops*. We find, as did the state commissions,[484] that BellSouth's performance with respect to high capacity loops complies with checklist item 4.[485] We reach this conclusion despite the fact that BellSouth's performance with respect to some provisioning metrics – including the percentage of missed installation appointments and the percentage of troubles found within 30 days of installation – is out of parity for several months during the applicable period.[486] As we discuss below, however, this performance does not warrant a finding of checklist noncompliance. Isolated cases of performance disparity, especially when the margin of disparity is small, generally will not result in a finding of checklist noncompliance.[487]

(Continued from previous page)
Loops<DS1/Non-Dispatch in Florida/Tennessee) (out of parity in Florida from May through September, and out of parity in Tennessee in May), *see also* KMC Comments at 16

[481] BellSouth Reply at 42, BellSouth Varner Reply Aff at para 150

[482] BellSouth missed parity with regard to digital loops requiring dispatch in Florida from May through September with customer trouble rates of 1 34%, 1 49%, 1 74%, 1 57%, and 1 40% for competitive LECs, and rates of 0 26%, 0 28%, 0 34%, 0 36%, and 0 28% for BellSouth retail, BellSouth also missed parity in Tennessee from May through September with customer trouble rates of 1 11%, 1 14%, 1 10%, 1 49%, and 0 95% for competitive LECs, and rates of 0 34%, 0 37%, 0 44%, 0 44%, and 0 40% for BellSouth retail *See* BellSouth Varner Aff , Ex PM-33, BellSouth Varner Reply Aff , Ex PM-15, BellSouth Nov 21 *Ex Parte* Letter – #1 BellSouth missed parity with respect to non-dispatch digital loops in Florida from May through September with customer trouble rates of 0 66%, 0 55%, 0 47%, 0 57%, and 0 49% for competitive LECs, and rates of 0.35%, 0 28%, 0 32%, 0 33%, and 0 31% for BellSouth retail, BellSouth only missed parity in Tennessee in May with a customer trouble rate of 0 71% for competitive LECs, and a rate of 0 32% for BellSouth retail *See* BellSouth Varner Aff , Ex PM-33, BellSouth Varner Reply Aff , Ex PM-15, BellSouth Nov 21 *Ex Parte* Letter – #1, *see also BellSouth Georgia/Louisiana Order*, 17 FCC Rcd at 9150, para 230 Should BellSouth's performance in this area deteriorate, we will pursue appropriate enforcement action.

[483] *See* KMC Comments at 16-17, *but see* BellSouth Varner Aff , Ex PM-33, BellSouth Varner Reply Aff , Ex PM-15, BellSouth Nov 21 *Ex Parte* Letter – #1 (listing BellSouth's disaggregated performance under the % Repeat Troubles within 30 Days metrics for digital and high capacity loops), BellSouth Varner Reply Aff at para 151.

[484] *See* Florida Commission Comments – Hearing at 123-124, Tennessee Authority Comments at 33-34

[485] *See generally* Appendices B and C, *see also supra* n 469

[486] *See* Florida/Tennessee B 2 18 19 1 1 (% Missed Installation Appointments, Digital Loops≥DS1/<10 Circuits/Dispatch), Florida/Tennessee B 2 19 19 1 1 (% Provisioning Troubles within 30 Days, Digital Loops≥DS1/<10 Circuits/Dispatch)

[487] *See BellSouth Georgia/Louisiana Order*, 17 FCC Rcd at 9144, para 219, *Verizon Massachusetts Order*, 16 FCC Rcd at 9055-56, para 122, *Verizon Pennsylvania Order*, 16 FCC Rcd at 17468-69, para 90 (finding that even (continued)

140. First, we recognize that BellSouth's performance with respect to the missed installation appointments metric was out of parity in Florida and Tennessee for several months during the relevant period.[488] BellSouth states that there were only 29 missed appointments in Florida under the missed installation appointment metric from May through July for over 1,200 orders, and that the majority of these missed due dates were caused by facility issues where installation of the loop required the construction of additional facilities.[489] Given that the majority of installation appointments were met, and that BellSouth's overall loop performance is satisfactory, we do not find that lack of parity under the missed installation appointments metric for high capacity loops warrants a finding of noncompliance in Florida and Tennessee for checklist item 4.

(Continued from previous page)
"poor" performance with regard to high capacity loops did not warrant a finding of checklist noncompliance for all loop types where high capacity loops represented only a small percentage of all loops ordered by competitors in a state) High capacity loops appear to represent approximately 3 5% and 7 6% of the unbundled loops provisioned to competitive LECs in Florida and Tennessee, respectively *See* BellSouth Application App A, Vol 3a, Tab F, Affidavit of W Keith Milner (BellSouth Milner Aff) at paras 96, 98

[488] *See* Florida B 2 18 19 1 1 (% Missed Installation Appointments, Digital Loops≥DS1/<10 Circuits/Dispatch) (indicating missed installation appointment rates from May to September of 2 16%, 1 81%, 3 15%, 4 01%, and 4 37% for competitive LECs, and rates of 0 60%, 0 00%, 1 30%, 0 69%, and 1 33% for BellSouth retail), Tennessee B 2 18 19 1 1 (% Missed Installation Appointments, Digital Loops≥DS1/<10 Circuits/Dispatch) (indicating missed installation appointment rates in May, June, August and September of 6 77%, 9 17%, 7 25%, and 6 38% for competitive LECs, and rates of 2 93%, 4 22%, 3 14%, and 1 98% for BellSouth retail) KMC argues that BellSouth's loop assignment practices are discriminatory, and result in a greater percentage of competitive LEC high capacity loop orders being "held, pending facility" and placed in jeopardy status KMC Comments at 11, *see also* Letter from Andrew M Klein, Counsel to KMC, to Marlene H Dortch, Secretary, Federal Communications Commission, WC Docket No 02-307, Attach at 6 (filed Dec 5, 2002) (KMC Dec 5 *Ex Parte* Letter) According to KMC, BellSouth's jeopardy performance in Georgia and Louisiana has also declined in recent months *See* KMC Dec 5 *Ex Parte* Letter, Attach at 7-8 KMC states that this high percentage of jeopardies under BellSouth's facility assignment approach leads to more missed appointments for competitive LECs KMC Comments at 14, KMC Reply at 8 BellSouth, however, explains that the difference in the percentage of competitive LEC and BellSouth orders placed in jeopardy status is primarily a reflection of the fact that competitive LECs are targeting business customers in customer locations that are typically heavily congested and capacity constrained, whereas BellSouth's retail orders are more widely distributed across a statewide area *See* Letter from Kathleen B Levitz, Vice President – Federal Regulatory, BellSouth, to Marlene H Dortch, Secretary, Federal Communications Commission, WC Docket No 02-307 at 1-2 (filed Dec 11, 2002)(BellSouth Dec 11 *Ex Parte* Letter – #1) According to BellSouth, the percentage of jeopardies issued for competitive LEC orders in Georgia and Louisiana has increased, but BellSouth notes that jeopardies for BellSouth retail have also increased to an even greater degree than for competitive LEC orders BellSouth Dec 11 *Ex Parte* Letter – #1 at 3 BellSouth states that despite the issuance of jeopardies in Florida and Tennessee, many orders were still completed as scheduled BellSouth Varner Reply Aff at paras 127, 129 *But see* Letter from Andrew M Klein, Counsel to KMC, Marlene H Dortch, Secretary, Federal Communications Commission, WC Docket No 02-307 at 1 (filed Dec 17, 2002) (KMC Dec 17 *Ex Parte* Letter) In addition, BellSouth states that the majority of missed appointments that did occur were not caused by discriminatory practices, but instead were due to the fact that the competitive LEC orders were placed to end-users where facility projects were required to meet the demand BellSouth Varner Reply Aff at para 129 We note that BellSouth's performance reflected by another measure of installation timeliness – the order completion interval metric – indicates parity in both states for all relevant months *See* Florida/Tennessee B 2 1 19 1 1 (Order Completion Interval, Digital Loops≥DS1/<10 Circuits/Dispatch)

[489] *See* BellSouth Varner Aff , Ex PM-2 at para 153

141. Next, KMC argues that BellSouth fails to achieve parity under the provisioning quality metric measuring the percentage of troubles found within 30 days of high capacity loop installation.[490] BellSouth states that in Florida the majority of the misses were caused by defective plant facilities, central office wiring problems or incidents where trouble reports were resolved as tested OK/found OK.[491] BellSouth also specifically states that in Tennessee, forty percent of the reports were closed as no trouble found, while the remainder were equally spread between outside facilities and equipment within the central office.[492] As discussed above, we agree that several troubles reported under this measure appear to be attributed to causes other than BellSouth's own provisioning process. Data provided by BellSouth show for example that 13 of the 39 total trouble reports reported in September for high capacity loops in Florida fell under the category of loops that actually were tested OK or found OK.[493] Given this evidence, and recognizing BellSouth's generally acceptable performance for other categories of loops, we find that BellSouth's performance is in compliance with checklist item 4.[494]

142 KMC also contends that BellSouth's maintenance and repair performance for high capacity loops precludes a finding of checklist compliance.[495] In particular, KMC points to BellSouth's performance under the percentage of repeat troubles within 30 days and the customer trouble report rate.[496] With respect to BellSouth's performance under the repeat troubles metric in Florida and Tennessee, we find that contrary to KMC's claim, results during the relevant period indicate nondiscriminatory performance for BellSouth's maintenance and

---

[490] KMC Comments at 15-16 As with missed appointments, KMC suggests that the high percentage of jeopardies under BellSouth's facility assignment approach contributes to the greater number of provisioning troubles *See supra* n 488, KMC Reply at 8-9 *See also* Florida/Tennessee B 2 19 19 1 1 (% Provisioning Troubles within 30 Days, Digital Loops≥DS1/<10 Circuits/Dispatch) (BellSouth missed parity in Florida in May, July, August and September with trouble rates of 11 17%, 10 57%, 9 93%, and 12 04% for competitive LECs, and rates of 6 89%, 5 41%, 6 36%, and 2 07% for BellSouth retail, BellSouth missed parity in Tennessee in May, July, August, and September with trouble rates of 19 23%, 14 41%, 18 92%, and 16 58% for competitive LECs, and rates of 5 51%, 6 63%, 3 52%, and 3 92% for BellSouth retail) Performance under these measures is within the range accepted in previous BellSouth applications

[491] *See* BellSouth Varner Aff , Ex PM-2 at para 154, *see also* BellSouth Dec 11 *Ex Parte* Letter – #1 at 5-6 *But see* KMC Dec 17 *Ex Parte* Letter at 3

[492] *See* BellSouth Varner Aff , Ex PM-3 at para 149

[493] *See* BellSouth November 13 *Ex Parte* Letter – #2 at 4 BellSouth shows that when tested OK/found OK reports are removed from the percent provisioning troubles in 30 days metric, the competitive LEC results in May, July, August and September are reduced to 8 6%, 7 3%, 6 5%, and 8 0% respectively BellSouth Nov 18 *Ex Parte* Letter – #1

[494] Should BellSouth's performance in this area deteriorate, we will pursue appropriate enforcement action

[495] KMC Comments at 17

[496] KMC Comments at 16-17 As with missed appointments, KMC suggests that the high percentage of jeopardies under BellSouth's facility assignment approach contributes to the greater number of customer trouble reports *See supra* n 488, KMC Reply at 8-9

repair of high capacity loops.[497] The customer trouble report rate, however, was out of parity in Florida and Tennessee throughout the relevant period.[498] BellSouth states that one explanation for this disparity is that the retail analogue for these circuits includes many interoffice circuits that use fiber facilities running between central offices at the DS-3 level, and which are less complex, and thus less prone to the technical problems that give rise to customer trouble reports, than the DS-1 competitive LEC circuits that have additional circuit equipment.[499] BellSouth also states that, in spite of the performance disparity, 95 percent of the competitive LEC circuits for dispatch and non-dispatch high capacity loop orders were trouble free during the relevant period.[500] Because the overall trouble report rate for high capacity loops that BellSouth provided competitive LECs was low during the relevant period, we find that these disparities lack competitive significance, and that BellSouth's maintenance and repair performance for high capacity loops warrants a finding of checklist compliance.[501]

---

[497] *See* BellSouth Varner Aff., Ex. PM-33, BellSouth Nov. 21 *Ex Parte* Letter – #1 (listing BellSouth's disaggregated performance under the % Repeat Troubles Within 30 Days metric for digital and high capacity loops) (indicating parity performance from May-Sept. for dispatch/non-dispatch high capacity loop orders in Tennessee, and parity performance for every month during the relevant period except August for dispatch/non-dispatch high capacity loop orders in Florida). *See also* BellSouth Dec. 11 *Ex Parte* Letter – #1 at 7.

[498] *See* BellSouth Varner Aff., Ex. PM-33, BellSouth Varner Reply Aff., Ex. PM-15, BellSouth Nov. 21 *Ex Parte* Letter – #1 (listing BellSouth's disaggregated performance under the Customer Trouble Report Rate, Digital Loops>=DS1/Dispatch in Florida/Tennessee) (out of parity in Florida and Tennessee from May through September), *id.* (discussing BellSouth's disaggregated performance under the Customer Trouble Report Rate, Digital Loops>=DS1/Non-Dispatch in Florida/Tennessee) (out of parity in Florida and Tennessee from May through September), *see also* KMC Comments at 9, 16 (stating that despite the fact that in most cases high capacity loops constitute a small percentage of overall loops provided, the out of parity trouble rate for high capacity loops affects a competitive LEC customer base equivalent to between 156,240 and 4,374,720 voice grade lines depending on whether all of the 6,510 circuits are on DS-1 or DS-3 high capacity loops).

[499] *See* BellSouth Varner Reply Aff. at para. 150. BellSouth also notes that KMC's argument regarding the voice grade line equivalent for these high capacity loops assumes that each DS-1 and DS-3 is completely full, which is not the case. *See* BellSouth Varner Reply Aff. at para. 150.

[500] BellSouth Reply at 42, BellSouth Varner Reply Aff. at para. 150, *see also* BellSouth Dec. 11 *Ex Parte* Letter – #1 at 6.

[501] BellSouth missed parity with regard to high capacity loops requiring dispatch in Florida from May through September with customer trouble rates of 3.55%, 3.34%, 3.59%, 3.10%, and 3.03% for competitive LECs, and rates of 0.26%, 0.28%, 0.34%, 0.36%, and 0.28% for BellSouth retail. BellSouth also missed parity in Tennessee from May through September with customer trouble rates of 3.30%, 3.03%, 4.40%, 3.91%, and 3.25% for competitive LECs, and rates of 0.34%, 0.37%, 0.44%, 0.44%, and 0.40% for BellSouth retail. *See* BellSouth Varner Aff., Ex. PM-33, BellSouth Varner Reply Aff., Ex. PM-15, BellSouth Nov. 21 *Ex Parte* Letter – #1. BellSouth missed parity with respect to non-dispatch high capacity loops in Florida from May through September with customer trouble rates of 1.44%, 1.32%, 1.44%, 1.26%, and 1.31% for competitive LECs, and rates of 0.35%, 0.28%, 0.32%, 0.33%, and 0.31% for BellSouth retail. BellSouth missed parity in Tennessee from May through September with customer trouble rates of 1.38%, 1.48%, 1.43%, 1.60%, and 1.46% for competitive LECs, and rates of 0.32%, 0.32%, 0.35%, 0.38%, and 0.28% for BellSouth retail. *See* BellSouth Varner Aff., Ex. PM-33, BellSouth Varner Reply Aff., Ex. PM-15, BellSouth Nov. 21 *Ex Parte* Letter – #1, *see also BellSouth Georgia/Louisiana Order*, 17 FCC Rcd at 9150, para. 230.

143. AT&T asserts that BellSouth fails to satisfy checklist item 4 because it fails to provide a reasonable and cost-based method of converting special access DS-1 circuits to TELRIC-priced unbundled loops.[502] Specifically, AT&T states that BellSouth's conversion process requires the issuance of a disconnect order for the special access DS-1 in addition to a new connect order for the UNE loop, risking disruption of service.[503] AT&T further states that BellSouth does not dispute AT&T's right to convert the special access circuit to an unbundled loop, only the process of conversion.[504] In response, BellSouth argues that its interconnection agreement provides only for the conversion of special access to UNE combinations and does not provide for, or require, conversions of access or tariffed services to stand-alone UNEs.[505] Based on the limited factual record, and the time constraints associated with section 271 proceedings, we find that this competitive LEC-specific dispute is more appropriately addressed in an adjudicatory proceeding in the appropriate forum. Thus we find that a finding of checklist compliance is warranted despite AT&T's allegations.

144 *Line Sharing.* We find, as did the state commissions,[506] that BellSouth offers nondiscriminatory access to the high frequency portion of the loop in Florida and Tennessee.[507] BellSouth has provisioned 2,850 line sharing arrangements in Florida and 931 line sharing arrangements in Tennessee, as of July 2002.[508] We recognize that BellSouth's performance in Florida and Tennessee, with respect to one installation timeliness measure – the order completion interval metric (dispatch) – was out of parity for several months.[509] We note, however, that the data under another installation timeliness metric – percent missed installation appointments – shows that BellSouth generally provisioned line shared loops in a timely fashion

---

[502] AT&T Comments at 19-20

[503] AT&T Comments at 19-20 AT&T also suggests that current single order alternatives are cost prohibitive *Id* at 20

[504] AT&T Comments at 19 n 13

[505] BellSouth Ruscilli/Cox Reply Aff at para 25 BellSouth submits that its project management offer to facilitate the conversion of special access to stand-alone UNEs goes beyond its obligations BellSouth Ruscilli/Cox Reply Aff at paras 26-27

[506] *See* Florida Commission Comments – Hearing at 123-24, Tennessee Authority Comments at 33-34

[507] The D C Circuit recently stated that "the *Line Sharing Order* must be vacated and remanded " *USTA v FCC*, 290 F 3d 415, 429 (D C Cir 2002) The court also stated that it "grant[ed] the petitions for review[] and remand[ed] the *Line Sharing Order* to the Commission for further consideration in accordance with the principles outlined " *Id* at 430 We are addressing the line sharing rules as part of our *Triennial Review Proceeding See Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, 16 FCC Rcd 22781, 22805, paras 53-54 (2001)

[508] *See* BellSouth Application at 97

[509] *See* Florida B 2 1 7 3 1 (Order Completion Interval, <6 Circuits/Dispatch), Florida B 2 1 7 3 2 (Order Completion Interval, <6 Circuits/Non-Dispatch), Tennessee B 2 1 7 3 2 (Order Completion Interval, <6 Circuits/Non-Dispatch)

during the relevant period.[510] Accordingly, we find that BellSouth's provisioning of line-shared loops satisfies checklist item 4. Should BellSouth's performance in this area deteriorate, we will pursue appropriate enforcement action.

145. Covad raises issues regarding BellSouth's performance under the percent provisioning troubles within 30 days of installation, the maintenance average duration, and the percent repeat troubles within 30 days metrics.[511] BellSouth states that despite the disparity under the provisioning troubles within 30 days of installation metric, the results indicate a very high incidence of trouble reports that were resolved as tested OK/found OK in Florida for both dispatch and non-dispatch orders.[512] BellSouth further states that misses in Tennessee under the maintenance average duration metric are again largely due to delays caused by a very high incidence of trouble reports closed as tested OK/found OK.[513] Given the totality of circumstances, we conclude that BellSouth's performance under these metrics is consistent with satisfactory performance of this checklist item. We also note that despite Covad's claims of discriminatory performance under the percent repeat troubles within 30 days metric, BellSouth achieved parity under this metric for all relevant months in Tennessee, and all but one month in Florida.[514]

146. *UNE ISDN Loops*. We find, as did the state commissions,[515] that BellSouth provides ISDN loops to competitors in a nondiscriminatory manner. BellSouth's performance

---

[510] *See* Florida B 2 18 7 1 1 (% Missed Installation Appointments, Line Sharing/<10 Circuits/Dispatch), Florida B 2 18 7 1 2 (% Missed Installation Appointments, Line Sharing/<10 Circuits/Non-Dispatch), Tennessee B 2 18 7 1 2 (% Missed Installation Appointments, Line Sharing/<10 Circuits/Dispatch)

[511] Covad Comments at 25-29 As in prior section 271 orders, performance data relative to competitive LECs on an aggregate basis is the most persuasive evidence of whether a BOC meets the checklist requirements *See, e g , BellSouth MultiState Order*, 17 FCC Rcd at 17727, para 237, *BellSouth Georgia/Louisiana Order*, 17 FCC Rcd at 9148, para 226 Thus, although Covad claims that its data show discriminatory performance, allegedly anomalous results for a single carrier in this instance are insufficient to rebut BellSouth's evidence demonstrating checklist compliance If evidence becomes available to the Commission in the future sufficient to show systemic performance disparities, we will pursue appropriate enforcement action

[512] BellSouth Reply at 40, BellSouth Varner Reply Aff at para 143 (indicating that 39% of the troubles for dispatch line sharing orders were closed as tested OK/found OK in May, 23% in June, 50% in July, and 31% in August) BellSouth states that when tested OK/found OK reports are removed from this metric for non-dispatch line sharing orders in Florida, the results in May, June, July, and August are 4 6%, 9 6%, 5 4% and 4 5% respectively BellSouth Varner Reply Aff at para 144 BellSouth also states that when tested OK/found OK reports are removed from Tennessee results, the percentage of troubles within 30 days are quite small BellSouth Reply at 41, BellSouth Varner Reply Aff at para 144 (indicating that results under this metric would have been 2 8% and 4 2% respectively if the tested OK/found OK reports are removed for July and August)

[513] BellSouth Reply at 41, BellSouth Varner Reply Aff at para 146 As noted above, troubles that fall under the tested OK/found OK category would not appear to indicate that there was an actual problem with the quality of the installation performed by BellSouth *See supra* n 477

[514] *See* BellSouth Reply at 41

[515] *See* Florida Commission Comments – Hearing at 123-24, Tennessee Authority Comments at 33-34

data demonstrate that, for the most part, it met the relevant benchmarks and parity standards,[516] notwithstanding that the data reveal some performance issues with respect to ordering and a maintenance and repair measure. First, with respect to the order processing timeliness metric, Firm Order Confirmation (FOC) timeliness, we recognize that BellSouth's performance misses the relevant benchmarks for partially mechanized orders for several months.[517] BellSouth explains that the volumes decreased to such low levels in recent months that to meet the 85 percent in 10-hours benchmark in any given month, BellSouth could not miss more than four LSRs in Florida and could not miss any LSRs in Tennessee.[518] BellSouth adds that steps have been taken to improve performance, such as the implementation of new computer tools and periodic operational reviews.[519] Given this, and the fact that the order volumes were low for this submetric, we find that that these performance discrepancies are not competitively significant. We also reject AT&T's claim that BellSouth's performance for the percentage of jeopardy notices for mechanized ISDN loops, which is out of parity throughout the relevant period in Florida and Tennessee, demonstrates BellSouth's noncompliance with this checklist item.[520] We believe that BellSouth's failing to meet the parity standard for such jeopardy notices has little competitive impact because BellSouth ultimately provisioned the ISDN loop in a timely manner.[521] Should BellSouth's performance in this area deteriorate, we will pursue appropriate enforcement action.

---

[516] *See, e g*, Florida/Tennessee B 2 1 6 3 1 (Order Completion Interval, UNE ISDN/<6 Circuits/Dispatch), Florida/Tennessee B 2 18 6 1 1 (% Missed Installation Appointments, UNE ISDN/<10 Circuits/Dispatch)

[517] *See* Florida B 1 12 6 (FOC Timeliness – Partially Mechanized – 10 hours, ISDN Loops (UDN, UDC)) (in Florida, BellSouth missed the 85% within 10 hours benchmark from June-Sept , the results are 82 05%, 70 83%, 80 95%, 83 33%, respectively), Tennessee B 1 12 6 (FOC Timeliness – Partially Mechanized – 10 hours, ISDN Loops (UDN, UDC)) (in Tennessee, BellSouth missed the 85% within 10 hours benchmark in June and July, the results are 81 82% and 80 00%, respectively) We note that AT&T generally comments about BellSouth's performance in Florida and Tennessee with respect to the FOC timeliness partially mechanized submetric AT&T Norris Decl at paras 18, 51, *see also supra* n 201

[518] BellSouth Varner Reply Aff at paras 160-61 Volumes dropped off substantially after May 2002 in Florida and Tennessee In Florida, on average, from June-Sept , there were approximately 25 orders a month In Tennessee, for these same months, there were approximately 7 orders a month, on average *See* Florida/Tennessee B 1 12 6 (FOC Timeliness – Partially Mechanized – 10 hours, ISDN Loops (UDN, UDC))

[519] BellSouth Varner Reply Aff at para 161

[520] *See* AT&T Norris Decl at paras 20, 56, Florida B 2 5 6 (% Jeopardies - Mechanized, UNE ISDN) (out of parity in May-Sept), Tennessee B 2 5 6 (% Jeopardies - Mechanized, UNE ISDN) (out of parity in May, July-Sept)

[521] Jeopardy notices warn competitive LECs that BellSouth may miss an installation appointment BellSouth Varner Aff , Ex PM-2 at para 141 In its reply, BellSouth points out that AT&T failed to mention that BellSouth met almost all of the % Missed Installation Appointment metrics and added that "the jeopardy percentage was not indicative of whether the appointment was actually made " BellSouth Varner Reply Aff at para 129 BellSouth met or exceeded the missed installation appointment submetric with one minor exception in Florida *See* Florida B 2 18 6 1 1 (% Missed Installation Appointments, UNE ISDN/<10 Circuits/Dispatch)

147. Finally, even though BellSouth's data reveal some performance disparities with respect to the maintenance and repair of ISDN loops, BellSouth's overall performance in this area complies with checklist item 4. Specifically, BellSouth was out of parity with respect to the customer trouble report rate for several months in Florida.[522] BellSouth states that a large proportion of the reported troubles were due to defective cable pairs or circuit cards that had to be "reseated."[523] BellSouth adds that with respect to the circuit cards, the problem may be attributable to a customer's defective modem or computer[524] and claims that its performance is excellent when viewing the metric from the converse perspective – trouble-free lines – which is 97 percent for both wholesale and retail customers.[525] The record shows that BellSouth has not identified any persistent problems and seeks ways to improve performance by holding monthly Outside Plant Improvement committees aimed at addressing these types of problems.[526] Moreover, the disparity between BellSouth retail and competitive LEC performance is small for this submetric.[527] Accordingly, we find that BellSouth's performance overall for ISDN loops warrants a finding of checklist compliance.

B. Checklist Item 11 – Number Portability

148 Section 271(c)(2)(B)(xi) of the Act requires a BOC to comply with the number portability regulations adopted by the Commission pursuant to section 251.[528] Section 251(b)(2) requires all LECs "to provide, to the extent technically feasible, number portability in accordance with requirements prescribed by the Commission "[529] Based on the evidence in the

---

[522] *See* Florida B 3 2 6 1 (Customer Trouble Report Rate, UNE ISDN/Dispatch) (out of parity May-Sept) However, we note that BellSouth met or exceeded the parity standard for metrics measuring the percentage of missed repairs, maintenance average duration, and the percentage of repeat troubles with two minor exceptions *See* Florida B 3 3 6 2 (Maintenance Average Duration, UNE ISDN/Non-Dispatch) (out of parity in June and September), Florida B 3 4 6 1 (% Repeat Troubles within 30 days, UNE ISDN/Dispatch) (out of parity in June)

[523] BellSouth Application at 95, BellSouth Varner Reply Aff at para 164, Letter from Kathleen B Levitz, Vice President – Federal Regulatory, BellSouth, to Marlene H Dortch, Secretary, Federal Communications Commission, WC Docket No 02-307 at 2 (filed Nov 12, 2002) (BellSouth Nov 12 *Ex Parte* Letter) BellSouth explains that when a circuit card has to be "reseated" this means that a technician removes a plug-in card associated with an ISDN line and then reinserts that card into the same slot BellSouth Nov 12 *Ex Parte* Letter at 2

[524] *Id* According to BellSouth, a defective modem or computer may seize the line but does not release when the transmission is complete *Id* As a result, the line is unavailable *Id*

[525] BellSouth Varner Reply Aff at para 162

[526] *Id* at para 164

[527] Florida B 3 2 6 1 (Customer Trouble Report Rate, UNE ISDN/Dispatch) (generally equal to or less than 1 5% difference between BellSouth retail and wholesale performance)

[528] 47 U S C § 271(c)(2)(B)(xi)

[529] 47 U S C § 251(b)(2)

attachments in any case where such matters are regulated by a State."[159] As of 1992, nineteen states, including Connecticut, had certified to the Commission that they regulated the rates, terms, and conditions for pole attachments.[160]

D. Checklist Item 4 – Unbundled Local Loops

48. Section 271(c)(2)(B)(iv) of the Act, item 4 of the competitive checklist, requires that a BOC provide "[l]ocal loop transmission from the central office to the customer's premises, unbundled from local switching or other services."[161] The Commission has defined the loop as a transmission facility between a distribution frame, or its equivalent, in an incumbent LEC central office, and the demarcation point at the customer premises. This definition includes different types of loops, including two-wire and four-wire analog voice-grade loops, and two-wire and four-wire loops that are conditioned to transmit the digital signals needed to provide service such as ISDN, ADSL, HDSL, and DS1-level signals [162]

49. In order to establish that it is "providing" unbundled local loops in compliance with checklist item 4, a BOC must demonstrate that it has a concrete and specific legal obligation to furnish loops and that it is currently doing so in the quantities that competitors demand and at an acceptable level of quality A BOC must also demonstrate that it provides nondiscriminatory access to unbundled loops [163] Specifically, the BOC must provide access to any functionality of the loop requested by a competing carrier unless it is not technically feasible

---

[159] *Id.* § 224(c)(1). The 1996 Act extended the Commission's authority to include not just rates, terms, and conditions, but also the authority to regulate nondiscriminatory access to poles, ducts, conduits, and rights-of-way. *Local Competition First Report and Order*, 11 FCC Rcd at 16104, para. 1232; 47 U S C § 224(f). Absent state regulation of terms and conditions of nondiscriminatory attachment access, the Commission retains jurisdiction. *Local Competition First Report and Order*, 11 FCC Rcd at 16104, para 1232; 47 U.S C. § 224(c)(1); *see also Bell Atlantic New York Order*, 15 FCC Rcd at 4093, para. 264

[160] *See States That Have Certified That They Regulate Pole Attachments*, Public Notice, 7 FCC Rcd 1498 (1992); 47 U S.C. § 224(f).

[161] 47 U.S.C. § 271(c)(2)(B)(iv).

[162] *Local Competition First Report and Order*, 11 FCC Rcd at 15691, para. 380; *UNE Remand Order*, 15 FCC Rcd at 3772-73, paras. 166-67, n.301 (retaining definition of the local loop from the *Local Competition First Report and Order*, but replacing the phrase "network interconnection device" with "demarcation point," and making explicit that dark fiber and loop conditioning are among the features, functions and capabilities of the loop)

[163] *SWBT Texas Order*, 15 FCC Rcd at 18481-81, para 248; *Bell Atlantic New York Order*, 15 FCC Rcd at 4095, para 269, *Second BellSouth Louisiana Order*, 13 FCC Rcd at 20637, para. 185

to condition the loop facility to support the particular functionality requested. In order to provide the requested loop functionality, such as the ability to deliver xDSL services, the BOC may be required to take affirmative steps to condition existing loop facilities to enable competing carriers to provide services not currently provided over the facilities. The BOC must provide competitors with access to unbundled loops regardless of whether the BOC uses digital loop carrier (DLC) technology or similar remote concentration devices for the particular loops sought by the competitor.

50. On December 9, 1999, the Commission released the *Line Sharing Order*, which introduced new rules requiring BOCs to offer requesting carriers unbundled access to the high-frequency portion of local loops (HFPL).[164] HFPL is defined as "the frequency above the voiceband on a copper loop facility that is being used to carry traditional POTS analog circuit-switched voiceband transmissions." This definition applies whether a BOC's voice customers are served by cooper or by digital loop carrier equipment Competing carriers should have access to the HFPL at either a central office or at a remote terminal. However, the HFPL network element is *only* available on a copper loop facility.[165]

51. To determine whether a BOC makes line sharing available consistent with Commission rules set out in the *Line Sharing Order*, the Commission examines categories of performance measurements identified in the *Bell Atlantic New York* and *SWBT Texas Orders* Specifically, a successful BOC applicant could provide evidence of BOC-caused missed installation due dates, average installation intervals, trouble reports within 30 days of installation, mean time to repair, trouble report rates, and repeat trouble report rates. In addition, a successful BOC applicant should provide evidence that its central offices are operationally ready to handle commercial volumes of line sharing and that it provides competing carriers with nondiscriminatory access to the pre-ordering and ordering OSS functions associated with the provision of line shared loops, including access to loop qualification information and databases.

52. Section 271(c)(2)(B)(iv) also requires that a BOC demonstrate that it makes line splitting available to competing carriers so that competing carriers may provide voice and data service over a single loop [166] In addition, a BOC must demonstrate that a competing carrier, either alone or in conjunction with another carrier, is able to replace an existing UNE-P

---

[164] *See Line Sharing Order*, 14 FCC Rcd at 20924-27, paras 20-27; *see also* n 63 at C-12 *supra*.

[165] *See 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, 16 FCC Rcd 2101, 2106-07, para. 10 (2001).

[166] *See generally SWBT Texas Order*, 15 FCC Rcd at 18515-17, paras 323-329 (describing line splitting); 47 C.F.R. § 51 703(c) (requiring that incumbent LECs provide competing carriers with access to unbundled loops in a manner that allows competing carriers "to provide any telecommunications service that can be offered by means of that network element").

configuration used to provide voice service with an arrangement that enables it to provide voice and data service to a customer. To make such a showing, a BOC must show that it has a legal obligation to provide line splitting through rates, terms, and conditions in interconnection agreements and that it offers competing carriers the ability to order an unbundled xDSL-capable loop terminated to a collocated splitter and DSLAM equipment, and combine it with unbundled switching and shared transport [167]

E. Checklist Item 5 – Unbundled Local Transport

53. Section 271(c)(2)(B)(v) of the competitive checklist requires a BOC to provide "[l]ocal transport from the trunk side of a wireline local exchange carrier switch unbundled from switching or other services."[168] The Commission has required that BOCs provide both dedicated and shared transport to requesting carriers.[169] Dedicated transport consists of BOC transmission facilities dedicated to a particular customer or carrier that provide telecommunications between wire centers owned by BOCs or requesting telecommunications carriers, or between switches owned by BOCs or requesting telecommunications carriers.[170] Shared transport consists of transmission facilities shared by more than one carrier, including the BOC, between end office switches, between end office switches and tandem switches, and between tandem switches, in the BOC's network.[171]

---

[167] *See SWBT Kansas/Oklahoma Order*, 16 FCC Rcd at 6348, para. 220

[168] 47 U S.C § 271(c)(2)(B)(v)

[169] *Second BellSouth Louisiana Order*, 13 FCC Rcd at 20719, para. 201

[170] *Id.* A BOC has the following obligations with respect to dedicated transport (a) provide unbundled access to dedicated transmission facilities between BOC central offices or between such offices and serving wire centers (SWCs); between SWCs and interexchange carriers points of presence (POPs); between tandem switches and SWCs, end offices or tandems of the BOC, and the wire centers of BOCs and requesting carriers, (b) provide all technically feasible transmission capabilities such as DS1, DS3, and Optical Carrier levels that the competing carrier could use to provide telecommunications; (c) not limit the facilities to which dedicated interoffice transport facilities are connected, provided such interconnections are technically feasible, or restrict the use of unbundled transport facilities; and (d) to the extent technically feasible, provide requesting carriers with access to digital cross-connect system functionality in the same manner that the BOC offers such capabilities to interexchange carriers that purchase transport services. *Id* at 20719.

[171] *Id.* at 20719, n.650. The Commission also found that a BOC has the following obligations with respect to shared transport: (a) provide shared transport in a way that enables the traffic of requesting carriers to be carried on the same transport facilities that a BOC uses for its own traffic; (b) provide shared transport transmission facilities between end office switches, between its end office and tandem switches, and between tandem switches in its network; (c) permit (continued)

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Joint Application by BellSouth Corporation,	)	
BellSouth Telecommunications, Inc., And	)	WC Docket No. 02 - 150
BellSouth Long Distance, Inc. for Provision	)	
of In-Region, InterLATA Services in	)	
Alabama, Kentucky, Mississippi, North	)	
Carolina, and South Carolina	)	

MEMORANDUM OPINION AND ORDER

Adopted: September 18, 2002 **Released: September 18, 2002**

By the Commission: Commissioner Copps issuing a statement.

TABLE OF CONTENTS

I. INTRODUCTION

1. On June 20, 2002, BellSouth Corporation and its subsidiaries, BellSouth Telecommunications, Inc., and BellSouth Long Distance, Inc (collectively, BellSouth) filed an application pursuant to section 271 of the Communications Act of 1934, as amended,[1] for authority to provide in-region, interLATA service originating in the states of Alabama, Kentucky, Mississippi, North Carolina, and South Carolina.[2] We grant BellSouth's application

[1] We refer to the Communications Act of 1934, as amended, as the Communications Act or the Act. *See* 47 U.S.C. §§ 151 *et seq.*

[2] *See Joint Application by BellSouth Corporation, BellSouth Telecommunications, Inc., and BellSouth Long Distance, Inc. for Provision of In-Region, InterLATA Services in Alabama, Kentucky, Mississippi, North Carolina, and South Carolina*, WC Docket No. 02-150 (filed June 20, 2002) (BellSouth Application), *see also Comments Requested on the Joint Application by BellSouth Corporation for Authorization under Section 271 of the Communications Act to Provide In-region InterLata Service in the States of Alabama, Kentucky, Mississippi, North Carolina, and South Carolina*, WC Docket No. 02-150, Public Notice, 17 FCC Rcd 11303 (2002).

commission's distinction between those calls subject to access charges and those subject to reciprocal compensation.[879]

230. In any event, as AT&T itself recognizes, the interconnection agreement between AT&T and BellSouth expressly covers the LATA-wide calling issue.[880] Indeed, AT&T's principal complaint is that "BellSouth refuses to perform *according to the terms in its interconnection agreements*."[881] Interpretive disputes concerning interconnection agreements are for the state commissions to decide in the first instance, and this Commission will not normally preempt a state commission's decisionmaking process.[882]

231. For the foregoing reasons, we reject commenters' allegations of error and find that BellSouth complies with checklist item 1.

B. Checklist Item 4 - Unbundled Local Loops

232. Section 271(c)(2)(B)(iv) of the Act requires that a BOC provide "[l]ocal loop transmission from the central office to the customer's premises, unbundled from local switching or other services."[883] Based on the evidence in the record, we conclude, as did the state commissions,[884] that BellSouth demonstrates that it provides unbundled local loops in accordance

---

[879] AT&T Comments at 28. AT&T also asserts that "nothing in the *Virginia Arbitration Order* established that ILECs may deny CLECs equal flexibility to define their local calling areas." AT&T August 23 Pricing and Growth Tariff *Ex Parte* Letter at 9 (citing *In the Matter of Petition of WorldCom, Inc Pursuant to Section 252(e)(5) of the Communications Act for Preemption of the Jurisdiction of the Virginia State Corporation Commission Regarding Interconnection Disputes with Verizon Virginia Inc., and for Expedited* Arbitration, CC Docket Nos 00-218, 00-249, and 00-251, Memorandum Opinion and Order, DA 02-1731 (rel July 15, 2002) (*Virginia Arbitration Order*) Consistent with the *Local Competition Order*, however, the definition of a local calling area is the prerogative of a state commission *Local Competition Order*, 12 FCC Rcd at 16013, para 1035

[880] AT&T Comments App., Ex A, Declaration of Denise Berger (AT&T Berger Decl.) at paras 9-11

[881] *Id* at para 15 (emphasis added) AT&T states that this is not an interconnection agreement dispute because of BellSouth's belief that "CLEC[s] do not have a right to LATA-wide calling." AT&T August 23 Pricing and Growth Tariff *Ex Parte* Letter at 10 (citation omitted) We believe that a more accurate characterization of the issue is whether state commissions have the authority to define the local calling area as they see fit *See Local Competition Order*, 12 FCC Rcd at 16013, para 1035

[882] *Verizon Pennsylvania Order*, 16 FCC Rcd at 17484, para 118, *Verizon New Jersey Order*, 17 FCC Rcd at 12354, para 159

[883] 47 U S C § 271(c)(2)(B)(iv) The Commission has defined the loop as a transmission facility between a distribution frame, or its equivalent, in an incumbent LEC central office, and the demarcation point at the customer premises Dark fiber and loop conditioning equipment are among the features, functions, and capabilities of the loop *UNE Remand Order*, 15 FCC Rcd at 3772-73, paras 166-67 n 301 For a discussion of the requirements of checklist item 4, *see* Appendix H at paras 48-52, *infra*

[884] *See* Alabama Commission Comments at 211, Kentucky Commission Comments at 31, 41, Mississippi Commission Comments at 3, North Carolina Commission Comments at 206, South Carolina Commission Comments at 1

with the requirements of section 271 and our rules. As in past section 271 orders, our conclusion is based on our review of BellSouth's performance for all loop types, including voice grade loops, xDSL-capable loops, high capacity loops, and digital loops, as well as our review of BellSouth's hot cut, line-sharing, and line splitting processes. We note that, as of June 30, 2002, BellSouth states that it had provisioned 15,913 loops in Alabama, 3,841 loops in Kentucky, 6,258 loops in Mississippi, 51,229 loops in North Carolina, and 14,901 loops in South Carolina.[885]

233. Consistent with our prior section 271 orders, we do not address aspects of BellSouth's loop performance where our review of the record satisfies us that BellSouth's performance complies with the parity and benchmark measures established in the relevant states [886] Instead, we focus our discussion on those areas where the record indicates discrepancies between BellSouth's performance for its competitors and BellSouth's performance for its own retail operations. As in past section 271 proceedings in the course of our review, we look for patterns of systemic performance disparities that have resulted in competitive harm or that otherwise have denied new entrants a meaningful opportunity to compete.[887] Where BellSouth's competitive LEC volumes in a particular state are too small to provide a meaningful assessment of BellSouth's loop-provisioning capabilities, we look to BellSouth's recent performance in Georgia to help us determine whether BellSouth meets this checklist item.[888]

234. *Hot Cut Activity.* Like the state commissions,[889] we find that BellSouth is providing voice grade loops through hot cuts in each state in accordance with the requirements of checklist item 4.[890] BellSouth provides hot cuts in each of the states within reasonable time intervals,[891] at an acceptable level of quality, with minimal service disruption, and with a minimum number of troubles following installation [892]

---

885 *See* BellSouth August 14 OSS and Loops *Ex Parte* Letter at 3

886 *See, e g , BellSouth Georgia/Louisiana Order*, 17 FCC Rcd at 9144, para 219, *Verizon Connecticut Order*, 16 FCC Rcd at 14151-52, para 9

887 *See, e g , Verizon Massachusetts Order*, 16 FCC Rcd at 9055-56, para 122

888 *See SWBT Kansas/Oklahoma Order*, 16 FCC Rcd at 6254, paras 36-37 (determining that recent data regarding SWBT's performance in Texas provides a reliable indicator of SWBT's performance in Kansas and Oklahoma)

889889 *See* Alabama Commission Comments at 204, Kentucky Commission Comments at 32, Mississippi Commission Comments at 3, North Carolina Commission Comments at 197, South Carolina Commission Comments at 1.

890 A hot cut is the process of converting a customer from one network, usually a UNE-platform served by an incumbent LEC's switch, to a UNE-loop served by another carrier's switch The "cut" is said to be "hot" because telephone service on the specific customer's loop is interrupted for a brief period of time during the conversion process *Bell Atlantic New York Order*, 15 FCC Rcd 3953, 4104, para 291 n 925

891 *See* Alabama/Kentucky/Mississippi/North Carolina/South Carolina B 2 12 1-B 2 12 2 (Coordinated Customer Conversions), Alabama/Kentucky/Mississippi/North Carolina/South Carolina B 2 13 1-B 2 13 4 (% Hot Cuts>15 (continued .)

235. *Voice Grade Loops* We find, as did the state commissions,[893] that BellSouth provisions voice grade loops to competitors in a nondiscriminatory manner. BellSouth met the benchmark and parity standards for installation timeliness,[894] installation quality,[895] and maintenance and repair timeliness and quality with regard to voice grade loops in each of the states in each relevant month, with minor exceptions.[896] These exceptions are relatively slight and are not competitively significant to competitive LECs [897] We therefore find that these exceptions do not warrant a finding of checklist noncompliance.

(Continued from previous page)
Minutes Early), Alabama/Kentucky/Mississippi/North Carolina/South Carolina B 2 14 1-B 2 14 4 (Hot Cut Timeliness), Alabama/Kentucky/Mississippi/North Carolina/South Carolina B 2 15 1-B 2.15 4 (% Hot Cuts>15 Minutes Late), Alabama/Kentucky/Mississippi/North Carolina/South Carolina B 2 16 1-B 2 16 2 (Average Recovery Time – CCC) *But see* KMC Comments at 10 (alleging that BellSouth's hot cut coordination is substandard).

[892] *See* Alabama/Kentucky/Mississippi/North Carolina/South Carolina B 2 17 1 1-B 2 17 2 2 (% Provisioning Troubles within 7 Days – Hot Cuts). We note that, while BellSouth failed to meet one of these benchmarks during June in South Carolina, it exceeded that benchmark on average during March through June in South Carolina *See* South Carolina B 2 17 1 1 (% Provisioning Troubles within 7 Days, Hot Cuts, UNE Loop Design/Dispatch) We therefore find that the disparity in June does not rise to the level of checklist noncompliance We also note that although BellSouth's volumes were low for certain hot cut measures in the applicable states, BellSouth's hot cut performance in Georgia raises no issues regarding checklist compliance *See* Georgia B 2 12 1-B 2 17 2 2 (Hot Cut Provisioning)

[893] *See* Alabama Commission Comments at 211, Kentucky Commission Comments at 31, 41, Mississippi Commission Comments at 3, North Carolina Commission Comments at 190, South Carolina Commission Comments at 1

[894] *See* Alabama/Kentucky/Mississippi/North Carolina/South Carolina B 1 9 8 -B 1 9 13, B 1 12 8-B 1 1 12 13, B 1.13 8-B 1.13 13 (FOC Timeliness, 2 Wire Analog Loops), Alabama/Kentucky/Mississippi/North Carolina/South Carolina B 2 1 8.1 1-B 2 1 13 2 4 (Order Completion Interval, 2 Wire Analog Loops), Alabama/Kentucky/Mississippi/North Carolina/South Carolina B 2 18 8 1 1-B 2 18 13 2 4 (% Missed Installation Appointments, 2 Wire Analog Loops)

[895] *See* Kentucky/Mississippi/North Carolina/South Carolina B 2 19 8 1 1-B 2 19 13 2 4 (% Provisioning Troubles within 30 Days, 2 Wire Analog Loops), Alabama B 2 19 8 1 2-B 2 19 13 2 4 (% Provisioning Troubles within 30 Days, 2 Wire Analog Loops), Alabama/Kentucky/Mississippi B 3 2 8 1-B 3 2 9 2 (Customer Trouble Report Rate, 2 Wire Analog Loops)

[896] *See* Alabama/Kentucky/Mississippi/North Carolina/South Carolina B 3 1 8 1-B 3 1 9 2 (% Missed Repair Appointments, 2 Wire Analog Loops), Alabama/Kentucky/Mississippi/North Carolina/South Carolina B.3 3 8 1-B 3 3 9 2 (Maintenance Average Duration, 2 Wire Analog Loops), Alabama/Kentucky/Mississippi/North Carolina/South Carolina B 3 3 8 1-B 3 3 9 2 (% Repeat Troubles within 30 Days, 2 Wire Analog Loops)

[897] *See* Alabama B 3 1 8 1 (Missed Repair Appointments, 2 Wire Analog Loops, Design/Dispatch) (out of parity in June with a 11 54% trouble report rate for competitive LECs and a 6 79% trouble report rate for BellSouth's retail operations, but a 4 50% overall trouble report rate for competitive LECs and a 6 30% overall trouble report rate for BellSouth's retail operations during March through June), South Carolina B 3 2 9 1 (Customer Trouble Report Rate, 2 Wire Analog Loops, Non-Design/Dispatch) (out of parity in two months with a 4 38% trouble report rate during March and a 7 05% trouble report rate during April for competitive LECs and a 1 60% trouble report rate during March and a 1 82% trouble report rate during April for BellSouth's retail operations, but a 4 13% overall trouble report rate for competitive LECs and a 1 83% overall trouble report rate for BellSouth's retail operations (continued .)

236. *xDSL-Capable Loops.* We find, as did the state commissions,[898] that BellSouth demonstrates that it provides stand-alone xDSL-capable loops in accordance with checklist item 4. BellSouth's performance with respect to the percentage of provisioning troubles within 30 days, a metric that measures installation quality, appears to be out of parity in Kentucky, Mississippi, North Carolina, and South Carolina for recent months.[899] We find, however, that this performance does not warrant a finding of checklist noncompliance in view of the low number of installation troubles reported in each of the five states. We recognize, as we have in prior section 271 orders, that a small handful of observations can cause seemingly large variations in the performance measures.[900] Moreover, given BellSouth's parity of performance with respect to this metric in Georgia for the relevant period, we find that BellSouth provisions xDSL loops in a nondiscriminatory manner in all five states.[901] Next, we note that BellSouth's

(Continued from previous page)

from March through June), Georgia B 1 12 12 (FOC Timeliness, Partially Mechanized, 2 Wire Analog Loops with LNP, Design) (under benchmark requiring that BellSouth provide firm order confirmations within 10 hours at least 85% of the time, out of parity in May with an 83 41% score and June with a 78 71% score, but 86 13% overall average during March through June), Georgia B 2 1 13 1 4 (Order Completion Interval, 2 Wire Analog Loops with LNP/Non-Design/<10 Circuits/Dispatch) (out of parity from March through June with average intervals of 4 90 days for competitive LECs and 1 56 days for BellSouth's retail operations, competitive LEC volume of 54 orders represents only about 5 15% of total voice grade loops that competitive LECs ordered for Georgia during the same period) We consider these data for Georgia because BellSouth volumes under these metrics were low in certain of the applicable states *See, e g*, Kentucky B 1 12 12 (FOC Timeliness, Partially Mechanized, 2 Wire Analog Loops with LNP, Design), Kentucky B 2 1 13 1 4 (Order Completion Interval, 2 Wire Analog Loops with LNP/Non-Design/<10 Circuits/Dispatch)

[898] *See* Alabama Commission Comments at 211, Kentucky Commission Comments at 31, 41, Mississippi Commission Comments at 3, North Carolina Commission Comments at 192, South Carolina Commission Comments at 1

[899] Specifically, BellSouth's performance data show that it was out of parity in Kentucky, Mississippi, North Carolina, and South Carolina in April, and missed parity in North Carolina in May and South Carolina in March In Mississippi, BellSouth's performance data show that competitive LECs experience an average of 7 01% trouble reports within 30 days after installation of an xDSL loop, compared to an average of 3 14% for BellSouth retail operations from March through June In North Carolina, competitive LECs experience an average of 8 15%, compared to an average of 3 09% for BellSouth retail *See* Mississippi/North Carolina B 2 19 5 1 1 (% Provisioning Troubles within 30 Days, ADSL, HDSL and UCL<10 Circuits/Dispatch) We note that BellSouth's performance data is based on low volumes in Kentucky and South Carolina Further, there are no volumes reported for BellSouth retail operations in Kentucky in March, May, and June In Kentucky, competitive LECs experience an average of 5 26% provisioning trouble reports within 30 days, compared to an average of 0 00%, while in South Carolina competitors experience an average of 13 04% trouble reports within 30 days, compared to an average of 3 05% for BellSouth retail operations *See* Kentucky/South Carolina B 2 19 5 1 1 (% Provisioning Troubles within 30 Days, ADSL, HDSL and UCL<10 Circuits/Dispatch)

[900] *See Verizon Massachusetts Order*, 16 FCC Rcd at 8988, para 93 n 296 BellSouth's installation quality performance data show that competitive LECs volumes were, on average, 44 in Alabama, 10 in Kentucky, 39 in Mississippi, 58 in North Carolina, and 6 in South Carolina during the relevant period *See* Alabama/Kentucky/Mississippi/North Carolina/South Carolina B 2 19 5 1 1 (% Provisioning Troubles within 30 Days, ADSL, HDSL and UCL<10 Circuits/Dispatch)

[901] In Georgia, BellSouth's performance data show that it achieved parity for this metric for all months during the relevant period *See* Georgia B 2 19 5 1 1 (% Provisioning Troubles within 30 Days, ADSL, HDSL and UCL<10 Circuits/Dispatch)

order processing timeliness performance was slightly out of parity in Kentucky, Mississippi, and North Carolina on a few occasions.[902] We find that these performance discrepancies are slight, episodic, and do not appear to be competitively significant.

237. Covad alleges that its own data show that BellSouth's UCL-ND order completion interval,[903] installation quality,[904] and maintenance average duration[905] performance demonstrates discriminatory treatment.[906] BellSouth, however, contends that its performance with respect to this type of loop has been excellent and that it installs UCL-ND loops in a timely manner.[907] We find that Covad-specific data is outweighed by evidence of BellSouth's overall performance. As in prior section 271 orders, performance data relative to competitive LECs on an aggregate basis is the most persuasive evidence of whether a BOC meets the checklist requirements.[908] BellSouth's performance data demonstrate that BellSouth met or exceeded the parity standard for the order completion interval.[909] In addition, BellSouth's maintenance and repair performance, which measures the timeliness and quality of the maintenance and repair functions,

---

902 BellSouth met the vast majority of its order processing timeliness benchmarks. In Kentucky, BellSouth missed the benchmark (95% within 3 hours) for mechanized orders in March. However, competitive LECs experience an average of 97.20% within 3 hours for the relevant period. *See* Kentucky B.1.9.5 (FOC Timeliness, Mechanized, ADSL, HDSL and UCL). For partially mechanized orders in Mississippi and North Carolina, BellSouth missed the benchmark (85% within 10 hours) in March and May, respectively. In Mississippi, competitive LECs experience an average of 90.60% within 10 hours, and in North Carolina competitive LECs experience an average of 88.57% within 10 hours. *See* Mississippi/North Carolina B.1.12.5 (FOC Timeliness, Partially Mechanized, ADSL, HDSL and UCL).

903 Covad contends that for orders of this loop requiring dispatch, BellSouth completed orders for its own customers one day faster than Covad's orders in North Carolina, two days faster in Alabama, and five days faster in Kentucky. Covad Comments at 27.

904 Covad maintains that BellSouth failed to properly provision 38 of 50 UCL-ND orders in Florida in January 2002. Covad Comments at 24.

905 Specifically, Covad states that in Alabama for UCL-ND loops not requiring dispatch, BellSouth fixed problems for its own customers in 8.10 hours, while taking 24 hours to get Covad's customers back to service. Covad Comments at 29-30.

906 *See generally* Covad Comments at 22-31. In fact, Covad contends that BellSouth's provisioning problems with the UCL-ND loop have been so bad that Covad was forced to stop ordering the loop entirely in every state in the BellSouth region except Florida. *Id.* at 23.

907 BellSouth Reply Comments at 55, BellSouth Varner Reply Aff. at paras. 117, 120. Concerning Covad's claim that BellSouth provides retail customers faster repair services on average than it provides for Covad's UCL-ND orders, BellSouth states that Covad fails to note the differences in sample size and the effect even a single "miss" can have on the reported performance for the competitive LEC product. *Id.*

908 *See, e.g., BellSouth Georgia/Louisiana Order*, 17 FCC Rcd at 9148, para. 226.

909 *See* Alabama/Kentucky/Mississippi/North Carolina/South Carolina B.2.2.2 (Order Completion Interval within 7 Days, ADSL, HDSL and UCL/Loop without Conditioning<6 Circuits/Dispatch).

has shown parity during the relevant period.[910] Moreover, as discussed above, we find that BellSouth provisions xDSL-capable loops of a quality sufficient to afford competitors a meaningful opportunity to compete. Thus, although Covad claims that its data show discriminatory performance, allegedly anomalous results for a single carrier in this instance do not qualify as a pattern of systemic performance disparities that result in competitive harm.[911]

238. *UNE ISDN Loops.* Like the state commissions,[912] we find that BellSouth provides ISDN loops to competitors in a nondiscriminatory manner. BellSouth's performance under the order completion interval and the percentage missed installation appointment submetrics shows that BellSouth has been timely in the provisioning of ISDN loops.[913] Further, BellSouth's performance data demonstrate that it generally met the parity standard for the percentage of provisioning troubles within 30 days (dispatch) of installation metric.[914]

239. BellSouth's data, however, reveal some performance issues with respect to the maintenance and repair of ISDN loops. Specifically, while BellSouth met or exceeded the parity standard for metrics measuring the percentage of missed repairs, maintenance average duration,

---

[910] BellSouth met or exceeded parity with respect to the percentage of missed repair appointments, customer trouble report rate, and maintenance average duration metrics in each of the states during the relevant period *See* Alabama/Kentucky/Mississippi/North Carolina/South Carolina B 3 1 5 1-B 3 1 5 2 (% Missed Repair Appointments, ADSL, HDSL and UCL/Dispatch and Non-Dispatch), B 3 2 5 1-B 3 2 5 2 (Customer Trouble Report Rate, ADSL, HDSL and UCL/Dispatch and Non-Dispatch), B 3 3 5 1-B 3 3 5 2 (Maintenance Average Duration, ADSL, HDSL and UCL/Dispatch and Non-Dispatch) BellSouth met the standard for repeat troubles within 30 days, with two minor exceptions *See* South Carolina B 3 4 5 2 (% Repeat Troubles within 30 Days, ADSL, HDSL and UCL/Non-Dispatch) BellSouth missed this metric in April and June

[911] If evidence becomes available to the Commission in the future sufficient to show systemic performance disparities, we will pursue appropriate enforcement action

[912] *See* Alabama Commission Comments at 211; Kentucky Commission Comments at 31, 41, Mississippi Commission Comments at 3, North Carolina Commission Comments at 192, South Carolina Commission Comments at 1

[913] BellSouth met the benchmark for installation timeliness and missed installation appointments for each month in all five states during the relevant period *See* Alabama/Kentucky/Mississippi/North Carolina/South Carolina B 2 1 6 3 1 (Order Completion Interval, UNE ISDN<6 Circuits/Dispatch), Alabama/Kentucky/Mississippi/North Carolina/South Carolina B 2 18 6 1 1 (% Missed Installation Appointments, UNE ISDN<10 Circuits/Dispatch)

[914] BellSouth's performance data show that it provides an installation quality sufficient to afford competitors a meaningful opportunity to compete *See* Alabama/Kentucky/Mississippi/North Carolina/South Carolina B 2 19 6 1 1 (% Provisioning Troubles within 30 Days, UNE ISDN<10 Circuits/Dispatch) However, BellSouth missed one month in Kentucky and two months in North Carolina In Kentucky, competitive LECs experienced an average of 8 00% provisioning troubles within 30 days of installation, compared to 6 79% for BellSouth retail operations *See* Kentucky B 2 19 6 1 1 (% Provisioning Troubles within 30 Days, UNE ISDN<10 Circuits/Dispatch) In North Carolina, competitors experienced an average of 8 22% compared to 5 82% for BellSouth retail for the same period *See* North Carolina B 2 19 6 1 1 (% Provisioning Troubles within 30 Days, UNE ISDN<10 Circuits/Dispatch We find, however, that BellSouth's overall performance for this metric show that BellSouth provides competitors with sufficient installation quality

and the percentage of repeat troubles with few minor exceptions,[915] BellSouth was out of parity with the customer trouble report rate for several months in each of the five states.[916] We do not find, however, that these performance discrepancies are competitively significant. Further, we note that no commenter has commented on BellSouth's ISDN loop performance with respect to this metric. Accordingly, in light of BellSouth's competitive carrier ISDN loop record overall, we do not find that BellSouth's performance demonstrates that it fails to meet the requirements of checklist item 4.

240. *Digital Loops* We find, as did the state commissions,[917] that BellSouth's performance with respect to digital loops complies with checklist item 4. BellSouth's performance in this area generally met the parity standards established by the state commissions for installation timeliness.[918] We recognize, however, that BellSouth's performance in North

---

[915] Specifically, BellSouth's missed repair appointment performance (dispatch) was out of parity for two months in North Carolina and one month in South Carolina during the relevant period *See* North Carolina/South Carolina B 3 1 6 1 (% Missed Repair Appointments, UNE ISDN/Dispatch) In North Carolina, competitive carriers experienced an average of 1 19% missed repair appointments compared to 1 03% for BellSouth retail operations from March through June In South Carolina, competitors experienced an average of 7 14% compared to 3 09% for BellSouth retail for the same period *Id* In Alabama, BellSouth was only out of parity in May for non-dispatch loops *See* Alabama B 3 1 6 2 (% Missed Repair Appointments, UNE ISDN/Non-Dispatch) BellSouth's maintenance average duration (dispatch) was only out of parity for one month in South Carolina *See* South Carolina B 3 3 6 1 (Maintenance Average Duration, UNE ISDN/Dispatch) BellSouth performance data show that it was out of parity for one month in Alabama and South Carolina for maintenance average duration (non-dispatch) In North Carolina, BellSouth missed parity for two months, and competitive carriers experience an average of 2.75% misses compared to an average of 1 73% for BellSouth's retail operations for the relevant period *See* Alabama/North Carolina/South Carolina B 3 3 6 2 (Maintenance Average Duration, UNE ISDN/Non-Dispatch) BellSouth was also slightly out of parity for the percentage of repeat troubles within 30 days metric However, BellSouth's performance data for this metric show that BellSouth was out of parity for one month in Alabama (dispatch), and one month in Mississippi and North Carolina (non-dispatch) *See* Alabama B 3 4 6 1 (% Repeat Troubles within 30 Days, UNE ISDN/Dispatch), Mississippi/North Carolina B 3 4 6 2 (% Repeat Troubles within 30 Days, UNE ISDN/Non-Dispatch) Should BellSouth's performance in this area deteriorate, we will pursue appropriate enforcement action

[916] Specifically, BellSouth's customer trouble report rate (dispatch) was out of parity for one month in South Carolina, two months in Alabama and Kentucky, three months in Mississippi, and four months in North Carolina *See* Alabama/Kentucky/Mississippi/North Carolina/South Carolina B 3 2 6 1 (Customer Trouble Report Rate, UNE ISDN/Dispatch) In Mississippi, competitive carriers experienced an average of 1 33% dispatch trouble reports compared to an average of 0 61% for BellSouth retail operations for the relevant period In North Carolina, competitors experienced an average of 1 18% dispatch trouble reports compared to an average of 0 64% for BellSouth retail *See* Mississippi/North Carolina B 3 2 6 1 (Customer Trouble Report Rate, UNE ISDN/Dispatch) BellSouth's customer trouble report rate (non-dispatch) performance data show that BellSouth was in parity for all months reported *See* Alabama/Kentucky/Mississippi/North Carolina/South Carolina B 3 2 6 2 (Customer Trouble Report Rate, UNE ISDN/Non-Dispatch)

[917] *See* Alabama Commission Comments at 211, Kentucky Commission Comments at 31, 41, Mississippi Commission Comments at 3, North Carolina Commission Comments at 192, South Carolina Commission Comments at 1

[918] *See* Kentucky/Mississippi/South Carolina B 2 1 18 1 1 (Order Competition Interval, Digital Loops<DS1/<10 Circuits/Dispatch), Kentucky/Mississippi/North Carolina/South Carolina B 2 1 18 1 2-B 2 1 18 2 2 (Order (continued)

Carolina with respect to an installation timeliness measure – the order completion interval metric (dispatch) – was out of parity for March through June.[919] The record shows, however, that no facilities were available for a disproportionate percentage of the competitive LEC orders reflected in this metric and that completing these orders required BellSouth to dispatch technicians to provision new loops.[920] We find that BellSouth reasonably assigned these orders longer intervals than it assigned to orders that did not involve the dispatch of technicians. Because the retail orders reflected in this metric typically did not involve the dispatch of technicians, we also find that the disparity in BellSouth's performance under this metric does not raise an issue of checklist noncompliance.[921] In addition, the data for the other installation timeliness metric – percent missed installation appointments – show that BellSouth missed no installation appointments for competitive LECs during the relevant period in North Carolina.[922] In these circumstances, we conclude that BellSouth's performance under this order completion interval metric has not denied competitive LECs a meaningful opportunity to compete in North Carolina.

241 We reject KMC's argument that BellSouth's provisioning and maintenance and repair performance for digital loops preclude a finding of checklist compliance.[923] BellSouth's installation quality measure for digital loops – the percentage of provisioning troubles within 30 days – was out of parity for certain months in Kentucky, Mississippi, North Carolina, and South Carolina.[924] The record shows, however, that BellSouth has implemented several initiatives to

(Continued from previous page)
Competition Interval, Other Digital Loops<DS1), Alabama/Kentucky/Mississippi/North Carolina/South Carolina B 2 18 18 1-B 2 18 18 2 2 (% Missed Installation Appointments, Digital Loops<DS1/<10 Circuits)

[919] *See* North Carolina B 2 1 18 1 1 (Order Competition Interval, Digital Loops<DS1/<10 Circuits/Dispatch) (monthly averages ranging from 8 72 days to 9 69 days for competitive LECs and from 3 74 days to 5 51 days for BellSouth's retail operations)

[920] BellSouth August 14 *Ex Parte* Letter at 3, BellSouth Varner Reply Aff at para 224

[921] BellSouth August 14 *Ex Parte* Letter at 3

[922] *See* BellSouth Varner Reply Aff at para 224, North Carolina B 2 18 18 1 1 (% Missed Installation Appointments, Digital Loops<DS1/<10 Circuits/Dispatch) (no missed installation appointments for competitive LECs from March through June, versus an overall 3 70 % missed installation appointment rate for BellSouth's retail operations during the same period)

[923] KMC Comments at 15-16

[924] *See* Kentucky/Mississippi/North Carolina/South Carolina B 2 19 18 1 1 (% Provisioning Troubles within 30 Days, Digital Loops<DS1/<10 Circuits/Dispatch) Specifically, BellSouth was below parity for this metric for May in Kentucky (11 76% of installations for competitive LECs having troubles within 30 days, versus 1 25% for BellSouth's retail operations), for April in Mississippi (8 97% of installations for competitive LECs having troubles within 30 days, versus 3 29% for BellSouth's retail operations), for March through May in North Carolina (6 25%, 10 12%, and 10 14% of installations for competitive LECs having troubles within 30 days, versus 3 58%, 2 21%, and 3.52% for BellSouth's retail operations), and for March and April in South Carolina (15 63% and 9 43% of installations for competitive LECs having troubles within 30 days, versus 3 24% and 3 71% for BellSouth's retail operations) *Id*

reduce provisioning troubles.[925] These initiatives include working with competitive LECs to rectify any issues and concerns prior to completing a service order.[926] In addition, at the competitive LEC's request, BellSouth will engage in cooperative testing to ensure that the loop being provisioned meets the relevant technical criteria.[927] Given this evidence, and recognizing BellSouth's generally acceptable performance for other categories of loops, we find that BellSouth's performance under this installation quality metric does not warrant a finding of checklist noncompliance.

242 Similarly, although BellSouth's maintenance and repair performance for digital loops was generally in parity during the applicable period,[928] one measure of that performance – the customer trouble report rate – was out of parity for the applicable states throughout much of the relevant period.[929] Because the overall trouble report rate for digital loops that BellSouth provided competitive LECs was low during the relevant period,[930] we find that these disparities lack competitive significance.[931] BellSouth also was out of parity with regard to another measure of maintenance and repair quality – maintenance average duration – during certain months in Alabama, Mississippi, North Carolina, and South Carolina.[932] However, BellSouth's overall

---

925 *See* BellSouth August 14 OSS and Loops *Ex Parte* Letter at 4.

926 BellSouth Ainsworth Aff at para 139

927 *Id*

928 *See* BellSouth August 14 OSS and Loops *Ex Parte* Letter at 9, 11-14, 21, 23-27, 29-32 (discussing % Missed Repair Appointments, Maintenance Average Duration, and % Repeat Troubles within 30 Days, Digital Loops) We note that while BellSouth has provided disaggregated maintenance and repair data for digital loops, no metrics have been established for these data

929 *See* BellSouth August 14 OSS and Loops *Ex Parte* Letter at 15, 17-20 (discussing Customer Trouble Report Rate, Digital Loops<DS1/Dispatch) (out of parity in applicable states throughout relevant period), *id* (discussing Customer Trouble Report Rate, Digital Loops<DS1/Non-Dispatch) (out of parity in Alabama during April and May, in Mississippi during June, in North Carolina during March through May, and in South Carolina during March)

930 During that period, the average trouble report rate for digital loops provided competitive LECs was 1 12% in Alabama, 1 27% in Kentucky, 1 54% in Mississippi, 1 64% in North Carolina, and 1 63% in South Carolina *See* BellSouth August 14 *Ex Parte* Letter at 15, 17-20 (discussing Customer Trouble Report Rate, Digital Loops<DS1)

931 *See BellSouth Georgia/Louisiana Order*, 17 FCC Rcd at 9150, para 230

932 *See* BellSouth August 14 OSS and Loops *Ex Parte* Letter at 27, 29-32 (discussing Maintenance Average Duration, Digital Loops<DS1/Non-Dispatch) Specifically, in Alabama, BellSouth's performance for this measure was out of parity in April with an average duration of 5 01 hours for competitive LECs and 2 28 hours for BellSouth's retail operations, and in May with an average duration of 7 03 hours for competitive LECs and 2 55 hours for BellSouth's retail operations In Mississippi, BellSouth's performance was out of parity in June with an average duration of 5 63 hours for competitive LECs and 2 50 hours for BellSouth's retail operations In North Carolina, BellSouth's performance was out of parity in June with an average duration of 4.29 hours for competitive LECs and 2 29 hours for BellSouth's retail operations. In South Carolina, BellSouth's performance was out of parity in March with an average duration of 4 87 hours for competitive LECs and 1 99 hours for BellSouth's retail operations, and in June with an average duration of 3 92 hours for competitive LECs and 1 88 hours for BellSouth's retail operations *Id*

performance for this measure during the applicable period for competitive LECs was comparable to its performance for its own retail operations.[933] We therefore find that the disparities in maintenance average duration also lack competitive significance. Moreover, contrary to KMC's assertion, BellSouth was consistently in parity, with very few repeat troubles, with regard to its measure for repeat troubles within 30 days of maintenance or repair of digital loops.[934]

243. *High Capacity Loops* We find, as did the state commissions,[935] that BellSouth's performance with respect to high capacity loops complies with checklist item 4 We reach this conclusion despite the fact that BellSouth's performance with respect to certain performance metrics – including the percentage of missed installation appointments for high capacity loops and the percentage of troubles found within 30 days following installation of a high capacity loop – is out of parity for several recent months.[936] As we discuss below, however, this performance does not warrant a finding of checklist noncompliance. As the Commission has stated in the past, isolated cases of performance disparity, especially when the margin of disparity is small, generally will not result in a finding of checklist noncompliance.[937]

244. First, we recognize that BellSouth's performance with respect to an installation timeliness measure – the missed installation appointments metric – was out of parity for most of the months in Alabama [938] The record shows, however, that BellSouth missed few installation

---

[933] During the relevant period, BellSouth's maintenance intervals for digital loops averaged 4 76 hours for competitive LECs and 4 25 hours for BellSouth's retail operations in Alabama, 4 52 hours for competitive LECs and 3 78 hours for BellSouth's retail operations in Kentucky, 4 83 hours for competitive LECs and 4 09 hours for BellSouth's retail operations in Mississippi, 3 71 hours for competitive LECs and 3 83 hours for BellSouth's retail operations in North Carolina, and 5 14 hours for competitive LECs and 3 39 hours for BellSouth's retail operations in South Carolina *See* BellSouth August 14 OSS and Loops *Ex Parte* Letter at 27, 29-32 (discussing Maintenance Average Duration, Digital Loops<DS1)

[934] *See* KMC Comments at 16 Specifically, the record shows that during the relevant period, competitive LECs reported only 77 repeat troubles for digital loops in the applicable states BellSouth August 14 OSS and Loops *Ex Parte* Letter at 21, 23-26 (discussing % Repeat Troubles within 30 Days, Digital Loops<DS1)

[935] *See* Alabama Commission Comments at 211, Kentucky Commission Comments at 31, 41, Mississippi Commission Comments at 3, North Carolina Commission Comments at 206, South Carolina Commission Comments at 1

[936] *See* Alabama/Kentucky/Mississippi/North Carolina/South Carolina B 2 19 19 1 1 (% Provisioning Troubles within 30 Days, Digital Loops≥DS1/<10 Circuits/Dispatch), Alabama/Kentucky/Mississippi/North Carolina/South Carolina B.2 18 19 1.1 (% Missed Installation Appointments, Digital Loops≥DS1/<10 Circuits/Dispatch) Notes 941 and 944, *infra*, provide the relevant data regarding BellSouth's performance under these metrics.

[937] *See BellSouth Georgia/Louisiana Order*, 17 FCC Rcd at 9144, para 619, *Verizon Massachusetts Order*, 16 FCC Rcd at 9055-56, para 22, *Verizon Pennsylvania Order*, 16 FCC Rcd at 17468-69, para 90 (finding that even "poor" performance with regard to high capacity loops did not warrant a finding of checklist noncompliance for all loop types where high capacity loops represented only a small percentage of all loops ordered by competitors in a state) Should BellSouth's performance in this area deteriorate, we will pursue appropriate enforcement action

[938] *See* Alabama B 2 18 19 1 1 (% Missed Installation Appointments, Digital Loops≥DS1/<10 Circuits/Dispatch) BellSouth's data for Alabama show that, from March through June, BellSouth missed 4 62% of its installation appointments for its retail high capacity loop operations and 9 51% of its installation appointments for competitive (continued)

appointments for either wholesale or retail high capacity loops in Alabama during the applicable period.[939] Therefore, a very small increase in the number of missed installation appointments for competitive LEC customers can cause BellSouth to fail to achieve parity for this metric in a given month.[940] BellSouth's data show that it missed a total of 29 high capacity loop appointments for competitive LECs during the relevant period and that 14 fewer missed installation appointments would have allowed BellSouth to achieve parity with respect to this metric throughout that period.[941] Moreover, we note that BellSouth's performance reflected by an installation timeliness metric – the order completion interval metric for high capacity loops – satisfies the benchmark for all months.[942] Given this evidence, we do not find that lack of parity on this missed installation appointments metric warrants a finding that BellSouth fails to meet checklist item 4 in Alabama.[943]

245. Next, in each applicable state, the percentage of troubles reported within 30 days following installation was statistically out of parity during much of the relevant period.[944] The

(Continued from previous page)
LECs' high capacity loop operations *Id* We note that BellSouth was out of parity for this metric for May in Kentucky and North Carolina Kentucky/North Carolina B 2 1 19 1 1 (Order Completion Interval, Digital Loops≥DS1/<10 Circuits/Dispatch) BellSouth, however, failed to keep only three high capacity loop appointments for May in Kentucky and only one high capacity loop appointment for May in North Carolina These isolated disparities in performance do not undercut BellSouth's otherwise acceptable level of performance and, thus, do not require a finding of checklist noncompliance *See, e g , Verizon Massachusetts Order*, 16 FCC Rcd at 9055-56, para 122

939 BellSouth Varner Reply Aff at para 226, Alabama B 2 18 19 1 1 (% Missed Installation Appointments, Digital Loops≥DS1/<10 Circuits/Dispatch)

940 BellSouth Varner Reply Aff at para 226

941 BellSouth's data show that of its high capacity loop appointments for competitive LECs in Alabama, it missed a total of eight in March, nine in April, six in May, and six in June While BellSouth achieved parity for this metric in Alabama during March, four fewer missed appointments during April, five fewer missed appointments during May, and five fewer missed appointments during June would have enabled BellSouth to achieve parity for this metric in Alabama during each relevant month *See* Alabama B 2 18 19 1 1 (% Missed Installation Appointments, Digital Loops≥DS1/<10 Circuits/Dispatch

942 *See* Alabama/Kentucky/Mississippi/North Carolina/South Carolina B 2 1 19 1 1 (Order Completion Interval, Digital Loops≥DS1/<10 Circuits/Dispatch), *see also* BellSouth August 15 Non-pricing *Ex Parte* Letter at 9-10 (arguing that the need to construct or rearrange facilities serving particular end users caused many of the missed installation appointments for high capacity loops); BellSouth Varner Reply Aff at para 226 (stating that BellSouth missed six high capacity loop appointments in March and seven high capacity loop appointments in April because it failed to add needed facilities at a single location prior to the scheduled installation dates).

943 *See SWBT Kansas/Oklahoma Order*, 16 FCC Rcd at 6344, para 213.

944 Alabama/Kentucky/Mississippi/North Carolina/South Carolina B 2 19 19 1 1 (% Provisioning Troubles within 30 Days, Digital Loops≥DS1/<10 Circuits/Dispatch) In Alabama, competing carriers experienced an average of 12 26% trouble reports within 30 days after installation of a high capacity digital loop, compared to an average of 2 98% for BellSouth retail operations from March through June *See* Alabama B 2 19 19 1 1 (% Provisioning Troubles within 30 Days, Digital Loops≥DS1/<10 Circuits/Dispatch) Kentucky performance data show that competitive carriers experienced an average of 7 38% trouble reports, compared to an average of 2 28% for BellSouth retail operations for the same period *See* Kentucky B 2 19 19 1 1 (% Provisioning Troubles within 30 (continued)

record makes clear, however, that many of the troubles competitive LECs reported during that period were closed without any trouble being found.[945] Adjusting BellSouth's reported performance data to eliminate these trouble reports would improve the reported results significantly.[946] In addition, BellSouth has implemented an ongoing program to ensure installation quality for high capacity loops throughout its region.[947] This program has allowed BellSouth to identify and, in some instances, eliminate the problems that cause installation problems with high capacity loops.[948] As with digital loops, this program includes an opportunity for the competitive LEC to engage in cooperative testing with BellSouth to ensure that a high capacity loop meets relevant technical criteria prior to its being handed off to the competitive LEC [949] BellSouth indicates, however, that, even with cooperative testing, some problems arise cannot be detected until the customer premises equipment is connected to the loop, which typically does not happen until several days after BellSouth hands it off to the competitive LEC.[950] Given this evidence, and recognizing BellSouth's generally acceptable performance for other categories of loops, we find that BellSouth's performance is in compliance with checklist item 4.

246. We reject KMC's contentions that BellSouth's provisioning and maintenance and repair performance for high capacity loops precludes a finding of checklist compliance.[951] Given

(Continued from previous page)

Days, Digital Loops≥DS1/<10 Circuits/Dispatch) In Mississippi, the comparable figures were 16 44% for competitive LECs and 5 92% for BellSouth *See* Mississippi B 2 19 19 1 1 (% Provisioning Troubles within 30 Days, Digital Loops≥DS1/<10 Circuits/Dispatch) In North Carolina, they were 12 79% for competitive LECs and 5 00% for BellSouth. *See* North Carolina B 2 19 19 1 1 (% Provisioning Troubles within 30 Days, Digital Loops≥DS1/<10 Circuits/Dispatch) In South Carolina, they were 12 18% for competitive LECs and 4 15% for BellSouth South Carolina B 2 19 19 1 1 (% Provisioning Troubles within 30 Days, Digital Loops≥DS1/<10 Circuits/Dispatch) We note that in the *BellSouth Georgia/Louisiana Order*, the Commission considered performance data showing averages for trouble reports within 30 days of 7 87% for competitive LECs and 1 76% for BellSouth's retail operations in Georgia, and 6 93% for competitive LECs and 1 00% for BellSouth retail operations in Louisiana *See BellSouth Georgia/Louisiana Order*, 17 FCC Rcd at 9152 n 907

945 *See* BellSouth Varner Reply Aff at para 219

946 *See id*

947 BellSouth August 14 OSS and Loops *Ex Parte* Letter at 4, BellSouth Ainsworth Aff at para 139, BellSouth Varner Reply Aff at paras 217, *see also BellSouth Georgia/Louisiana Order*, 17 FCC Rcd at 9152-53, para 233 This program also addressed digital loops *See* para 241, *supra*

948 BellSouth August 14 OSS and Loops *Ex Parte* Letter at 4, BellSouth Varner Reply Aff at paras 216-18 For instance, to help assure that its technicians test high capacity loops before reporting that installations are complete, BellSouth now requires that the technicians post the test results BellSouth Varner Reply Aff at para 216

949 BellSouth Ainsworth Aff at para 139, BellSouth August 14 OSS and Loops *Ex Parte* Letter at 4

950 *See* BellSouth Varner Reply Aff at para 215 (stating that the customer premises equipment adds loop length and resistance to the circuit that may push it beyond viable limits)

951 KMC Comments at 15-16 KMC also asserts that facilities-based carriers like KMC will have no meaningful opportunity to compete unless the Commission forces BellSouth to improve its high capacity loop performance by denying this application KMC Comments at 8-9

BellSouth's generally acceptable performance with regard to other types of loops, and BellSouth's continuing efforts to ensure installation quality for high capacity loops, we cannot conclude that BellSouth's performance with regard to high capacity loops denies competitive LECs a reasonable opportunity to compete.[952] Contrary to KMC's assertion,[953] repeat troubles are not a major problem with respect to high capacity loops. During the relevant four-month period, competitive LECs reported only 283 repeat troubles for high capacity loops, a reporting rate generally in parity with the retail analogue.[954] Moreover, BellSouth generally maintained parity performance under the missed repair appointment and the mean time to repair measures during the relevant period.[955] Although one measure of BellSouth's maintenance and repair performance for high capacity loops – the customer trouble report rate – was out of parity for the applicable states throughout much of the relevant period,[956] the overall trouble report rate for high capacity loops that BellSouth provided competitive LECs was low during the relevant period.[957] We therefore find that these disparities lack competitive significance,[958] and that BellSouth's maintenance and repair performance for high capacity loops warrants a finding of checklist compliance.

247. We also reject KMC's argument that BellSouth's performance for the percentage of jeopardy notices for mechanized high capacity loops, which is significantly out of parity throughout the four-month period,[959] demonstrates that BellSouth assigns high capacity loops in a

---

952 *See Verizon Pennsylvania Order*, 16 FCC Rcd at 17468-69, para 90

953 *See* KMC Comments at 16

954 BellSouth August 14 OSS and Loops *Ex Parte* Letter at 21, 23-26 (discussing % Repeat Troubles within 30 Days, Digital Loops≥DS1) (parity during the applicable months except with regard to high capacity loop troubles requiring dispatch in Mississippi in April, and high capacity loop troubles not requiring dispatch in South Carolina in April and Mississippi in May)

955 *See* BellSouth August 14 OSS and Loops *Ex Parte* Letter at 9, 11-14 (discussing Missed Repair Appointments, Digital Loops≥DS1) (parity throughout the applicable states for the relevant period except with regard to high capacity loop maintenance requiring dispatch in North Carolina in May), *id* at 27-33 (discussing Maintenance Average Duration, Digital Loops≥DS1) (parity throughout the applicable states for the relevant period except with regard to high capacity loop maintenance requiring dispatch in North Carolina in May)

956 *See* BellSouth August 14 OSS and Loops *Ex Parte* Letter at 15, 17-20 (discussing Customer Trouble Report Rate, Digital Loops≥DS1/Dispatch) (out of parity in applicable states throughout relevant period), *id* (discussing Customer Trouble Report Rate, Digital Loops≥DS1/Non-Dispatch) (out of parity in Alabama, Mississippi, North Carolina, and South Carolina throughout relevant period and in Kentucky from April through June)

957 During that period, the average trouble report rate for high capacity loops was 3 19% in Alabama, 4 04% in Kentucky, 7 82% in Mississippi, 3 84% in North Carolina, and 4 22% in South Carolina *See id* (Customer Trouble Report Rate, Digital Loops≥DS1)

958 *See BellSouth Georgia/Louisiana Order*, 17 FCC Rcd at 9150, para 230

959 Alabama/Kentucky/Mississippi/North Carolina/South Carolina Metric B 2 5 19 (% Jeopardies, Digital Loops≥DS1, Mechanized) BellSouth's monthly performance data for this metric range from 3 93% to 35 87% during the four-month period, for competitive LECs, the percentages range from 60 87% to 93 22%

discriminatory manner.[960] This difference in the jeopardy rates simply reflects differences between the types and locations of facilities reflected in this metric. Because virtually all of the high capacity loops ordered by competitive LECs terminate at an end user's premises, it is likely that a temporary facilities shortage would place a competitive LEC's order in jeopardy.[961] In contrast, a significant percentage of the high capacity circuits included in the retail analogue for this metric carry traffic between BellSouth central offices, where temporary facility shortages are significantly less likely.[962] We therefore give this performance data minimal weight with respect to whether BellSouth's loop assignment practices are nondiscriminatory.[963]

248. *Line Sharing.* We find, as did the state commissions,[964] that BellSouth offers nondiscriminatory access to the high frequency portion of the loop in each applicable state.[965] We note that competitive LECs in Mississippi and South Carolina have not yet ordered any line-sharing arrangements from BellSouth.[966] Because order volumes for line-shared loops are low in each of the states, we look to BellSouth's line-sharing performance in Georgia to inform our analysis.[967] We further note that no party has alleged that BellSouth's line-sharing offerings in

---

960 KMC Comments at 11. We note that KMC makes no claim that BellSouth provides jeopardy notices for high capacity loops in a discriminatory manner. *See id.*

961 BellSouth Varner Reply Aff. at para. 127.

962 *Id.*

963 We note that BellSouth's systems and procedures are designed to ensure that high capacity loops are assigned on a nondiscriminatory basis. BellSouth Milner Reply Aff. at para. 10. Specifically, BellSouth shows that it uses a mechanized system, LFACS, to assign high capacity loops, among other facilities, on a "first come, first served" basis to its wholesale and retail customers. If LFACS cannot find a suitable facility, the service order is referred to BellSouth's Address and Facilities Inventory Group (AFIG) or its Service Advocate Center (SAC). These groups assign high capacity loops and other facilities in the order in which BellSouth originally received the service orders. *Id.* We also note that BellSouth's data make clear that it provides jeopardy notices to competitive LECs significantly in advance of scheduled installation dates. *See* Alabama/Kentucky/Mississippi/North Carolina/South Carolina B 2 8 19 (Average Jeopardy Notice Interval, Digital Loops≥DS1, Mechanized) (showing compliance with benchmark requiring that jeopardy notices be provided at least 48 hours prior to scheduled installation). We therefore reject KMC's argument that competitive LECs do not receive adequate notice that the change in service providers will not take place as scheduled. KMC Comments at 14.

964 *See* Alabama Commission Comments at 211, Kentucky Commission Comments at 32-33, Mississippi Commission Comments at 3; North Carolina Commission Comments at 200, South Carolina Commission Comments at 1.

965 As discussed in note 61, *supra*, the D.C. Circuit recently stated that "the *Line Sharing Order* must be vacated and remanded." *USTA v. FCC*, 290 F.3d 415, 429. The court also stated that it "grant[ed] the petitions for review[] and remand[ed] the *Line Sharing Order*. . . to the Commission for further consideration in accordance with the principles outlined." *Id.* at 430. We are addressing the line sharing rules as part of our *Triennial Review Proceeding*. *See Triennial Review Notice*, 16 FCC Rcd at 22805, paras. 53-54.

966 BellSouth Milner Aff. at para. 114.

967 *See* para. 233, *supra*.

Mississippi and South Carolina fail to provide nondiscriminatory access to the high frequency portion of the loop.

249. BellSouth has generally met the benchmark and parity standards for installation timeliness,[968] installation quality,[969] and maintenance and repair quality for line sharing in the other relevant states.[970] Because BellSouth's performance data show that it installs line-sharing arrangements in accordance with the standards approved by the state commissions,[971] we reject Covad's reliance on BellSouth's alleged failure to provision line-sharing arrangements within the time frame specified in its interconnection agreement with Covad.[972] Given that BellSouth's

---

[968] *See* Alabama/Kentucky/North Carolina B 1 9 7-B 1 13 7 (Firm Order Confirmation, Line Sharing), Alabama/Kentucky/North Carolina B 2 1 7 3 1-B 2 7 5 2 (Order Completion Interval, Line Sharing), *see also* Georgia B 2 1 7 3 1-B 2 1 7 5 2 (Order Completion Interval, Line Sharing), Georgia B 2 1 7 3 1-B 2 1 7 5 2 (Order Completion Interval, Line Sharing), Alabama/Kentucky/North Carolina/Georgia B 2 18 7 1 1-B 2 18 7 2 2 (% Missed Installation Appointments, Line Sharing)

[969] *See* Alabama/Kentucky/North Carolina/Georgia B 2 19 7 1 2-B 2 19 7 2 1 (% Provisioning Troubles within 30 Days, Line Sharing), Alabama/Kentucky/North Carolina/Georgia B 3 2 7 1-B 3 2 7 2 (Customer Trouble Report Rate, Line Sharing)

[970] *See* Alabama/Kentucky/North Carolina/Georgia B 3 1 7 1-B 3 1 7 2 (% Missed Repair Appointments, Line Sharing), Alabama/Kentucky/North Carolina/Georgia B 3 3 7 1-B 3 3 7 2 (Maintenance Average Duration, Line Sharing), Alabama/Kentucky/North Carolina/Georgia B 3 4 7 1-B 3 4.7 2 (% Repeat Troubles within 30 Days, Line Sharing) While Covad complains that BellSouth took longer to perform line-sharing maintenance for competitive LECs than for its own retail operations, BellSouth's performance under the metrics for maintenance average duration is generally in parity, with very low volumes, in Alabama, Kentucky, and North Carolina from March through June Covad Comments at 29-30, *see* Alabama B 3 3 7 1-B 3 3 7 2 (Maintenance Average Duration, Line Sharing) (parity in all four months for both dispatch and non-dispatch), Kentucky B 3 3.7 1-B 3 3 7 2 (Maintenance Average Duration, Line Sharing) (parity in all four months for both dispatch and in three months for non-dispatch), North Carolina B 3 3 7 1-B 3 3 7 2 (Maintenance Average Duration, Line Sharing) (parity in all four months for both dispatch and non-dispatch)

[971] *See* Alabama/Kentucky/North Carolina B 2 1 7 3 1-B 2.1 7 3 2 (Order Completion Interval, Line Sharing/<6 Circuits) We note that BellSouth's order completion interval performance was out of parity during June in Alabama, Kentucky, and North Carolina, and during much of the relevant period in Georgia *See* Alabama/Kentucky/North Carolina B 2 1 7 3 2 (Order Completion Interval, Line Sharing/<6 Circuits/Non-Dispatch) (average June intervals of 4 00 for competitive LECs and 2 43 days for BellSouth's retail operations in Alabama, 3 85 days for competitive LECs and 2 46 days for BellSouth's retail operations in Kentucky, and 3 63 days for competitive LECs and 2 39 days for BellSouth's retail operations in North Carolina), Georgia B 2 1 7 3 1-B 2 1 7 5 2 (Order Completion Interval, Line Sharing) (average monthly intervals ranging from 3 88 days to 5 96 days for competitive LECs and 2 39 days to 4 07 days for BellSouth's retail operations) The data indicate, however, that, on average during the applicable period, BellSouth's order completion intervals were 0 49 days shorter in Alabama, 0 46 days longer in Kentucky, 0 15 days shorter in North Carolina, and 0 66 days longer in Georgia for competitive LECs than for BellSouth's retail operations Alabama/Kentucky/North Carolina/Georgia B 2 1 7 3 1-B 2 1 7 3 2 (Order Completion Interval, Line Sharing/<6 Circuits) We find these differences to be competitively insignificant

[972] *See* Covad Comments at 22-23, 27 (asserting that BellSouth's failure to provision line-sharing arrangements within the three-day time frame specified in the interconnection agreement adversely affects Covad's ability to serve its customers with the speed and efficiency they expect)

line-sharing provisioning intervals for its retail customers and competitive LECs are comparable, and recognizing BellSouth's timeliness performance during the relevant period in Georgia, we find that BellSouth's installation performance does not warrant a finding of checklist noncompliance.[973] We do not, however, exclude the possibility that Covad might prevail in the event it chose to pursue this as a dispute under its agreement with BellSouth.

250. We also reject Covad's claim that BellSouth's line-sharing provisioning and maintenance and repair performance precludes a grant of long distance authority.[974] Although BellSouth's performance with regard to certain measures – customer trouble reports within 30 days of installation and repeat trouble reports within 30 days of maintenance or repair – is out of parity in certain months,[975] we find these disparities in reported performance do not warrant a finding of checklist noncompliance. First, as BellSouth argues, certain disparities reflect only a few trouble reports.[976] Second, because only a small percentage of the line-sharing arrangements provided by BellSouth resulted in initial trouble reports, the total volume of repeat troubles is too

[973] We note that Covad provides no data regarding the provisioning intervals for the line-shared loops it obtains from BellSouth. *See* Covad Comments at 27 (alleging line-sharing provisioning intervals of 3.88 days in Alabama, 4.07 days in Kentucky, and 3.78 days in North Carolina). In any event, this proceeding is not the proper forum for redressing any interconnection agreement violations by BellSouth. Covad may seek enforcement of its interconnection agreement by the state commissions.

[974] Covad Comments at 27-29.

[975] Alabama B 2 19 7 1 2 (% Provisioning Troubles within 30 days, Line Sharing/<10 Circuits/Non-Dispatch) (out of parity during three months with an average trouble rate of 8.43% for competitive LECs and 1.95% for BellSouth's retail operations), North Carolina B 2 19 7 1 2 (% Provisioning Troubles within 30 days, Line Sharing/<10 Circuits/Non-Dispatch) (out of parity throughout relevant period with an average trouble rate of 20.62% for competitive LECs and 2.38% for BellSouth's retail operations), Georgia B 2 19 7 1 1-B 2 19 7 1 2 (% Provisioning Troubles within 30 days, Line Sharing/<10 Circuits) (out of parity throughout relevant period with trouble rates ranging from 11.30% to 39.42% for competitive LECs and from 2.06% to 5.27% for BellSouth), North Carolina B 3 4 7 2 (% Repeat Troubles within 30 Days, Line Sharing/Non-Dispatch) (out of parity in April and June with overall repeat trouble rates of 36.00% for competitive LECs and 22.19% for BellSouth's retail operations during March through June), Georgia B 3 4 7 1 (% Repeat Troubles within 30 Days, Line Sharing/Dispatch) (out of parity in March, May, and June with overall repeat trouble rates of 47.22% for competitive LECs and 26.94% for BellSouth's retail operations during March through June), Georgia B 3.4 7 2 (% Repeat Troubles within 30 Days, Line Sharing/Non-Dispatch) (out of parity in June with overall repeat trouble rates of 29.91% for competitive LECs and 26.04% for BellSouth's retail operations during March through June).

[976] BellSouth Varner Reply Aff. at para. 121 (*citing confidential data*), *id.* at para. 227, Letter from Kathleen B. Levitz, Vice President – Federal Regulatory, BellSouth, to Marlene H. Dortch, Secretary, Federal Communications Commission, WC Docket No. 02-150 (filed Sept. 6, 2002) (BellSouth September 6 *Ex Parte* Letter), Alabama B 2 19 7 1 1 (% Provisioning Troubles within 30 days, Line Sharing/<10 Circuits/Dispatch) (out of parity during March and April with monthly volumes of seven for competitive LECs), North Carolina B 2 19 7 1 1 (% Provisioning Troubles within 30 days, Line Sharing/<10 Circuits/Dispatch) (out of parity during March with volume of five for competitive LECs), Kentucky B 2 19 7 1 2 (% Provisioning Troubles within 30 days, Line Sharing/<10 Circuits/Non-Dispatch) (out of parity during April, May, and June with respective monthly volumes of three, four, and three for competitive LECs).

small to yield statistically significant results.[977] BellSouth generally performed at or above parity with regard to line-sharing maintenance, as measured by its trouble report rate for line-sharing arrangements, during the relevant period.[978] In these circumstances, we conclude that BellSouth's customer trouble report and repeat trouble report rates for line sharing do not support a finding of checklist noncompliance.

251. *Line Splitting.* We find that BellSouth also provides nondiscriminatory access to line splitting in accordance with our rules.[979] BellSouth states that it facilitates line splitting by cross connecting an unbundled loop to a competitive LEC's collocation space. Moreover, BellSouth implemented permanent OSS for line splitting on January 5, 2002, and competitive LECs have raised no complaints about this process.[980]

---

[977] Kentucky B 3 2 7 2 (% Repeat Troubles within 30 Days, Line Sharing/Dispatch) (out of parity in May with two repeat troubles). North Carolina B 3 4 7 2 (% Repeat Troubles within 30 Days, Line Sharing/Non-Dispatch) (out of parity in April with four repeat troubles and in June with three repeat troubles), Georgia B 3 4 7 1 (% Repeat Troubles within 30 Days, Line Sharing/Dispatch) (out of parity in four months with repeat trouble counts ranging from three to 16)

[978] *See, e g*, Alabama B 3 2 7 1 (Customer Trouble Report Rate, Line Sharing/Dispatch) (overall trouble report rates of 20 00% for competitive LECs and 50 57% for BellSouth for dispatch orders), Alabama B 3 2 7 2 (Customer Trouble Report Rate, Line Sharing/Non-Dispatch) (overall trouble report rates of 3 70% for competitive LECs and 3 49% for BellSouth for non-dispatch orders), Kentucky B 3 2 7 1 (Customer Trouble Report Rate, Line Sharing/Dispatch) (overall trouble report rates of 0 32% for competitive LECs and 1 24% for BellSouth for dispatch orders), Kentucky B 3 2 7 2 (Customer Trouble Report Rate, Line Sharing/Non-Dispatch) (overall trouble report rates of 1 41% for competitive LECs and 2 03% for BellSouth for non-dispatch orders), North Carolina B 3 2 7 1 (Customer Trouble Report Rate, Line Sharing/Dispatch) (overall trouble report rates of 0 18% for competitive LECs and 0 81% for BellSouth for dispatch orders), North Carolina B 3 2 7 2 (Customer Trouble Report Rate, Line Sharing/Non-Dispatch) (overall trouble report rates of 1 32% for competitive LECs and 1.61% for BellSouth for non-dispatch orders), Georgia B 3 2 7.1 (Customer Trouble Report Rate, Line Sharing/Dispatch) (overall trouble report rates of 0.78% for competitive LECs and 1 17% for BellSouth for dispatch orders), Georgia B 3 2 7 2 (Customer Trouble Report Rate, Line Sharing/Non-Dispatch) (overall trouble report rates of 2 58% for competitive LECs and 2 85% for BellSouth for non-dispatch orders)

[979] *See Line Sharing Reconsideration Order*, 16 FCC Rcd at 2111, para 20 n 36

[980] *See BellSouth Georgia/Louisiana Order*, 17 FCC Rcd at 9157, para 243

C. Checklist Item 5 – Unbundled Transport

252. Section 271(c)(2)(B)(v) of the competitive checklist requires a BOC to provide "[l]ocal transport from the trunk side of a wireline local exchange carrier switch unbundled from switching or other services."[981] Based on the evidence in the record, we conclude, as did the state commissions,[982] that BellSouth complies with the requirements of checklist item 5.[983]

253 The Commission has previously relied on the missed installation appointment rate to determine whether a BOC is provisioning transport to its competitors in a nondiscriminatory manner.[984] Despite the low transport order volume for competitive LECs in each of the five states, BellSouth's performance data show that it missed installation appointments for provisioning transport at a lower rate for its competitors than for its own retail customers during the relevant period.[985] Given this evidence, and recognizing BellSouth's parity performance in Georgia, we conclude that BellSouth's provisioning of transport to competitive LECs is nondiscriminatory.[986]

254 We note that US LEC alleges that the current rules regarding loop-transport combinations, EELs, have impeded US LEC's ability to compete with BellSouth in violation of checklist item 5.[987] New South also claims that BellSouth does not comply with the Commission's orders regarding EELs audits and contends that it has experienced delays in the conversion of special access circuits to EELs [988] We address these claims in our discussion of checklist item 2, above.[989]

---

[981] 47 U S C § 271(c)(2)(B)(v)

[982] Alabama Commission Comments at 213-15, Mississippi Commission Comments at 3, Kentucky Commission Comments at 33, North Carolina Commission Comments at 209, South Carolina Commission Comments at 1

[983] BellSouth Application at 117-18, BellSouth Milner Aff at paras 137-45

[984] *See, e g , BellSouth Georgia/Louisiana Order*, 17 FCC Rcd at 9158, para 246, *Verizon Massachusetts Order*, 16 FCC Rcd at 9106-07, para 210

[985] *See* B 2 18 2 1 1 (% Missed Installation Appointments, Local Interoffice Transport/<10 Circuits/Dispatch) We note that, during the months with reported competitive LEC data, BellSouth achieved parity in Alabama (June), Kentucky (April, May, and June), Mississippi (April, May, and June), and North Carolina (March, April, May, and June) *See* Alabama/Kentucky/Mississippi/North Carolina B 2 18 2 1 1 (% Missed Installation Appointments, Local Interoffice Transport/<10 Circuits/Dispatch)

[986] Because order volumes for transport were nonexistent or low in the five states during the relevant period, we look to Georgia data to inform our analysis *See* Georgia B 2 18 2 1.1 (% Missed Installation Appointments, Local Interoffice Transport/<10 Circuits/Dispatch)

[987] US LEC Comments at 7-19, US LEC Reply at 4-5

[988] New South August 5 *Ex Parte* Letter at 6

[989] *See* section IV B 3, *supra*

apply to, or to give the Commission jurisdiction with respect to the rates, terms, and conditions, or access to poles, ducts, conduits and rights-of-way as provided in [section 224(f)], for pole attachments in any case where such matters are regulated by a State."[159] As of 1992, nineteen states, including Connecticut, had certified to the Commission that they regulated the rates, terms, and conditions for pole attachments.[160]

D. Checklist Item 4 – Unbundled Local Loops

48. Section 271(c)(2)(B)(iv) of the Act, item 4 of the competitive checklist, requires that a BOC provide "[l]ocal loop transmission from the central office to the customer's premises, unbundled from local switching or other services "[161] The Commission has defined the loop as a transmission facility between a distribution frame, or its equivalent, in an incumbent LEC central office, and the demarcation point at the customer premises. This definition includes different types of loops, including two-wire and four-wire analog voice-grade loops, and two-wire and four-wire loops that are conditioned to transmit the digital signals needed to provide service such as ISDN, ADSL, HDSL, and DS1-level signals.[162]

49. In order to establish that it is "providing" unbundled local loops in compliance with checklist item 4, a BOC must demonstrate that it has a concrete and specific legal obligation to furnish loops and that it is currently doing so in the quantities that competitors demand and at an acceptable level of quality. A BOC must also demonstrate that it provides nondiscriminatory access to unbundled loops.[163] Specifically, the BOC must provide access to any functionality of the loop requested by a competing carrier unless it is not technically feasible to condition the loop facility to support the particular functionality requested. In order to provide the requested loop functionality, such as the ability to deliver xDSL services, the BOC may be required to take affirmative steps to condition existing loop facilities to enable competing carriers to provide services not currently provided over the facilities The BOC must provide

---

[159] *Id* § 224(c)(1) The 1996 Act extended the Commission's authority to include not just rates, terms, and conditions, but also the authority to regulate nondiscriminatory access to poles, ducts, conduits, and rights-of-way *Local Competition First Report and Order*, 11 FCC Rcd at 16104, para 1232, 47 U S C § 224(f) Absent state regulation of terms and conditions of nondiscriminatory attachment access, the Commission retains jurisdiction *Local Competition First Report and Order*, 11 FCC Rcd at 16104, para 1232, 47 U S C § 224(c)(1), *see also Bell Atlantic New York Order*, 15 FCC Rcd at 4093, para 264

[160] *See States That Have Certified That They Regulate Pole Attachments*, Public Notice, 7 FCC Rcd 1498 (1992), 47 U S C § 224(f)

[161] 47 U S C § 271(c)(2)(B)(iv)

[162] *Local Competition First Report and Order*, 11 FCC Rcd at 15691, para 380, *UNE Remand Order*, 15 FCC Rcd at 3772-73, paras 166-67, n 301 (retaining definition of the local loop from the *Local Competition First Report and Order*, but replacing the phrase "network interconnection device" with "demarcation point," and making explicit that dark fiber and loop conditioning are among the features, functions and capabilities of the loop)

[163] *SWBT Texas Order*, 15 FCC Rcd at 18481-81, para 248, *Bell Atlantic New York Order*, 15 FCC Rcd at 4095, para 269, *Second BellSouth Louisiana Order*, 13 FCC Rcd at 20637, para 185

competitors with access to unbundled loops regardless of whether the BOC uses digital loop carrier (DLC) technology or similar remote concentration devices for the particular loops sought by the competitor.

50. On December 9, 1999, the Commission released the *Line Sharing Order*, which introduced new rules requiring BOCs to offer requesting carriers unbundled access to the high-frequency portion of local loops (HFPL).[164] HFPL is defined as "the frequency above the voiceband on a copper loop facility that is being used to carry traditional POTS analog circuit-switched voiceband transmissions." This definition applies whether a BOC's voice customers are served by cooper or by digital loop carrier equipment. Competing carriers should have access to the HFPL at either a central office or at a remote terminal. However, the HFPL network element is *only* available on a copper loop facility [165]

51 To determine whether a BOC makes line sharing available consistent with Commission rules set out in the *Line Sharing Order*, the Commission examines categories of performance measurements identified in the *Bell Atlantic New York* and *SWBT Texas Orders* Specifically, a successful BOC applicant could provide evidence of BOC-caused missed installation due dates, average installation intervals, trouble reports within 30 days of installation, mean time to repair, trouble report rates, and repeat trouble report rates In addition, a successful BOC applicant should provide evidence that its central offices are operationally ready to handle commercial volumes of line sharing and that it provides competing carriers with nondiscriminatory access to the pre-ordering and ordering OSS functions associated with the provision of line shared loops, including access to loop qualification information and databases.

52. Section 271(c)(2)(B)(iv) also requires that a BOC demonstrate that it makes line splitting available to competing carriers so that competing carriers may provide voice and data service over a single loop [166] In addition, a BOC must demonstrate that a competing carrier, either alone or in conjunction with another carrier, is able to replace an existing UNE-P configuration used to provide voice service with an arrangement that enables it to provide voice and data service to a customer. To make such a showing, a BOC must show that it has a legal obligation to provide line splitting through rates, terms, and conditions in interconnection agreements and that it offers competing carriers the ability to order an unbundled xDSL-capable

---

[164] *See Line Sharing Order*, 14 FCC Rcd at 20924-27, paras 20-27, *see also* n 63 at C-12 *supra*

[165] *See 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, 16 FCC Rcd 2101, 2106-07, para 10 (2001)

[166] *See generally SWBT Texas Order*, 15 FCC Rcd at 18515-17, paras 323-329 (describing line splitting), 47 C F R § 51 703(c) (requiring that incumbent LECs provide competing carriers with access to unbundled loops in a manner that allows competing carriers "to provide any telecommunications service that can be offered by means of that network element")

loop terminated to a collocated splitter and DSLAM equipment, and combine it with unbundled switching and shared transport.[167]

E. Checklist Item 5 – Unbundled Local Transport

53. Section 271(c)(2)(B)(v) of the competitive checklist requires a BOC to provide "[l]ocal transport from the trunk side of a wireline local exchange carrier switch unbundled from switching or other services."[168] The Commission has required that BOCs provide both dedicated and shared transport to requesting carriers.[169] Dedicated transport consists of BOC transmission facilities dedicated to a particular customer or carrier that provide telecommunications between wire centers owned by BOCs or requesting telecommunications carriers, or between switches owned by BOCs or requesting telecommunications carriers.[170] Shared transport consists of transmission facilities shared by more than one carrier, including the BOC, between end office switches, between end office switches and tandem switches, and between tandem switches, in the BOC's network [171]

F. Checklist Item 6 – Unbundled Local Switching

54 Section 271(c)(2)(B)(vi) of the 1996 Act requires a BOC to provide "[l]ocal switching unbundled from transport, local loop transmission, or other services."[172] In the *Second*

---

[167] *See SWBT Kansas/Oklahoma Order*, 16 FCC Rcd at 6348, para 220

[168] 47 U S C § 271(c)(2)(B)(v)

[169] *Second BellSouth Louisiana Order*, 13 FCC Rcd at 20719, para 201

[170] *Id* A BOC has the following obligations with respect to dedicated transport (a) provide unbundled access to dedicated transmission facilities between BOC central offices or between such offices and serving wire centers (SWCs), between SWCs and interexchange carriers points of presence (POPs), between tandem switches and SWCs, end offices or tandems of the BOC, and the wire centers of BOCs and requesting carriers, (b) provide all technically feasible transmission capabilities such as DS1, DS3, and Optical Carrier levels that the competing carrier could use to provide telecommunications, (c) not limit the facilities to which dedicated interoffice transport facilities are connected, provided such interconnections are technically feasible, or restrict the use of unbundled transport facilities, and (d) to the extent technically feasible, provide requesting carriers with access to digital cross-connect system functionality in the same manner that the BOC offers such capabilities to interexchange carriers that purchase transport services *Id* at 20719

[171] *Id* at 20719, n 650. The Commission also found that a BOC has the following obligations with respect to shared transport (a) provide shared transport in a way that enables the traffic of requesting carriers to be carried on the same transport facilities that a BOC uses for its own traffic, (b) provide shared transport transmission facilities between end office switches, between its end office and tandem switches, and between tandem switches in its network, (c) permit requesting carriers that purchase unbundled shared transport and unbundled switching to use the same routing table that is resident in the BOC's switch, and (d) permit requesting carriers to use shared (or dedicated) transport as an unbundled element to carry originating access traffic from, and terminating traffic to, customers to whom the requesting carrier is also providing local exchange service *Id* at 20720, n 652

[172] 47 U S C § 271(c)(2)(B)(vi), *see also Second BellSouth Louisiana Order*, 13 FCC Rcd at 20722 A switch connects end user lines to other end user lines, and connects end user lines to trunks used for transporting a call to (continued ..)

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Joint Application by BellSouth Corporation,	)	
BellSouth Telecommunications, Inc.,	)	CC Docket No. 02-35
And BellSouth Long Distance, Inc for	)	
Provision of In-Region, InterLATA Services	)	
In Georgia and Louisiana	)	
	)	
	)	

MEMORANDUM OPINION AND ORDER

Adopted: May 15, 2002 **Released: May 15, 2002**

By the Commission: Commissioner Copps issuing a statement.

TABLE OF CONTENTS

I. INTRODUCTION

1. On February 14, 2002, BellSouth Corporation and its subsidiaries, BellSouth Telecommunications, Inc., and BellSouth Long Distance, Inc. (collectively, BellSouth) filed this application pursuant to section 271 of the Communications Act of 1934, as amended,[1] for authority to provide in-region, interLATA service originating in the states of Georgia and Louisiana. Although BellSouth initially filed for in-region, interLATA authority for the states of Georgia and Louisiana on October 2, 2001,[2] that application was subsequently withdrawn by

[1] We refer to the Communications Act of 1934, as amended by the Telecommunications Act of 1996 and other statutes, as the Communications Act or the Act. *See* 47 U.S C §§ 151 *et seq.* We refer to the Telecommunications Act of 1996 as the 1996 Act *See* Telecommunications Act of 1006, Pub. L No 104-104, 110 Stat 56 (1996).

[2] *See Application by BellSouth Corporation, BellSouth Telecommunications, Inc , and BellSouth Long Distance, Inc for Authorization Under Section 271 of the Communications Act to Provide In-Region, InterLATA Services in the States of Georgia and Louisiana*, CC Docket No. 01-277 (filed October 2, 2001) (BellSouth GALA I (continued)

B. Checklist Item 4 – Unbundled Local Loops

218. Section 271(c)(2)(B)(iv) of the Act requires that a BOC provide, "[l]ocal loop transmission from the central office to the customer's premises, unbundled from local switching or other services."[852] Based on the evidence in the record, we conclude, as did the Georgia and Louisiana Commissions,[853] that BellSouth demonstrates that it provides unbundled local loops in accordance with the requirements of section 271 and our rules. Our conclusion is based on our review of BellSouth's performance for all loop types, which include, as in past section 271 orders, voice grade loops, hot cut provisioning, xDSL-capable loops, high capacity loops, and digital loops, and our review of BellSouth's processes for line sharing and line splitting. As of October 2001, competitors have acquired and placed into use more than 80,000 loops in Georgia, and 19,000 loops in Louisiana.[854]

219 Consistent with our prior section 271 orders, we do not address every aspect of BellSouth's loop performance where our review of the record satisfies us that BellSouth's performance is in compliance with the parity and benchmark measures established in Georgia and Louisiana.[855] Instead, we focus our discussion on those areas where the record indicates minor discrepancies in performance between BellSouth and its competitors in Georgia and Louisiana. As in past section 271 proceedings, in the course of our review, we look for patterns of systemic performance disparities that have resulted in competitive harm or that have otherwise denied new entrants a meaningful opportunity to compete.[856] Isolated cases of performance disparity, especially when the margin of disparity is small, generally will not result in a finding of checklist noncompliance.[857]

220. *Hot Cut Activity.* Like the Georgia and Louisiana Commissions,[858] we find that BellSouth is providing voice grade loops through hot cuts in Georgia and Louisiana in

---

[852] 47 U S C § 271(c)(2)(B)(iv) The Commission has defined the loop as a transmission facility between a distribution frame, or its equivalent, in an incumbent LEC central office, and the demarcation point at the customer premises Dark fiber and loop conditioning equipment are among the features, functions, and capabilities of the loop *UNE Remand Order*, 15 FCC Rcd at 3772-73, paras 166-67 n 301 For a discussion of the requirements of checklist item 4, *see* Appendix D at paras 48-52, *infra*

[853] Georgia Commission GALA I Comments at 166, Louisiana Commission GALA II Comments at 1-2

[854] BellSouth GALA II Stockdale Aff, Exh ES-5 and ES-6 (*citing confidential information*) As of February 2002, BellSouth had provisioned over 70,000 stand-alone loops (including DSL loops), 8,934 digital loops, and 3,145 high capacity loops *See* Milner GALA I Aff at para 115, Letter from Kathleen B Levitz, Vice President-Federal Regulatory, BellSouth, to Marlene R. Dortch, Secretary, Federal Communications Commission, CC Docket No 02-35 (filed April 17, 2002) (BellSouth Apr. 17 *Ex Parte* Letter) In Louisiana, BellSouth had provisioned over 15,000 stand-alone loops (including DSL Loops), 3,500 digital loops, and 3,154 high capacity loops *Id*

[855] *See, e g , Verizon Connecticut Order*, 16 FCC Rcd at 14151-52, para 9

[856] *See Verizon Massachusetts Order*, 16 FCC Rcd at 9055-56, para. 122

[857] *See id*

[858] Georgia Commission GALA I Comments at 161; Louisiana Commission GALA I Comments at 57

accordance with the requirements of checklist item 4. BellSouth provides hot cuts in Georgia and Louisiana within a reasonable time interval,[859] at an acceptable level of quality, with minimal service disruption, and with a minimum number of troubles following installation.[860]

221. We reject the argument made by AT&T that BellSouth fails to meet the "standards" the Commission developed in the *Bell Atlantic New York Order*.[861] AT&T claims that when using the loop cutover calculation measures analyzed by the Commission in the *Bell Atlantic New York Order*, BellSouth's on-time performance for completing hot cuts is deficient.[862] In the Texas proceedings, AT&T similarly argued that SWBT could not establish checklist compliance because the Texas performance metrics differed from those employed in New York.[863] As the Commission noted in the *SWBT Texas Order*, "[w]ith each application we are presented with a different set of circumstances: new and differently designed performance measurements, state proceedings with different histories, new processes by which BOCs perform necessary functions for competing carriers, and new competing carrier concerns."[864] In fact, this Commission has recognized that "individual states and BOCs may define performance measures in different ways."[865] As a result, although our hot cut inquiry examines the same criteria as our inquiry in prior section 271 applications, we necessarily base our conclusion on the evidence presented in this application.[866] In particular, as noted above, we evaluate BellSouth's hot cut process, and the timeliness and quality of the hot cuts it provides to competing carriers, and find that BellSouth's hot cut performance for the five-month period, October through February, met or exceeded the checklist requirements.

---

[859] *See* Georgia/Louisiana B 2 12 1 (Coordinated Customer Conversions, Loops with INP), Georgia/Louisiana B.2 12 2 (Coordinated Customers Conversions, Loops with LNP), Georgia/Louisiana B 2 14 1-B 2 14 4 (Hot Cut Timeliness), Georgia/Louisiana B.2 15.1-B 2 15 4 (% Hot Cuts>15 Minutes Late), Georgia/Louisiana B 2 16 1-B 2 16 2 (Average Recovery Time – CCC), Georgia/Louisiana B 2 13 (% Hot Cuts>15 minutes early); Georgia/Louisiana B 2 15 (% Hot Cuts>15 minutes late) *But see* Xspedius GALA I Comments at 5-6 (asserting that BellSouth does not perform coordinate customer conversions as scheduled)

[860] *See* Georgia/Louisiana B 2 17 1.1-B 2.17 2 2 (% Provisioning Troubles Within Seven Days – Hot Cuts) KMC claims that, when BellSouth completes the physical hot cut, BellSouth fails to perform timely switch translations and loop cutovers in a manner that prevent end users from losing service KMC Comments at 7 We address KMC's claim in checklist item 11, below.

[861] *See* AT&T GALA I Comments at 40-41

[862] *Id*

[863] *SWBT Texas Order*, 15 FCC Rcd at 18485, para 257.

[864] *Id*

[865] *Verizon Pennsylvania Order*, 16 FCC Rcd at 17462-63, para 79 n 275 In many cases, such differences are the product of state proceedings where provisioning processes and performance measurements were developed and refined with input from both the BOC and competing carriers

[866] *SWBT Texas Order*, 15 FCC Rcd at 18485, para 257

222. We also reject Mpower's claim that BellSouth's failure to provide an adequate automated frame due time (FDT) violates BellSouth's obligation to provide reasonable and nondiscriminatory access to OSS and to unbundled loops.[867] Mpower asserts that BellSouth should be required to provide an adequate automated FDT process or, at least, not separately charge for coordination of hot cuts.[868] Competing carriers can now chose freely between the CHC and FDT hot cut processes in Georgia and Louisiana. In the *SWBT Texas and Kansas/Oklahoma Orders*, however, the Commission expressly chose not to rely upon SWBT's FDT showing in demonstrating compliance with checklist item 4 and relied instead on SWBT's coordinated method (for which there was no charge).[869] Absent further substantiation, we cannot find that BellSouth does not provide an adequate automated FDT process. The evidence in this record demonstrates that BellSouth provisions FDT hot cuts in a timely manner and with a minimum number of troubles following installation. Concerning BellSouth's separate charge for coordinated hot cuts (CHCs), the Commission has never required BOCs to provide CHCs at no charge.[870] By contrast, the Commission has found that competitive carriers have a meaningful opportunity to compete if a BOC makes available a non-automated CHC process with a charge.[871] We therefore believe that Mpower's challenge to the cost basis of these charges is in reality a challenge to the pricing determinations of the Georgia Commission and, to the extent that Mpower is requesting a hot cut process that BellSouth does not currently offer, we note that a section 271 application is not an appropriate forum for the resolution of such inter-carrier disputes. Given that BellSouth demonstrates that it provisions CHCs in a timely manner and at an acceptable level of quality, with a minimal service disruption and a minimum number of troubles following installation, we find that Mpower's concerns do not warrant a finding of checklist noncompliance. Thus, we do not believe that we have a sufficient basis for finding that these claims warrant checklist noncompliance.

223 *Voice Grade Loops*. Based on the evidence in the record, we find, as did the Georgia and Louisiana Commissions,[872] that BellSouth provisions voice grade loops to competitors in Georgia and Louisiana in a nondiscriminatory manner. In order to determine that

---

867 Mpower GALA I Comments at 6, Mpower GALA II Comments at 15

868 Mpower GALA II Comments at 16 Mpower states that BellSouth's automated FDT is very unsatisfactory and compares unfavorably with the process of the other BOCs because BellSouth will only specify a business day on which the automated transfer will occur, which could result in customers being without service for several hours or more if the transfer fails *Id* at 15. According to Mpower, SBC and Verizon make a commitment to perform a transfer of service within a time frame of 60 or 90 minutes *Id*

869 *SWBT Texas Order*, 15 FCC Rcd at 18487, paras 260-61, *see also SWBT Kansas/Oklahoma Order*, 16 FCC Rcd at 6337, para. 201.

870 *See SWBT Texas Order*, 15 FCC Rcd at 18494-95, para 276.

871 *See id* at 18494-95, paras 275-77. In the *SWBT Texas Order*, the Commission found that time and material charges imposed during the CHC process were valid because of the Texas Commission's demonstrated commitment to the Commission's pricing rules *Id* at paras 276-77.

872 Georgia Commission GALA I Comments at 154, Louisiana Commission GALA I Comments at 57.

BellSouth's performance reflects parity, we review performance measures comparable to those we have relied upon in prior section 271 orders.[873]

224. In both Georgia and Louisiana, BellSouth has generally met the benchmark and parity standards for installation timeliness, installation quality, and the quality of the maintenance and repair functions.[874] We recognize that BellSouth's performance with respect to a provisioning timeliness metric – the order completion interval metric – appears to be slightly out of parity in Georgia and Louisiana for several recent months.[875] However, recognizing that BellSouth performed at parity with respect to the majority of the voice grade loop "order completion interval" metrics, we find that BellSouth's performance does not warrant a finding of checklist noncompliance. Should BellSouth's performance in this area deteriorate, we may pursue appropriate enforcement action. In addition, we note that BellSouth's performance under the missed installation appointment metric suggests that BellSouth has generally been timely in the provisioning of voice grade loops.[876]

225. We also recognize that BellSouth does not achieve parity under the missed repair appointments metric for three months during the relevant October through February period in Georgia.[877] BellSouth explains that the primary reason for the disparity is the small volume of competitive LEC reports.[878] BellSouth's performance data demonstrate that it did not miss any competitive LEC repair appointments in January and February.[879] Given this improving trend in

---

[873] *See Verizon Massachusetts Order*, 16 FCC Rcd at 9078-79, para 162.

[874] *See* Georgia/Louisiana B 2 19 8 1 1-B 2 19 13 2 4 (% Provisioning Troubles within 30 Days, 2W Analog Loop), Georgia/Louisiana B.2 18 8 1 1-B 2 18 3 2 4 (% Missed Installation Appointments, 2W Analog Loop), Georgia/Louisiana B 3 2 8 1-B 3 2 9 2 (Customer Trouble Report Rate, 2W Analog Loop), Georgia/Louisiana B 3 3 8 1-B 3 3 9 2 (Maintenance Average Duration, 2W Analog Loop), Georgia/Louisiana B 3 4 8 1-B 3 4 9 2 (% Repeat Troubles within 30 Days, 2W Analog Loop)

[875] *See* Louisiana B 2 1 8 1 1 (Order Completion Interval, 2W Analog Loop-Design/<10 circuits/Dispatch), Louisiana B 2 1 12 1.1 (Order Completion Interval, 2W Analog Loop with LNP-Design/<10 circuits/Dispatch) For B 2.1 8 1 1, BellSouth performed better for its own retail affiliate in November and December in Louisiana. For B 2 1 12 1 1, the competitive LEC average measure was 5 47 for October-February and 3 47 for BellSouth retail in Louisiana.

[876] *See generally* Georgia/Louisiana B.2 18 8 1 1-B.2 18.13.2 4 (% Missed Installation Appointments, 2W Analog Loop); Georgia/Louisiana B 3 3 8 1-B 3 3 9.2 (Maintenance Average Duration, 2W Analog Loop)

[877] For October-February, BellSouth missed an average of 6 66% of competitive LEC repair appointments, compared to an average of 1 52% for BellSouth retail in Georgia *See* Georgia B 3 1.9 2 (Missed Repair Appointments, 2W Analog Loop, Non-Design/Non-Dispatch)

[878] *See* Letter from Glenn T Reynolds, Vice President-Federal Regulatory, BellSouth, to William Caton, Acting Secretary, Federal Communications Commission, CC Docket No 02-35 (filed March 14, 2002) (BellSouth Mar 14 *Ex Parte* Letter). For the months of October, November, and December 2001, the competitive LEC volumes for this measure were 21, 13, and 20, respectively, with only two appointments missed each month *Id*

[879] *Id* In January, the reported results show zero missed appointments for the 26 competitive LEC appointments scheduled in Georgia, exceeding the retail analogue with 0 00% for competitive LECs compared to 1 06% for the (continued .)

January and February, and the fact that competitive LEC volumes are low compared to other relevant missed repair appointment metrics, we do not find that this disparity rises to the level of checklist noncompliance.

226. KMC provides its own data to demonstrate that BellSouth's Georgia and Louisiana performance for missed installation appointments and provisioning troubles within 30 days for voice grade loops show discriminatory performance for competitive LECs.[880] Xspedius also claims that BellSouth's missed installation appointment performance for voice grade loops with LNP for October through January does not achieve parity.[881] We do not find that KMC and Xspedius's claims warrant a finding of checklist noncompliance. In making this finding, we rely on aggregate competitive carrier performance data, which we have found above to be accurate and reliable, to show that BellSouth's performance meets the requirements of checklist item four in this case.[882] According to the carrier-to-carrier reports for both Georgia and Louisiana, with the exception of November 2001 in Louisiana,[883] BellSouth's performance data for the relevant four month period show that it is provisioning voice grade loops in a timely manner in Georgia and Louisiana. Moreover, despite relatively low competitive carrier volumes, BellSouth's Georgia and Louisiana performance data for installation quality of voice grade loops show nondiscriminatory treatment.[884] Given this evidence, and recognizing that BellSouth is meeting the service installation dates for competitive LECs at higher rates than for its own retail customers,[885] and provisions voice grade loops of a quality sufficient to afford competitors a meaningful opportunity to compete, we do not find that KMC and Xspedius's claims warrant a finding of checklist noncompliance. Thus, although KMC and Xspedius claim that its data show discriminatory performance, anomalous results for a single carrier in this instance does not qualify as a pattern of systemic performance disparities that result in competitive harm.[886]

(Continued from previous page)
retail analogue BellSouth's data show zero missed appointments for the ten competitive LEC appointments scheduled in February *Id*

[880] KMC GALA I Comments at 3-4. In Georgia, KMC claims that BellSouth missed over 10% of the basic 2 Wire Analog Loop installs for KMC over an 8 month period ending January 2002, 26% of KMC's analog loop orders with LNP in December 2001, and 13% of KMC's analog installs failed within 30 days of installation *See* KMC GALA II Comments at 6. In Louisiana, KMC asserts that 16% of the analog loop installs failed within 30 days of being installed in December 2001 *Id*

[881] Xspedius GALA II Comments at 8-9.

[882] For a discussion of the evidentiary case, *see* section IIIB, *supra*

[883] *See* Georgia/Louisiana B 2 18.8 1 1-B 2 18 3 2 4 (% Missed Installation Appointments, 2W Analog Loop). BellSouth missed 4 06% of its appointments for its own customers, and 20 00% of the five appointments of those for its competitors in November in Louisiana *See* Louisiana B 2 1810 1 1 (% Missed Installation Appointments, 2W Analog Loop with INP Design<10 circuits/Dispatch)

[884] *See* Georgia/Louisiana B 2 19 8 1 1-B 2 19 13.2 4 (% Provisioning Troubles within 30 Days, 2W Analog Loop)

[885] *See* Georgia/Louisiana B 2 18 8 1 1-B 2 18 3 2 4 (% Missed Installation Appointments, 2W Analog Loop)

[886] *Verizon Massachusetts Order*, 16 FCC Rcd at 9055-56, para 122

227. We also reject Mpower's claim that BellSouth will not provide access to SL1 voice grade loops for end users that BellSouth serves through remote terminals.[887] In particular, Mpower asserts that when a requested loop is served by a DLC system, BellSouth insists on providing a more expensive SL2 loop to the competitive carrier.[888] The record reflects, however, that BellSouth will fill an SL1 loop order whenever the facilities are available, and it imposes no requirement that competitive LECs order a more expensive loop simply because DLC equipment is present.[889] Because we are not persuaded by Mpowers' contention that BellSouth will not provide access to SL1 voice grade loops for end users that BellSouth serves through remote terminals, we do not believe that we have a sufficient basis for finding that these concerns warrant a finding of noncompliance with checklist item 4. We also note that no other carrier raises similar claims in this proceeding.

228. *xDSL-Capable Loops*. Based upon the evidence in the record, we find, as did the Georgia and Louisiana Commissions,[890] that BellSouth demonstrates that it provides xDSL-capable loops in accordance with the requirements of checklist item 4.[891] BellSouth makes available xDSL-capable loops in Georgia and Louisiana through interconnection agreements and pursuant to tariffs approved by the Georgia and Louisiana Commissions.[892] In analyzing BellSouth's showing, we review performance measures comparable to those we have relied upon in prior section 271 orders: order processing timeliness, installation timeliness, missed installation appointments, installation quality, and the timeliness and quality of the maintenance and repair functions.[893] Based on our analysis of BellSouth's performance under these measures, we conclude that BellSouth's performance for competitive LECs has generally met the benchmark and parity standards established in Georgia and Louisiana.

229. While BellSouth's performance with respect to a maintenance and repair measure – the customer trouble report rate – appears to be out of parity in October and December in Georgia, we find that these disparities are slight and thus not competitively significant Indeed, in Georgia, BellSouth's performance data show that BellSouth performed slightly better for its

887 Mpower GALA I Comments at 30-31

888 *Id* at 32

889 BellSouth GALA I Reply App , Tab H, Reply Affidavit of Wiley G. Latham, Jr at para 7 (BellSouth GALA I Latham Reply Aff).

890 Georgia Commission GALA I Comments at 157, Louisiana Commission GALA I Comments at 61-62.

891 We note that competing carriers in Georgia and Louisiana rely principally on two types of unbundled xDSL-capable loops the xDSL loop and the ISDN loop The Georgia and Louisiana Commissions developed separate loop-type performance measurement categories for xDSL loops (including, but not limited to, loops provisioned for ADSL, HDSL, and UCL) and ISDN loops, which can be used by some competing carriers to provide IDSL services

892 *See* BellSouth GALA I Latham Aff. at para 3

893 *See Verizon Pennsylvania Order*, 16 FCC Rcd at 17462-63, para 79, *Verizon Connecticut Order*, 16 FCC Rcd at 15153-56, paras 15-20, *Verizon Massachusetts Order*, 16 FCC Rcd at 9056, 9059, paras 123, 130, *SWBT Kansas/Oklahoma Order*, 16 FCC Rcd at 6326-27, paras 181-82

retail affiliate from October through February.[894] Moreover, no commenter has indicated that the maintenance and repair performance of xDSL loops is a problem in Georgia. We therefore find that these issues are not fatal to BellSouth's showing, and do not warrant a finding of checklist noncompliance. Should BellSouth's performance in this area deteriorate, we will pursue appropriate enforcement action. Moreover, contrary to DIRECTV Broadband's assertion,[895] we are not persuaded that BellSouth is making fundamental changes to its DSL architecture that would severely limit the existing capability of DSL circuits to support advanced services.[896]

230. *ISDN Loops.* Based on the evidence in the record, we also find, as did the Georgia and Louisiana Commission,[897] that BellSouth provides ISDN loops to competitors in Georgia and Louisiana in accordance with the requirements of checklist item 4. Although BellSouth's data reveal some performance issues with ISDN loops, we conclude that these issues are not fatal to BellSouth's showing.[898] We find that the performance issues are relatively slight and do not appear to be competitively significant to competing LECs. Accordingly, in light of BellSouth's competitive carrier xDSL-capable loop record overall, we do not find that BellSouth's performance demonstrates that it fails to meet the requirements of checklist item 4.

---

[894] The October-February average for this measure is 0 82% for competitive LECs and 0 81% for BellSouth retail *See* Georgia B 3 2 5 1 (Customer Trouble Report Rate, xDSL (ADSL, HDSL, and UCL)/Dispatch)

[895] DIRECTV Broadband GALA I Comments at 5

[896] *See* BellSouth GALA I Milner Reply Aff at para 44 (explaining that BellSouth has not changed the way DSL is provisioned, nor does it have plans currently do so)

[897] Georgia Commission GALA I Comments at 157, Louisiana Commission GALA I Comments at 61-62.

[898] Specifically, in Louisiana, BellSouth's customer trouble report rate (dispatch) was out of parity for all months reported *See* Louisiana B 3.2 6 1 (Customer Trouble Report Rate, UNE ISDN/Dispatch) However, the customer trouble report rate has remained low in Louisiana, with competitive carriers experiencing an average of 1 40% dispatch trouble reports compared to an average of 0 58% for BellSouth retail operations from October through February. *Id* In addition, the UNE ISDN customer trouble report rate (non-dispatch) was in parity for all months reported, with competitive LECs experiencing an average of 0.79% non-dispatch customer trouble reports compared to an average of 1.03% for BellSouth retail operations from October-February *See* Louisiana B 3.2 6 2 (Customer Trouble Report Rate, UNE ISDN/Non-Dispatch) BellSouth has also generally met the benchmark for installation timeliness and missed installation appointments for each month from October-February in Georgia and Louisiana *See* Georgia/Louisiana B 2 1 6.3.1 (Order Completion Interval, UNE ISDN<6 circuits/Dispatch), Georgia/Louisiana B 2 18 6 1.1 (% Missed Installation Appointments, UNE ISDN<10 circuits/Dispatch). BellSouth's Georgia performance data show that it provides an installation quality sufficient to afford competitors a meaningful opportunity to compete *See* Georgia B 2.19 6 1 1 (% Provisioning Troubles within 30 Days, UNE ISDN<10 circuits/Dispatch) Competitive LECs experience an average of 4 90% trouble reports within 30 days after installation of an ISDN loop, compared to an average of 5 70% for BellSouth retail operations from October-February in Georgia *See id* In addition, BellSouth's maintenance and repair performance, which measure the timeliness and quality of the maintenance and repair functions, has shown parity or very low repeat trouble rates during the same period *See* Georgia/Louisiana B 3.1 6.1-B 3 16 2 (Missed Repair Appointments, UNE ISDN), Georgia/Louisiana B 3 4 6 1-B.3 4 6 2 (% Repeat Troubles within 30 Days, UNE ISDN)

231. *Digital Loops.* Based on the evidence in the record, we find, as did the Georgia and Louisiana Commissions,[899] that BellSouth's performance with respect to digital loops complies with checklist item 4. We recognize that BellSouth's performance with respect to the order completion interval metric in Georgia has been out of parity for competitive LECs for almost all months reported.[900] We find, however, that this performance does not warrant a finding of checklist noncompliance. BellSouth's parity performance for all relevant months under the missed appointment metric in Georgia and Louisiana indicates that BellSouth provisions digital loops in a timely manner. We also note that, for every month during the relevant period, BellSouth maintained parity under the installation quality measure in Georgia and Louisiana.[901] Disaggregated maintenance and repair performance is not available for digital loops. Rather, digital loop maintenance and repair performance is subsumed under a broader category ("UNE Other Design"), which include unbundled port and transport data. BellSouth generally maintained parity during the relevant months for measures of repair and maintenance timeliness and quality.[902] Given this evidence, we do not find that BellSouth's digital loop performance warrants a finding of checklist noncompliance.

232. *High Capacity Loops.* Based on the evidence in the record, we find, as did the Georgia and Louisiana Commissions,[903] that BellSouth's performance with respect to high capacity loops complies with checklist item 4. We reach this conclusion despite the fact that BellSouth's performance with respect to two specific performance metrics – the percentage of troubles found within 30 days following installation of a high capacity loop and the percentage of missed installation appointments – appear to be out of parity for several recent months.[904] As we discuss below, however, this performance does not warrant a finding of checklist noncompliance. As the Commission has stated in the past, isolated cases of performance disparity, especially when the margin of disparity is small, generally will not result in a finding of checklist noncompliance.[905] Moreover, given BellSouth's generally acceptable performance for all other categories of loops, and recognizing that high capacity loops make up a small percentage of

---

[899] Georgia Commission GALA I Comments at 166; Louisiana Commission GALA I Comments at 56

[900] *See* Georgia B 2 1 18 1.1 (Order Competition Interval, Digital Loop<DS1/<10 circuits/Dispatch)

[901] *See* Georgia/Louisiana B 2 19.18.1 1 (% Provisioning Troubles within 30 Days, Digital Loop<DS1/<10 circuits/Dispatch)

[902] Georgia/Louisiana B 3 1 10 1-B 3.1 10.2 (Missed Repair Appointments, Other Design), Georgia/Louisiana B 3 2 10 1-B 3 1 10 2 (Customer Trouble Report Rate, Other Design), Georgia/Louisiana B 3 3 10.1-B 3 3 10.2 (Maintenance Average Duration, Other Design), Georgia/Louisiana B 3 4 10 1-B 3 4 10 2 (% Repeat Troubles within 30 Days, Other Design)

[903] Georgia Commission GALA I Comments at 166, Louisiana Commission GALA I Comments at 56

[904] *See* Georgia/Louisiana B 2 19 19.1 1 (% Provisioning Troubles within 30 Days, Digital Loop >= DS1/< 10 circuits/Dispatch). Louisiana B 2 18 19 1 1 (% Missed Installation Appointments, Digital Loop>=DS1/<10 circuits/Dispatch)

[905] *See Verizon Massachusetts Order*, 16 FCC Rcd at 9055-56, para 22

overall loop orders in Georgia and Louisiana, we find that BellSouth's performance is in compliance with checklist item 4.[906]

233. In Georgia and Louisiana, BellSouth's performance for a high capacity loop installation quality measure, the percentage of troubles found within 30 days following installation, has been statistically out of parity for the five-month period.[907] According to BellSouth, however, when its performance under this metric is recalculated to not reflect troubles "found O.K.," "no trouble" found, and competitive LEC caused reports its performance improves.[908] In Georgia, BellSouth explains that the competitive LEC troubles are approximately half central office problems and half facility problems.[909] BellSouth states that its review of the competitive LEC trouble reports in Louisiana indicates the majority of the reports are attributable to facility issues.[910] More significant, BellSouth claims that competitive LECs received approximately 95 percent actual trouble free installations from December through February when troubles found O.K., no troubles found, and competitive LEC caused reports are removed from the calculations. In light of these facts, we give credence to statements made by BellSouth in this proceeding and are encouraged that BellSouth has instituted new procedures in Georgia and Louisiana to reduce the trouble reports for this metric.[911] Moreover, prior to the completion of any high capacity loop, BellSouth states that its technicians in the customer wholesale

---

[906] Through February 2002, BellSouth had provisioned 3,145 and 3,154 high capacity loops in Georgia and Louisiana, respectively *See* BellSouth Apr 17 *Ex Parte* Letter.

[907] Competing carriers experienced an average of 7 87% trouble reports within 30 days after installation of an high capacity digital loop, compared to an average of 1 76% for BellSouth retail operations from October through February in Georgia *See* Georgia B 2.19 19 1 1 (% Provisioning Troubles within 30 Days, Digital Loop>= DS1/< 10 circuits/Dispatch) Louisiana performance data show that competitive carriers experienced an average of 6 93% trouble reports, compared to an average of 1 00% for BellSouth resale operations for the same period *See* Louisiana B.2 19 19.1 1 (% Provisioning Troubles within 30 Days, Digital Loop>=DS1/<10 circuits/Dispatch

[908] *See* BellSouth Mar 14 *Ex Parte* Letter at Att 7; BellSouth Apr 17 *Ex Parte* Letter.

[909] *See* BellSouth Apr 17 *Ex Parte* Letter.

[910] *Id*

[911] BellSouth GALA I Varner Aff at para. 236. BellSouth states that it has implemented specific action plans in Georgia to bring the high capacity loop measure into parity with their retail analogue *See* BellSouth Apr. 17 *Ex Parte* Letter First, BellSouth states that the Louisiana Service Advocacy Centers (SACs) have increased their readiness to resolve any and all service order jeopardies *See id.* Second, BellSouth claims that it is providing a "maintenance spare" DS1 circuit (where possible) in service areas with known defective pairs. In Georgia, BellSouth states that it has instituted an action plan requiring the appropriate Network supervisor to review all provisioning trouble reports to determine the report's cause and the necessary action to keep it from recurring *Id But see* Letter from Patrick J Donovan, Counsel to Cbeyond, to Marlene H. Dortch, Secretary, Federal Communications Commission, CC Docket No. 02-35 (filed April 26, 2002) (Mar 14 *Ex Parte* Letter), Letter from Tricia Brekenridge, Executive Vice President, Industry Affairs, KMC Telecom, Inc , to Marlene H. Dortch, Secretary, Federal Communications Commission, CC Docket No 02-35 (filed May 2, 2002) (Mar. 14 *Ex Parte* Letter)

interconnection network service (CWINS) center, central office, and field will do a simultaneous test to make sure that the loop meets the appropriate specifications.[912]

234. . We also note that BellSouth's performance with respect to a provisioning timeliness metric – the missed installation appointments metric for dispatch orders – has been out of parity for October through February in Louisiana.[913] However, BellSouth's performance reflected by another provisioning timeliness metric – the order completion interval metric – satisfies the benchmark for most months.[914] In addition, BellSouth's satisfies the benchmark for all relevant months with respect to the non-dispatch missed installation appointment metric.[915] We are encouraged that BellSouth has initiated specific action plans to address missed installations, and BellSouth states that, for December 2001, the majority of the missed installations were a result of facility issues.[916] Because we look to the totality of circumstances in evaluating BellSouth's performance in providing loops in accordance with the checklist requirements, we do not find that lack of parity on these high capacity loop measurements warrant a finding that BellSouth fails to meet checklist item 4.[917]

235. KMC provides its own data to demonstrate that BellSouth misses firm loop installation appointments for high capacity loops, and that a large percentage of its high capacity loop installs fail within 30 days of installation.[918] We find, however, that this KMC-specific data does not warrant a finding of checklist noncompliance for checklist item 4. We discuss above BellSouth's aggregate performance under the installation quality and missed installation appointment metrics, and do not find that lack of parity on these high capacity loop measurements warrant a finding of checklist noncompliance.

236. We also note that KMC has expressed concern about BellSouth's high capacity loop maintenance and repair performance for the percentage of repeat troubles within 30 days.[919]

---

[912] *Id* We note that we will monitor BellSouth's compliance with its commitment to improve its high capacity loop performance Deterioration of BellSouth's performance could result in enforcement action

[913] *See* Louisiana B 2 18 19 1 1 (% Missed Installation Appointments, Digital Loop>=DS1/<10 circuits/Dispatch) The October-February average for this measure is 7 13% for competitive LECs and 2 23% for BellSouth retail

[914] *See generally* Louisiana B.2 1 18 1 1-B.2 1 19 2 2 (Order Completion Interval, Digital Loop).

[915] *See* Louisiana B.2 18 18 1 1 (% Missed Installation Appointments, Digital Loop<DS1/<10 circuits/Non Dispatch)

[916] BellSouth GALA II Varner Reply Aff at para 97

[917] *See SWBT Kansas/Oklahoma Order*, 16 FCC Rcd at 6344, para 213.

[918] *See generally* KMC GALA I Comments at 8

[919] KMC GALA I Comments at 3, KMC GALA II Comments at 10. KMC claims that BellSouth's own reported performance indicates that over one-third of KMC's DS1 and higher loop troubles in both Georgia and Louisiana from August 2001 to March 2002 experienced a trouble report within 30 days of installation *See* KMC GALA II Comments at 10.

As discussed above, disaggregated maintenance and repair performance is not available for high capacity loops. Rather, high capacity loop maintenance and repair performance is subsumed under a broader category ("UNE Other Design"), which include unbundled port and transport data. BellSouth has maintained parity performance with respect to the maintenance and repair timeliness under the mean time to repair measure. Moreover, BellSouth's disaggregated maintenance and repair performance for high capacity loops shows repair timeliness under the mean time to repair measure. Georgia and Louisiana UNE Other Design maintenance and repair performance, which measure the timeliness and quality of the maintenance and repair functions, has shown parity or very low trouble rates in recent months.[920] Given this evidence, we do not find that BellSouth's maintenance and repair performance warrants a finding of checklist noncompliance.

237. We also reject Cbeyond's allegations that BellSouth provides competitive carriers inferior quality DS1 loops and does not charge competitors correctly.[921] The record reflects that BellSouth delivers DS1 loops with a four-wire interface, regardless of the particular technology developed.[922] Significantly, the Georgia Commission has investigated and dismissed Cbeyond's claim, finding no basis to conclude that BellSouth has violated its interconnection agreement with Cbeyond in this respect.[923] Given this, we do not find that we have a sufficient basis for finding that Cbeyond's claims warrant a finding of checklist noncompliance.

238. *Line Sharing* Based on the evidence in the record, we find, as did the Georgia and Louisiana Commissions,[924] that BellSouth demonstrates that it provides nondiscriminatory access to the high frequency portion of the loop.[925] BellSouth offers line sharing in Georgia and

---

[920] Georgia/Louisiana B 3 1.10 1-B.3 1 10 2 (Missed Repair Appointments, Other Design), Georgia/Louisiana B 3 2 10 1-B 3 1.10 2 (Customer Trouble Report Rate, Other Design), Georgia/Louisiana B 3 3 10.1-B 3.3 10 2 (Maintenance Average Duration, Other Design), Georgia/Louisiana B 3 4.10 1-B 3 4 10 2 (% Repeat Troubles within 30 Days, Other Design)

[921] Cbeyond GALA I Comments at 22-26. Cbeyond claims that BellSouth is violating the parties' interconnection agreement because BellSouth does not provide the four-wire DS1 loops ordered by Cbeyond, instead, BellSouth frequently provides inferior quality 2-wire DS1 loops, which result in service degradation and inferior quality *Id* at 25. Cbeyond further claims that it is unfairly compensating BellSouth for its inappropriate provisioning of 2-wire DS1 loops *Id*

[922] *See* BellSouth Milner GALA I Reply Aff at paras. 25, 27-29.

[923] Georgia Commission GALA I Comments at 107.

[924] Georgia Commission GALA I Comments at 164, Louisiana Commission GALA I Comments at 64

[925] *Deployment of Wireline Services Offering Advanced Telecommunications Capabilities and Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, Third Report and Order, CC Docket No 98-147, Fourth Report and Order, CC Docket No 96-98, 14 FCC Rcd 20912 (1999) (*Line Sharing Order*) (*pet for rehearing pending sub nom. USTA v FCC*, DC Cir No. 00-102 (filed Jan 18, 2000)); *Deployment of Wireline Services Offering Advanced Telecommunications Capabilities and Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, Third Report and Order and Order on Reconsideration, CC Docket No 98-147, Fourth Report and Order on Reconsideration, CC Docket No. 96-98, Third Further Notice of Proposed Rulemaking, CC Docket No. 98-147, Sixth Further Notice of Proposed Rulemaking, CC Docket No 96- (continued. .)

Louisiana under its interconnection agreements and the terms of its tariff, in accordance with the requirements of the *Line Sharing Order* and the *Line Sharing Reconsideration Order*.[926]

239. BellSouth's performance with regard to the customer trouble report rate is out of parity for several recent months in Louisiana.[927] According to BellSouth, however, several of the customer trouble reports in November and December 2001, and January 2002, were actually information reports from competitive LECs and were not an indication of actual trouble.[928] Moreover, BellSouth's performance data show that customer trouble reports for competitive LECs decreased from 9.60 percent in January to 2.11 percent in February in Louisiana. We find that, given BellSouth's generally acceptable performance for all other categories of line-shared loops, BellSouth's performance is in compliance with checklist item 4.[929] As the Commission has stated in the past, isolated cases of performance disparity, especially when the margin of disparity is small, generally will not result in a finding of checklist noncompliance.[930] No commenter has raised concerns with BellSouth's line sharing customer trouble report rate in Louisiana.

240. While not addressing specific instances of line-shared performance disparities, AT&T raises broader policy and legal issues regarding BellSouth's line-sharing obligations.[931] AT&T contends that BellSouth does not permit competitive LECs to obtain access to the entire capabilities of the unbundled next generation digital loop carrier loop at the central office and at

(Continued from previous page)
98, 16 FCC Rcd 2101 (2001) (*Line Sharing Reconsideration Order*), *see also SWBT Kansas/Oklahoma Order*, 16 FCC Rcd at 6345-46, para 215

926 *See* BellSouth GALA I App , Tab W, Affidavit of Thomas G Williams at para 17 (Williams GALA I Aff)

927 In Louisiana, the October-February average for this measure is 5 10% for competitive LECs and 1 47% for BellSouth retail. *See* Louisiana B 3 2 7.2 (Customer Trouble Report Rate, Line Sharing/Non-Dispatch)

928 *See* Letter from Kathleen B Levitz, Vice President-Federal Regulatory, BellSouth, to William Caton, Acting Secretary, Federal Communications Commission, CC Docket No 02-35 (filed April 9, 2002) (BellSouth Apr 9 *Ex Parte* Letter) BellSouth explains that a breakdown of the trouble report rate show that, during November and December 2001, and January 2002, the number of reports for which there were "no trouble found" ranged from 50% in November 2001 to 72% in February 2002. *See id*

929 Georgia and Louisiana performance for installation timeliness and installation quality show nondiscriminatory treatment between competitors and BellSouth retail customers for line-shared loops *See* Georgia/Louisiana B 2.18 7 1 1-B 2.18 7 2 2 (% Missed Installation Appointments, Line Sharing), Georgia/Louisiana B 2.19 7 1 2-B 2 19.7 2 1 (% Provisioning Troubles within 30 Days, Line Sharing) In addition, BellSouth's performance demonstrates that competing carriers experience comparable repair times for line shared loops as BellSouth retail operations, and in both states, the percentage of competitive LEC missed repair appointments and repeat troubles were out of parity for only one of the five months reported. *See* Georgia/Louisiana B 3 4.7.1 (% Repeat Troubles within 30 Days, Line Sharing/Dispatch), Georgia/Louisiana B 3 4 7 2 (% Repeat Troubles within 30 Days, Line Sharing/Non-Dispatch), Georgia/Louisiana B.3 3 7.1 (Maintenance Average Duration, Line Sharing/Dispatch); Georgia/Louisiana B 3 3 7 2 (Maintenance Average Duration, Line Sharing/Non-Dispatch)

930 *See Verizon Massachusetts Order*, 16 FCC Rcd at 9055-56, para 22.

931 AT&T GALA I Comments at 42-45.

the remote terminal through the installation of integrated splitter/DSLAM cards.[932] We reject AT&T's allegation because although incumbent LECs are required to provide unbundled access to the entire loop, we have found that "the high frequency portion of the loop network element is limited by technology, *i e* , is only available on a copper facility."[933] Furthermore, competitive LECs may provide data services to BellSouth voice customers served by digital loop carriers by either collocation in the remote terminal or, in the event that the Commission's four-part test for packet switching is met, access to unbundled packet switching. In fact, BellSouth states that competitive LECs can choose whether to access the high frequency portion of the loop at a BellSouth central office or remote terminal, and competitive LECs can engage in line sharing or line splitting whether the customer is served by an all-copper loop, or by a combination of copper and digital loop carrier equipment.[934] Therefore, we disagree with AT&T that BellSouth's policies and practices concerning the provisioning of line sharing, as explained to us in the instant proceeding, violate the Commission's unbundling rules.[935] Accordingly, we decline to find that these allegations warrant a finding of checklist non-compliance.

241. *Line Splitting* Based on the evidence in the record, we find, as did the Georgia and Louisiana Commissions,[936] that BellSouth complies with its line-splitting obligations and provides access to network elements necessary for competing carriers to provide line splitting.[937]

242 We disagree with AT&T's claim that BellSouth must provide splitters for "voice" competitive LECs that seek to engage in line splitting.[938] The Commission rejected this precise argument in the *SWBT Texas Order*, explaining that "[t]he Commission has never exercised its legislative rulemaking authority under section 251(d)(2) to require incumbent LECs to provide access to the splitter, and incumbent LECs, therefore have no current obligation to make the

---

[932] *Id*

[933] *See Line Sharing Reconsideration Order*, 16 FCC Rcd at 2107, para. 10.

[934] BellSouth GALA I Reply at 78

[935] As we have stated in other section 271 orders, new interpretative disputes concerning the precise content of an incumbent LEC's obligations to its competitors, disputes that our rules have not yet addressed and that do not involve *per se* violations of the Act or our rules, are not appropriately dealt with in the context of a section 271 proceeding *See Verizon Massachusetts Order,* 16 FCC Rcd at 8993, para 10, *SWBT Texas Order,* 15 FCC Rcd at 18366, para 23 We note that many of these allegations with respect to competitive access to fiber-fed loops are being addressed in pending proceedings before the Commission *See Deployment of Wireline Services Offering Advanced Telecommunications Capability and Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket Nos 98-147, 96-98, Order on Reconsideration and Second Further Notice of Proposed Rulemaking in CC Docket No 98-147, and Fifth Further Notice of Proposed Rulemaking in CC Docket No 96-98, FCC 00-297, 15 FCC Rcd 17806, 17856-62, paras 118-33 (Aug 10, 2000); *Line Sharing Reconsideration Order*, 16 FCC Rcd at 2127-30, paras 55-64

[936] Georgia Commission GALA I Comments at 165; Louisiana Commission GALA I Comments at 65

[937] *See Line Sharing Reconsideration Order*, 16 FCC Rcd at 2111, para 20 n 36.

[938] AT&T GALA I Comments at 44

splitter available."[939] BellSouth, however, explains that it will allow a competitive carrier to provide its own splitter, or lease a BellSouth owned splitter for both line sharing and line splitting for central office based deployments and for both existing and new customers.[940] Thus, we do not find that AT&T's claims warrant a finding of checklist noncompliance.

243. We also disagree with AT&T's claim that BellSouth's OSS does not comply with our *Line Sharing Reconsideration Order*.[941] Specifically, AT&T asserts that BellSouth does not provide electronic OSS for ordering, provisioning and maintaining line splitting.[942] Pursuant to the Georgia Commission's mandate to make such OSS available for line splitting, BellSouth implemented permanent OSS for line splitting on January 5, 2002, and competitive LECs have raised no complaints about this new process. We find, therefore, that given the record before us, BellSouth's process for line splitting orders is in compliance with the requirements of the checklist at this time.

244. *Other Issues.* KMC contends that BellSouth takes weeks to accomplish the actual loop disconnect when requested by KMC.[943] KMC estimates that, in Georgia, between 20 percent and 30 percent of the facilities underlying loop disconnect orders remain unavailable 30 days after the loop disconnect, and in Louisiana, BellSouth's failure to disconnect loops properly has led to customer outages and delay in the release of the facility for use by KMC and other competitive carriers.[944] We conclude, however, that there is no evidence that the difficulties KMC may have encountered with BellSouth's loop disconnect processes reflect systemic defects with BellSouth's provisioning of unbundled local loops, and thus cannot find checklist noncompliance.

C. Checklist Item 5 – Unbundled Transport

245. Section 271(c)(2)(B)(v) of the competitive checklist requires a BOC to provide "[l]ocal transport from the trunk side of a wireline local exchange carrier switch unbundled from switching or other services."[945] Based on our review of the record, we conclude, as did both the

---

[939] *See SWBT Texas Order*, 15 FCC Rcd at 18516, para. 327.

[940] BellSouth GALA I App., Tab T, Reply Affidavit of Thomas G Williams at para 8 (Williams GALA I Reply Aff).

[941] AT&T GALA I Comments at 45-46, AT&T GALA I Turner Decl at para 24

[942] AT&T GALA I Comments at 45, AT&T GALA I Turner Decl at 24

[943] KMC GALA I Comments at 10.

[944] *Id*

[945] 47 U S C. § 271(c)(2)(B)(v).