

full potential of the equipment” used in advanced services, including plug-in line cards.³⁷² In granting SBC’s request for a waiver of the separate affiliate requirements for Project Pronto, the Commission imposed an affirmative obligation on SBC to “deploy other features, functions, and capabilities of the plug-in cards and other equipment” in order to accommodate the needs of competitive LECs and their customers.³⁷³ The Commission also emphasized that competitive LECs should be able to use QoS classes other than UBR in order to differentiate their products.³⁷⁴ Any other result would have been anti-competitive. As the Illinois Commission held, allowing incumbent LECs to be “the gatekeeper[s] of services...by limiting the services [over fiber-fed NGDLC networks] to those it wishes to enable, [would be] a situation as far from competition as we can imagine.”³⁷⁵

Finally, WorldCom wishes to debunk allegations that competitive LECs want line cards that are not supported by the fiber-fed NGDLC equipment.³⁷⁶ The truth is that competitive LECs are requesting only those line cards and functionalities that are within the capabilities of the Project Pronto architecture, and new functionalities as they become available.³⁷⁷

³⁷² *Project Pronto Waiver Order*, ¶ 45.

³⁷³ *Id.*, ¶¶ 43-44.

³⁷⁴ *Id.*, ¶ 45.

³⁷⁵ *Illinois Order on Rehearing* at 36.

³⁷⁶ *See* Verizon Comments at 93-94; *see also* SBC Comments Attachment C, at 1.

³⁷⁷ Incumbent LECs must give CLECs a meaningful opportunity to compete by providing access to systems and functionalities required to support a service even if there is no Incumbent LEC retail analog. *Application of Ameritech Michigan Pursuant to Section 271 of the Communications Act of 1934, as Amended, to Provide In-Region, InterLATA Services in Michigan*, Memorandum Opinion and Order, 12 FCC Rcd 20543, ¶ 171 (1997); *Application of BellSouth Corporation, et al. Pursuant to Section 271 of the*

(9) No Alternatives

Contrary to the incumbent LECs' assertions, competitive carriers have no viable alternatives to fiber-fed NGDLC facilities.³⁷⁸ For example, SBC contends that competitive LECs' access to existing copper facilities will be unchanged,³⁷⁹ yet Project Pronto's configuration will substantially alter the technical characteristics of a large number of loops that competitive LECs require to provide xDSL services via line sharing.³⁸⁰ In addition, limiting competitive LECs to all-copper loops to provide xDSL services would force competitors to depend on an option that the incumbent LECs are actively seeking to avoid.

If denied access to DSL-capable fiber-fed NGDLC loops, competitive LECs would be unable to provide xDSL-based services to millions of potential customers.³⁸¹ Traditional copper loops longer than 18,000 feet cannot support most xDSL services. SBC and Verizon³⁸² are able to overcome this distance sensitivity by shortening the

Communications Act of 1934, as Amended, to Provide In-Region, InterLATA Services in South Carolina, Memorandum Opinion and Order, 13 FCC Rcd 539, ¶ 98 (1997) ("*South Carolina Section 271 Order*"). In other words, CLECs must be allowed to offer all the different ATM QoS classes and plug-in card types that Project Pronto is equipped to provide, regardless of whether the Incumbent LEC's retail operations choose to use such QoS classes and plug-in card types.

³⁷⁸ See, e.g., SBC Comments at 46-47; Verizon Comments at 90.

³⁷⁹ SBC Comments at 47.

³⁸⁰ Stumbaugh/Reilly Declaration, at 16.

³⁸¹ For example, SBC has repeatedly stated that it is deploying Project Pronto in order to be able to offer DSL to customers with locations farther than 18,000 feet from the central office. SBC claimed it could reach 25 million DSL-capable customer locations as of the end of 2001. SBC Investor Briefing at 5 (Jan. 24, 2002).

³⁸² Verizon has plans to deploy facilities similar to those used in Project Pronto. Stumbaugh/Reilly Declaration at 13-14.

copper portion of the loop to no more than 12,000 feet.³⁸³ Using shorter copper subloops, SBC and Verizon are able to serve customers that were previously beyond the range of xDSL services and improve the quality of xDSL services to customers with loops between 18,000 feet and 12,000 feet. Even where distance is not a factor, the physical characteristics of spare copper will almost never enable a competitive LEC to match the service capabilities that SBC and other incumbents are able to offer over their upgraded loop architecture due to cross-talk interference problems from the fiber-fed NGDLC facilities.³⁸⁴

Clearly, competitive LECs would be impaired without unbundled access to the incumbents' fiber-based loop facilities. Without access to these facilities, competitive LECs would be unable to serve large numbers of customers, which would be able to obtain xDSL services only from the incumbent LECs. Moreover, competitive carriers would be unable to provide many more customers with service at a quality comparable to that of the incumbents LECs.

(a) Collocation at the RT is Not a Viable Option.

SBC and Verizon have effectively precluded competitive LECs from obtaining reasonable access to subloops by deploying new RTs with the copper feeder cable pairs spliced directly onto the protector stubs that feed the NGDLC card slots, even though it is not technically necessary to do so.³⁸⁵ As a result of SBC and Verizon's decision to hard wire the copper feeder pairs to the NGDLC equipment, competitive LECs must pay between \$15,000 and \$30,000 for the work needed to access the copper subloop at the

³⁸³ SBC Investor Briefing at 3-4 (Oct.18, 1999).

³⁸⁴ Stumbaugh/Reilly Declaration at 112.

³⁸⁵ *Id.* at 20.

RT.³⁸⁶ Space constraints at the RT also make it prohibitively expensive for competitive LECs to collocate DSLAMs at RTs.³⁸⁷ Sprint, for example, spent at least \$130,000 and almost a year attempting to collocate just *one* DSLAM at an RT in Kansas.³⁸⁸ As the Illinois Commission recognized, “[u]sing the number of RTs in Illinois, Sprint alone would have to spend an estimated \$260 million to obtain access to the same loop architecture which SBC/Ameritech can access.”³⁸⁹

Further, because numerous RTs subtend each central office (CO), the sheer number of DSLAMs required renders RT collocation uneconomical. For example, Covad has concluded that it would cost \$67,500,000 for RT collocation in a typical area, and it would take “14.2 years to recover *just* the cost of collocating RTs from customers (assuming there is no churn).”³⁹⁰ Covad’s analysis supports the New York State Department of Public Service’s conclusion that RT collocation often is “impracticable and not commercially feasible.”³⁹¹

Further complicating matters is the time it would take to collocate at the RT. Covad points out that “assuming Covad had the necessary capital, it would take as many

³⁸⁶ Stumbaugh/Reilly Declaration at 20-21; *see also Texas Arbitration Award* at 66.

³⁸⁷ WorldCom Comments at 109-111.

³⁸⁸ Illinois Order on Rehearing at 24; *see also*, Stumbaugh/Reilly Declaration at 22.

³⁸⁹ Illinois Order on Rehearing at 24.

³⁹⁰ Comments of Covad, Joint Declaration of Anjali Joshi, Eric Moyer, Mark Richman, and Michael Zulevic, para. 40 (emphasis in original). This conclusion is based on the following assumptions: collocation costs of \$90,000 per RT, 50 COs in the market, 15 RTs per CO, 300 customers per RT, take rate of 5%, and average monthly revenue per customer of \$35.

³⁹¹ Comments of the New York State Department of Public Service at 7.

as 10 years to collocate at RTs ubiquitously.”³⁹² Thus, competitive LEC collocation at the RT is not a viable solution.

Contrary to the suggestion of some incumbent LECs,³⁹³ dark fiber cannot be used as a substitute for NGDLC loops.³⁹⁴ In order for dark fiber to function as a realistic alternative, at least three conditions would have to be met: (i) ready access to dark fiber at TELRIC rates; (ii) collocation in the RT; and (iii) access to copper loops between the RT and customers’ homes. As a realistic matter, it is highly unlikely that competitive LECs could gain access to dark fiber, collocate in the RT, and gain access to copper loops, but even if such access were made available, it is likely that the costs would be so high as to effectively preclude competitors from offering service. The incumbent LECs frequently claim that there is no spare dark fiber that can be unbundled, and that there is no available space in RTs for collocation. But even if incumbent LECs make dark fiber, collocation and loops available, the economics are unlikely to prove out. In order to obtain access to copper loops between the RT and homes, competitive LECs would need to pay for a truck roll to the RT to set up for a given customer. In addition, obtaining dark fiber from a DLC would require competitive LECs to install their own DSLAMs in the relevant RTs, get access to the copper plant, and obtain an incumbent LEC dispatch for *every* loop order out of the RT (instead of simply using a CO cross-connect). Competitive LECs also would not be able to spread out the cost of their DSLAM and transmission

³⁹² Comments of Covad, Joint Declaration of Anjali Joshi, Eric Moyer, Mark Richman, and Michael Zulevic, para. 38.

³⁹³ Qwest Comments at 45-46.

³⁹⁴ Other Incumbent LECs, in particular SBC, request that dark fiber be “declared outside the scope of unbundling.” SBC Comments at 46.

equipment at the aggregation point over a large number of customers, as they do today by putting a DSLAM at the CO. Dark fiber therefore does not represent a viable substitute for UNE loops.

(b) Wholesale Services Are No Substitute for UNEs.

The incumbent LECs should not be allowed to avoid their unbundling obligations merely by offering wholesale broadband services.³⁹⁵ Such offerings would not provide an adequate alternative to unbundling DSL-capable fiber-fed NGDLC loop facilities. For example, as SBC admits, its Wholesale Broadband Service does not offer carriers any of the protections mandated under sections 251-252 for UNEs.³⁹⁶ In addition, whereas the term of an interconnection agreement is subject to negotiation and arbitration under section 252, just like any other contract term, there is nothing to prevent SBC from withdrawing or modifying its Broadband Service.³⁹⁷ This is particularly important given that SBC has consistently refused to commit to offer competitive LECs any option for accessing the Project Pronto network once its Broadband Service is withdrawn. No rational company can base a business plan on a service that the incumbent LEC can

³⁹⁵ See, e.g., Verizon Comments at 82.

³⁹⁶ See, e.g., SBC Accessible Letter CLECC00-223 (noting that the Broadband Service offering is a stand-alone agreement and not offered under §§ 251, 252(c)(2) of the Telecom Act). These protections include: the incumbent LECs' duty to negotiate in good faith, 47 U.S.C. § 251(c)(1); the right to arbitration before a state commission, 47 U.S.C. § 252(b); and the right to TELRIC-based pricing. See, e.g., *Verizon v. FCC*.

³⁹⁷ See, e.g., SBC Accessible Letter CLECC00-223, "SBC Broadband Service – Interim Contract Language and Product Availability (Business Processes) – California," (Sept. 6, 2000) (stating that "SBC-ILECs reserve the right to change, modify and/or withdraw their Broadband Service"). SBC filed this Accessible Letter in that docket attached to the Submission by Pacific Bell Telephone Company of Broadband Service Agreement (filed Sept. 18, 2000).

unilaterally withdraw or reprice. This is the very problem that the Commission sought to prevent in its previous orders.³⁹⁸

Another drawback of wholesale broadband service offerings is that they limit carriers' flexibility to differentiate their service offerings from those of the incumbent LEC by providing services such as real time on-demand video, videoconferencing, and reliable voice over DSL that the incumbent may not offer. If relegated to the role of reselling an incumbent's wholesale offering, competitive LECs would have to purchase the incumbent's offering "as is," unable to add new features and functions that the incumbent chose not to offer.³⁹⁹ SBC's Wholesale Broadband Service, for example, is limited to ADSL only, although there are other types of DSL that currently can be provisioned on the Alcatel Litespan NGDLC platform, including HDSL 4-wire, HDSL2 and G.SHDSL. This would allow the incumbent LEC to be the technology gatekeeper, determining what features and capabilities were available, regardless of the needs of end user customers or competitive carriers. As the New York State Department of Public Service noted in its comments, "[w]ithout unbundling requirements that realistically allow CLECs or potential competitors reasonable access to remote terminals, customers will have no choice of wireline broadband providers . . . and they may not be able to enjoy the benefits of wireline broadband at all."⁴⁰⁰

³⁹⁸ See, e.g., *UNE Remand Order* ¶ 114.

³⁹⁹ SBC Accessible Letter CLECC00-223.

⁴⁰⁰ Comments of the New York State Department of Public Service at 6-7.

B. Dedicated Interoffice Transport

Like loops, interoffice transport facilities exhibit significant economies of scale. Carriers seeking to deploy their own transport facilities must incur large fixed costs.⁴⁰¹ And these costs increase with the distance that must be covered.⁴⁰² Thus, as Mark Bryant explains, “for any given amount of traffic, the cost per unit of traffic will be lower where large amounts of traffic can be aggregated and carried a short distance.”⁴⁰³ The incumbent LECs’ network architecture, combined with their large customer bases, provides them with economies of scale that are not available to new entrants.⁴⁰⁴ At best, new entrants may be able to overcome the incumbent LECs’ inherent cost advantages in a few areas where they can aggregate large traffic volumes and where the distances between central offices are not great.⁴⁰⁵

1. Lack of Competition for Dedicated Interoffice Transport

In its initial comments, WorldCom demonstrated that there are few or no alternatives to incumbent LEC transport on the vast majority of routes where there is demand for dedicated interoffice transport.⁴⁰⁶ Competitors therefore continue to depend heavily on incumbent LEC-provided transport to provide the services they seek to offer.⁴⁰⁷ Even Sprint, which is itself an incumbent LEC, concurred in this conclusion,

⁴⁰¹ Bryant Declaration ¶ 16.

⁴⁰² *Id.*

⁴⁰³ *Id.*

⁴⁰⁴ *Id.* ¶¶ 18-21.

⁴⁰⁵ *Id.* ¶ 22.

⁴⁰⁶ WorldCom Comments 76-77.

⁴⁰⁷ Even in areas where competitive access providers have deployed their own facilities, the services provided by competitive access providers (CAPs) cannot substitute entirely for the transport network elements that exist in the networks of the incumbent LECs. *See*

stating that “the great majority of ILEC central offices, even in larger metropolitan areas, still do not have viable alternatives for transport.”⁴⁰⁸ This is consistent with the data WorldCom submitted in its initial comments⁴⁰⁹ and with data contained in the BOCs’ own Report.

The data provided in the BOC Report shows the limited scope of competitive LECs’ transport networks and plainly demonstrates the dearth of competition on most interoffice routes. According to the BOC Report, competitive LECs have built their own fiber to only 13 percent of the BOCs’ wire centers, serving 44 percent of the BOCs’ access lines.⁴¹⁰ Even more telling is the Report’s acknowledgement that only 4 percent of BOC wire centers, serving only 19 percent of BOC access lines, are served by three or more competitive LECs.⁴¹¹ The BOC Report further indicates that even in the largest MSAs, only 12 percent of BOC wire centers, serving only 27 percent of BOC access lines, are served by three or more competitive LECs.⁴¹²

As unimpressive as they are, the BOC Report’s statistics actually overstate the potential for competitive supply of interoffice transport. The BOCs rely on aggregate figures, combining the fiber-based collocations of all competitive LECs. Aggregate data does not reflect the true state of competitive supply because, as the Commission found in

Bryant Declaration ¶15.

⁴⁰⁸ Sprint Comments at 45.

⁴⁰⁹ WorldCom Comments at 76-78.

⁴¹⁰ BOC Report at III-2, Table 1.

⁴¹¹ *Id.*

⁴¹² BOC Report at III-3, Table 2.

the *UNE Remand Order*⁴¹³ and as WorldCom has recently confirmed,⁴¹⁴ customers cannot easily combine the transport services of multiple suppliers. A more illuminating measure of the scope of competitive supply would be the number of central offices served by each of the largest competitive LECs in each market. The BOCs have this information, but chose not to include it in their Report, presumably because it would show that even the largest competitive LEC in any market reaches only a handful of central offices.

The BOC Report purports to show that competitive LECs have built their own fiber to 48 percent of offices with 5,000 business lines “or more.”⁴¹⁵ In fact, the BOC Report presents data aggregated in a fashion that masks the dearth of competitive collocation in smaller offices. The utility of the BOC Report’s analysis is limited by the fact that it aggregates data from offices with 5,000-6,000 lines with much larger offices where competitive LEC fiber construction is most likely to occur. Using data that the BOCs have provided, WorldCom estimates that a much smaller percentage of offices below 10,000 lines have competitive LEC fiber. For example, only about 28 percent of offices in the 5,000-10,000 business line range have competitive LEC fiber and only about 8 percent of 5,000-10,000 business line offices have three or more competitive LECs.⁴¹⁶ The percentage of 5,000-6,000 business line offices with competitive LEC fiber

⁴¹³ *UNE Remand Order* at ¶¶ 358, 365.

⁴¹⁴ Declaration of Peter H. Reynolds at ¶¶ 16-18 (attachment to letter from Henry G. Hultquist, WorldCom, to William F. Caton, FCC, April 4, 2002).

⁴¹⁵ BOC Report at III-3, Table 3.

⁴¹⁶ WorldCom arrived at these disaggregated estimates by applying the data in the BOC Report to the distribution of offices as reflected in the Commission’s Synthesis Model.

is even smaller. Thus, there is no evidence that competitive LECs can, as a general matter, viably build to offices as small as 5,000 business lines.

The BOC Report's estimate of competitive LEC fiber route miles also is overstated because it includes long-haul as well as local fiber⁴¹⁷ and because it double-counts fiber leased by one competitive LEC from another. More importantly, the Commission cannot evaluate the significance of the Report's route mile figure because the BOCs have strategically avoided providing information about their own fiber route miles. Had the BOCs disclosed their comparative route mile data, it undoubtedly would have shown that the BOCs' networks dwarf those of their competitors.⁴¹⁸

2. Transport May Be Susceptible to a More Granular Analysis on a CO-by-CO Basis

Ignoring the clear inference that must be drawn from their own data, several of the BOCs assert that the Commission should establish a uniform rule eliminating dedicated transport as a UNE.⁴¹⁹ It would make absolutely no sense to eliminate unbundling when, according to the BOCs' own data, 86 percent of their wire centers serving 56 percent of their access lines still are not served by any competitive transport. This is an example of the BOCs' attempt to avoid presenting policymakers with the facts that would actually be useful in conducting a granular analysis.

A more granular analysis of the state of competition for interoffice transport must focus on the areas in which transport is actually provided. Those areas are route-specific.

⁴¹⁷ BOC Report at III-6.

⁴¹⁸ See, e.g., *New York Special Services Order* at 7 (finding that "Verizon dwarfs its competitors.")

⁴¹⁹ See, e.g., BellSouth Comments at 94; Verizon Comments at 105.

That is, in order to obtain access to loops that terminate in a particular wire center, a competitive carrier must have access to dedicated transport facilities that originate in that wire center and terminate in some location where the carrier has facilities.⁴²⁰ The presence of a competitive provider in one wire center is of no use to a competitive LEC that wishes to serve customers whose loops terminate in a different wire center. Therefore, an analysis of where alternatives to incumbent LEC transport are available must focus on individual wire centers.⁴²¹

SBC, to its credit, clearly recognizes this. In its initial comments, SBC proposed a test for the presence of transport competition.⁴²² While WorldCom disagrees with many elements of that test,⁴²³ WorldCom and SBC appear to agree that the appropriate level of granularity for transport competition is route-specific, based on the individual wire center.

3. Factors to Consider Before Relaxing Unbundling Obligations

Determining the relevant geographic area is only the first step in analyzing impairment for dedicated interoffice transport. The Commission should also establish factors for state commissions to consider when evaluating whether sufficient competition

⁴²⁰ The second location could be another wire center, a POP, a collocation hotel, or some other transport aggregation point.

⁴²¹ For wire centers where there is no effective competition, all types of transport must be provided on an unbundled basis, including dark fiber. It is also important to note that even for wire centers where a competitive LEC has its own fiber facilities, it will still depend on the incumbent LEC for interoffice transport from other wire centers that terminates in the wire center where the competitive LEC has facilities.

⁴²² SBC Comments at 88.

⁴²³ For instance, WorldCom does not agree with SBC's suggestion that DS3 and higher transport facilities should not be unbundled at all. It simply makes no sense to eliminate the unbundling obligation for these facilities given that for the majority of wire centers, there is no competitive alternative to Incumbent LEC facilities.

exists in an individual central office to support a finding of no impairment.⁴²⁴ Those factors should be designed to reveal whether requesting carriers can, as a practical matter, depend on the presence of competition to protect them from the exercise of incumbent LEC market power. For example, there must be a sufficient number of fiber-based competitors to ensure that a requesting carrier has a realistic opportunity to obtain wholesale access to competitive fiber and extend a loop from that fiber to the customer. In no case should an incumbent LEC be relieved of its obligation to provide unbundled interoffice transport from any particular wire center unless there are at least four non-affiliated, fiber-based collocators in the wire center that are actually offering competitive transport, either by tariff or contract, to other carriers. With fewer than four providers, it is unlikely that there will be sufficient competition to eliminate the impairment that requesting carriers would suffer if denied access to incumbent LEC unbundled loops.⁴²⁵

Even if four or more competitors are present in a wire center, the incumbent LEC should not be relieved of its obligation to provide unbundled transport unless it provides assurances that customers will continue to receive uninterrupted service. The incumbent LEC should, for example, be required to commit to migrate all existing circuits on its facilities to competitive providers within 30 days of a request to do so and commit to either (1) “grandfather” existing unbundled transport circuits, or (2) if these circuits are converted to special access (because unbundled transport is no longer available in those

⁴²⁴ In this section, WorldCom describes certain factors that WorldCom believes to be critical. These factors are not meant to be an exhaustive list, however, and states may well need to consider additional factors in evaluating whether a requesting carrier is impaired without access to unbundled transport.

⁴²⁵ See generally HAI Report at 82-84.

locations), “commingle” any unbundled loops attached to those circuits with incumbent LEC transport services without any interruption in connectivity.⁴²⁶ In no case should there be any interruption in service to existing customers. Such interruptions would severely damage the relations between competitive LECs and their customers. Moreover, they are completely unnecessary. There is absolutely no reason why an incumbent LEC should physically disconnect existing circuits absent a request to do so. Customers must be guaranteed uninterrupted connectivity following a finding of no impairment for a particular wire center.

Effective competition also requires that the incumbent LECs actually permit other carriers to migrate circuits upon demand. WorldCom is constantly frustrated by the unreasonable refusal of incumbent LECs to “groom” or migrate circuits from incumbent LEC facilities to WorldCom’s collocation arrangements in a timely fashion. The incumbent LECs thereby create a barrier to competition by effectively requiring WorldCom to pay double for its transport requirements – not only does WorldCom incur the costs of building its own network and collocating with the incumbent LEC, but WorldCom also continues to pay the incumbent for its transport services for months or, in some cases, years until circuit migrations are completed.

Accordingly, there should be no relaxation of the unbundling obligation for dedicated transport absent a commitment by the incumbent LECs to cooperate fully in completing circuit migrations within the requested time period, and stiff penalties by the Commission in response to any incumbent LEC recalcitrance. Indeed, the Commission

⁴²⁶ As discussed above in section II.I.(2)(a), WorldCom separately urges the Commission to eliminate any and all prohibitions on “commingling” for the reasons given in our initial comments.

should require the incumbent LECs to amend their tariffs to excuse carriers such as WorldCom from continued payment obligations for circuits that are not migrated within 30 days of a request. Such a policy would provide the incumbents with the appropriate incentives, and would allow WorldCom to enjoy the benefit of its investment in competitive facilities.

4. The Criteria Proposed by SBC Are Insufficient to Support a Finding of Non-Impairment

The factors described above differ markedly from those proposed by SBC, which proposes that that dedicated transport should not be unbundled for wire centers where there are two or more collocated fiber carriers or the incumbent LECs serve 15,000 or more business lines or generate more than \$150,000 per month in special access revenues.⁴²⁷ The relevance of these criteria is unclear, and SBC has provided no record basis for the prongs of its test. In fact, the criteria proposed by SBC are poor proxies for the feasibility of competitive entry. For the reasons explained above, the presence of only two fiber collocators does not show that there is sufficient competition to conclude that requesting carrier are not impaired in the absence of UNE transport. In addition, SBC's own "facts" show that approximately 60 percent of wire centers with 15,000 or more business lines have no fiber-based collocators at all.⁴²⁸ Similarly, over 60 percent of the wire centers that generate more than \$150,000 in monthly special access revenues have no fiber-based collocators.⁴²⁹ Moreover, the current economic climate makes it

⁴²⁷ SBC Comments at 88.

⁴²⁸ *Id.* at 91.

⁴²⁹ *Id.* at 92.

extremely unlikely that competitive LECs in the near future will build facilities to wire centers to which they did not build when capital was more abundant.

5. Central Office Bypass

BellSouth argues that because some competitive LECs have been able to engage in “central office bypass” by deploying fiber directly to end user locations, no competitive LEC can be impaired without access to unbundled interoffice transport.⁴³⁰ Competitive fiber serving a few locations does nothing to mitigate the impairment competitive LECs would suffer if denied access to the incumbent LEC facilities that are needed to reach the vast majority of buildings that are served only by incumbent LEC fiber. Moreover, it is likely that “central office bypass” largely is limited to wire centers where there are fiber-based collocators. This is so because many of the buildings to which it is economical for competitive LECs to build are located in the same central business districts that are most attractive to collocators.

6. Collocation Hotels

Collocation hotels do not provide an adequate substitute for incumbent LEC interoffice facilities. Collocation hotels are useful places for carriers and very large customers to meet. But only a very small number of customers have sufficient demand for bandwidth to justify this type of collocation. Most customers continue to be served on incumbent LEC-provided facilities, out of incumbent LEC wire centers, where no competitive carrier offers interoffice transport.

⁴³⁰ BellSouth Comments at 93.

7. Special Access

Qwest maintains that competitive LECs would not be impaired if denied access to incumbent LEC interoffice transport in areas where the incumbent LEC has been granted special access pricing flexibility.⁴³¹ As the Commission has previously explained, however, satisfaction of the pricing flexibility triggers “does not demonstrate that a requesting carrier is not impaired without access to unbundled dedicated transport.”⁴³² Indeed, pricing flexibility may be granted based on the presence of only a single fiber-based collocator in wire centers representing merely 30 percent of the special access revenues in an MSA. Clearly, a grant of pricing flexibility is not equivalent to a finding that requesting carriers would not be impaired if denied access to incumbent LEC interoffice facilities.⁴³³

Qwest also suggests that the availability of tariffed special access services is sufficient to support a finding of no impairment.⁴³⁴ The Commission has, with good reason, repeatedly rejected this argument, and there is no basis for the Commission now to reverse this well-settled conclusion.⁴³⁵

⁴³¹ Qwest Comments at 32.

⁴³² *UNE Remand Order*, n.673.

⁴³³ There is no reason to expect that the presence of competitors in less than one third of the wire centers in an MSA is sufficient to ensure that there is competition on every transport route within that MSA. Indeed, there may be no competition at all in more than 70 percent of the wire centers within that MSA.

⁴³⁴ Qwest Comments at 34.

⁴³⁵ See section II.G above. See also *UNE Remand Order* ¶ 67 (giving little weight to the availability of retail tariffed services because to do otherwise would allow ILECs to avoid completely section 251(c)(3)'s unbundling obligations by offering unbundled elements to end users as retail services).

C. Switching

As WorldCom's initial comments make clear, UNE-P is the only viable method for achieving the Act's goal of bringing competition to all telecommunications businesses, including the residential and small business sectors. Aside from the BOC commenters, there is broad consensus that UNE-P has been instrumental in creating what little competition currently exists for local telephone services, and that the Commission must preserve UNE-P to create further competition. Indeed, the state public utility commissions and consumer groups almost universally agree that local competition, particularly for residential and small business customers, is not currently available and sustainable without access to UNE-P.

The Georgia Public Service Commission, for example, notes that the majority of residential customers in Georgia receiving local service are served via UNE-P, and that the number of lines served via UNE-P constitutes approximately 6.3 percent of BellSouth's total switched access lines.⁴³⁶ Even that relatively small level of residential competition would not be possible if competitive LECs did not have access to UNEs.⁴³⁷ For that reason, the state commissions agree that all unbundled network elements should be made available on an unrestricted basis.⁴³⁸

⁴³⁶ Georgia Public Service Commission Comments at 5.

⁴³⁷ *Id.* at 4.

⁴³⁸ *See, e.g.*, Texas PUC Reply Comments at 5-8; California Public Utility Commission Comments at 20; Illinois Commerce Commission Comments at 3; Indiana Utility Regulatory Commission Comments at 4-5, Reply Comments at 2; Louisiana Public Service Commission Comments at 2; New Jersey Board of Public Utilities, June 5 *ex parte* at 2; Kentucky Public Service Commission, May 24 *ex parte* at 3; National Association of Regulatory Utility Commissioners Comments at 9.

The BOCs suggest that, because other competitive alternatives are just now becoming available, access to UNE-P is no longer necessary. While true alternatives to UNE-P competition may exist one day, that day has not yet arrived and will not arrive for a number of years. The so-called alternatives that the BOCs suggest simply are not viable substitutes for UNE-P for the vast majority of mass market customers – a point underscored by the fact that, to the extent the BOCs have any plans for out-of-region entry, those plans are based entirely on UNE-P.⁴³⁹

Contrary to the suggestion of the BOCs, the availability of UNE-P encourages investment rather than discouraging it. The residential and small business customers who can be served via UNE-P cannot, at present, be served economically through competitive LEC-owned facilities. Competitive LECs cannot possibly construct their own loops to compete for residential and small business customers everywhere in the country. Nor, at present, can they rely on incumbents' loops combined with their own switching. So long as competitive LECs must depend on collocation and manual hot cuts, an unbundled loop strategy will not be economically viable even in densely populated areas. Thus, each of the elements necessary to serve residential and small business customers via UNE-P must

⁴³⁹ “SBC revealed during the review of its merger with Ameritech that its out-of-region entry strategy was premised on the use of network element combinations to serve the residential and small business market. Further, in Pennsylvania, Bell Atlantic was ordered to file a plan to separate its operation into wholesale and retail affiliates. As part of that filing, Bell Atlantic (now Verizon) proposed to use UNE-P as its principal entry strategy.” Direct Testimony of Joseph Gillan on behalf of the Texas UNE-P Coalition, *et al.*, *Petition of MCIMetro Access Transmission Services, et al., for Arbitration with Southwestern Bell Telephone Company Under the Telecommunications Act of 1996*, Public Utilities Commission of Texas, Docket No. 24542 (*Gillan Texas Direct*) at p. 29, *citing to*, Deposition and Testimony of James Kahan on behalf of SBC, Public Utilities Commission of Ohio, Case No. 98-1082-TP-AMT and Re Structural Separation of Verizon Pennsylvania Inc. Retail and Wholesale Operations, Pennsylvania Public Utility Commission, Docket No. M-00001353.

be available nationwide, including UNE-loops, switching and shared transport. The BOCs' arguments to the contrary are little more than thinly disguised attempts to put an end to the nascent competition in mass market telecommunications services.

1. Consumers Benefit from UNE-P Based Competition

Local competition for residential and small business customers has only recently begun to take hold, as prices for unbundled elements have finally started to drop and the incumbent LECs' regulatory challenges to UNE-P have gradually been dismissed. The incumbents' arguments here are largely an attempt to re-fight a battle they have lost repeatedly.

Now that the Supreme Court has decided *Verizon v. FCC*, local competition can truly begin to flourish, so long as the Commission does not retreat from its prior commitment to UNE-P. As Commissioner Powell emphasized in his statement commenting on the Supreme Court's decision, regulatory certainty in this area is vital.⁴⁴⁰ The Commission should make clear that UNE-P will continue to remain available to competitive LECs that need that certainty to introduce competition into the marketplace.

The limited competition already made possible by UNE-P has resulted in substantial benefits to consumers, including better and more efficient marketing, better billing, more innovative products and more competitive pricing.⁴⁴¹ WorldCom has, for example, offered unlimited local calling in New York, an option previously unavailable to millions of customers. WorldCom's innovative product offerings have recently

⁴⁴⁰ Statement of FCC Chairman Michael Powell on U.S. Supreme Court Decision in TELRIC Case, May 13, 2002.

⁴⁴¹ WorldCom described many of its innovative products and its competitive pricing in its initial comments. *See* WorldCom Comments at 81-82.

increased. In April, WorldCom introduced its new “Neighborhood” Plan in 34 states.⁴⁴²

The Neighborhood frees customers from the constraints of local or intraLATA calling areas and allows them to call anywhere in the country for a single monthly fee.

WorldCom also introduced a similar plan for small business customers.⁴⁴³

The success of the Neighborhood depends on the continued availability of the unbundled network elements platform at TELRIC prices.⁴⁴⁴ Indeed, elimination of UNE-P would effectively eliminate local competition for residential and small business customers. It is completely uneconomic at present for competitive LECs to compete for such customers through any means other than UNE-P. And without such competition, consumers would be deprived not only of innovative local products, but also of any significant choice in the long distance business – or other downstream businesses. There is no longer any doubt that consumers prefer a bundled local and long distance product.⁴⁴⁵ If competitive LECs cannot offer such a product because they cannot compete effectively for local services, consumers will be limited to a single choice – the incumbent LEC – to obtain the bundled local and long distance product they prefer.

2. There Is No Significant Intramodal Competition for Residential and Small Business Services.

a) *End-to-End Facilities-Based Competition Is Not a Viable Alternative to UNE-P.*

Competition that relies entirely on competitive LEC-owned facilities is not as yet a viable alternative to UNE-P, for reasons already recognized both by Congress and by

⁴⁴² Huyard Declaration ¶ 5.

⁴⁴³ *Id.* ¶¶ 6-13.

⁴⁴⁴ *Id.* ¶¶ 20-22.

⁴⁴⁵ *Id.* ¶ 18.

this Commission.⁴⁴⁶ First, the cost of building duplicative networks for mass market customers is prohibitive for competitive LECs. While it may be true that “competitive LECs do not have to replicate the ILECs[’] entire loop plant to serve the markets they choose to serve,”⁴⁴⁷ it is nevertheless impossible for competitive LECs to recover the sunk costs required to build transmission facilities where the requisite economies of scale and scope are not present, as they are not in the business of serving residential and small business customers. Consequently, competitive LECs’ success in entering sectors using facilities they own has been limited almost exclusively to large business customers in core urban areas. Thus, even though WorldCom has the most extensive competitive LEC assets in the country, it concluded, after a comprehensive evaluation, that there was no viable business model for the construction of facilities to provide voice service to residential and small business customers.⁴⁴⁸

WorldCom’s conclusion is amply supported by the experience of competitive LECs that have attempted to gain entry primarily through extensive facilities investment: as AT&T notes, those attempts have uniformly failed. Of the 37 competitive LECs that have petitioned for bankruptcy protection or have been liquidated in bankruptcy in the past 18 months, the majority “self-provisioned switches and found themselves unable to fill their switch capacity.”⁴⁴⁹

⁴⁴⁶ See H.R. Conf. Rep. No. 104-458 at 148 (1996); *UNE Remand Order*, 15 FCC Rcd 3781 ¶ 186.

⁴⁴⁷ BellSouth Comments at 68-69.

⁴⁴⁸ WorldCom Comments at 33.

⁴⁴⁹ AT&T Comments at 50-51.

Second, the incumbent LECs' implicit assumption that it is just as easy for a competitive LEC to build its own facilities as it is for an incumbent LEC is patently false. As Z-Tel notes in its comments, capital costs continue to prevent competitive LECs from engaging in substantial facilities investment. Here, too, the economies of scale and scope favor the incumbent LECs, which "can purchase switches from vendors at considerable volume discounts" that are not available to competitive entrants.⁴⁵⁰

Finally, competitive LECs continue to face substantial barriers in gaining access to the municipal rights-of-way and multi-tenant establishments (MTEs) that are essential to facilities-based entry. The BOCs attempt to downplay the seriousness of these barriers by asserting that they are no different from the barriers faced by incumbent LECs. This response misses the point: the competitive LECs are attempting to enter markets in which the incumbent LECs *already have fiber in the ground*. The incumbent LECs, by definition, do not face the same barriers as the competitive LECs.⁴⁵¹

The BOCs also contend that municipalities' rights to impose costly and time-consuming conditions on access to rights of way are "tempered by the statute's goal of promoting unimpeded facilities based competition and are subject to preemption by the Commission," and some competitive LECs' membership in the Industry Rights-of-Way Working Group, which attempts to "reduce the delay and expense associated with securing permission to occupy public rights-of-way."⁴⁵² The fact remains, however, that municipalities continue to impose substantial barriers to competitive LECs' ability to

⁴⁵⁰ Z-Tel Comments at 37.

⁴⁵¹ See Section II.B above (describing important advantages that competitive LECs enjoy over new entrants).

⁴⁵² BellSouth Comments at 69-70.

access rights-of-way and MTEs. The Rights-of-Way Working Group itself has documented a large number of barriers to fiber deployment: municipalities have, for example, imposed excessive fees, imposed annual registration fees, required notification prior to the introduction of new services, required carriers to give free fiber and conduit capacity to the municipality, and regulated carriers' service offerings.⁴⁵³ Some municipalities have even forbidden new construction altogether.⁴⁵⁴

In short, competition over facilities entirely owned by competitive LECs is no more feasible today than it was at the time of the *UNE Remand Order*, and plainly cannot substitute for UNE-P.

b) UNE-Loop Competition Is Not a Viable Alternative to UNE-P.

Many of the same barriers to end-to-end facilities-based entry also prevent competitive LECs from making meaningful entry in the mass market on the basis of the leasing of the loop alone. Put simply, UNE-loop competition is prohibitively costly and time-consuming for the vast majority of residential and small business customers. State commissions agree that unbundled switching is "absolutely critical" to the continued development of competition for the provision of services to residential and small-business customers.⁴⁵⁵

As the competitive LECs explain in their comments, the feasibility of UNE-loop competition varies with the type of telecommunications customer being served. UNE-

⁴⁵³ AT&T Comments at 143 (citing Rights-of-Way Working Group *Ex Parte*, CC Docket Nos. 98-146, 96-98 and WT Docket No. 99-217 (filed Jan. 25, 2002)).

⁴⁵⁴ *Id.*

⁴⁵⁵ Louisiana Public Services Commission Comments at 2. *See also* California Public Utilities Commission Comments at 20; Indiana Utility Regulatory Commission Comments at 9; New York Department of Public Service Commission Comments at 2-5.

loop competition may be feasible for high-intensity telecommunications users that have substantial telecommunications needs at a single location and tend to enter term contracts for telecommunications service. If these customers are located reasonably close to a competitive LEC's switch, in an area in which there is a sufficient concentration of such customers to justify deployment of such a switch, if there are EELs available to ensure an efficient loop-multiplexer-transport transmission path to the carrier's network, and if the customer generates sufficient traffic, then switch-based service can be viable.⁴⁵⁶

Most telecommunications users do not fall into this category, however. Most telecommunications users have relatively simple needs for voice-grade service, and are served by analog loops, sometimes supplemented by DSL-based Internet access and related services. For this category, which includes virtually all residential and small business customers,⁴⁵⁷ switch-based competition simply is not feasible. To begin with, a competitive LEC is disadvantaged by significant economies of scale in switching.⁴⁵⁸ As the incumbent LECs point out, these economies potentially could be overcome even for voice-grade customers in sparsely populated areas if the competitive LEC aggregated traffic from a wide geographic area on a single switch. However, the competitive LEC would then face high transport costs in backhauling the traffic to the switch regardless of whether it did so on its own facilities or purchased dedicated transport from the incumbent LEC. These costs would be particularly significant in sparsely populated

⁴⁵⁶ WorldCom Comments at 84-85.

⁴⁵⁷ WorldCom's research shows that ninety percent of small business customers with 12 lines or less are served by POTS lines. Huyard Declaration ¶12.

⁴⁵⁸ Bryant Declaration ¶¶ 23-25; 50.

areas because of the substantial economies of scale in transport.⁴⁵⁹ In contrast, the BOC would not face similar transport charges because its high share allows it to use up the capacity of its switches at distances much closer to the customers than competitive LEC switches. Thus, economies of scale preclude competitive LECs from using their own switches to serve customers located outside of densely populated areas.

Collocation, too, has been prohibitively expensive for competitive LECs.⁴⁶⁰ As AT&T notes, the costs of collocation have not declined since the *UNE Remand Order*, when the Commission found that the non-recurring charges for collocating in a single central office could be as high as \$500,000.⁴⁶¹ These collocation costs are, of course, particularly severe where the competitive LEC serves few customers at each central office, as the collocation costs cannot be spread over as many customers. But they remain prohibitive at any realistic level of competitive LEC penetration.

If, for example, a competitive LEC built one switch in a particular geographic area to serve customers from ten incumbent LEC central offices and achieved a penetration of 13 percent, the competitive LEC would have essentially eliminated any incumbent LEC advantage in switching costs. But the overall competitive LEC cost of transport (including collocation) and switching would be 235% of the incumbent LECs' cost.⁴⁶² As Mark Bryant shows in his declaration, this disadvantage precludes a competitive LEC from competing using a UNE-loop strategy.⁴⁶³

⁴⁵⁹ See *id.* ¶ 34.

⁴⁶⁰ See *id.* ¶¶ 2-3; AT&T Comments at 211-12.

⁴⁶¹ AT&T Comments at 211 (citing *UNE Remand Order* ¶ 263).

⁴⁶² Attachment D to Bryant Declaration.

⁴⁶³ Bryant Declaration ¶¶ 46-54.

Equally important, the expenses and difficulties associated with collocation and manual hot cuts make it impossible for a competitive LEC economically to provide switch-based service to mass market customers even in core urban areas. The costs associated with manual hot cuts alone present a daunting obstacle to UNE-loop provision of service to POTS users. As Z-Tel explains in its comments, incumbent LEC estimates of the nonrecurring cost of performing a manual hot cut run as high as \$185.⁴⁶⁴ Even if a competitive LEC received revenues of \$30 per month, it would take the competitor more than six months simply to recover the nonrecurring cost of the hot cut, a prohibitively long period of time for a sector with significant churn.⁴⁶⁵

Moreover, the competitive LEC also is faced with substantial coordination costs on its side of the interface. Competitors would have to hire an army of technicians to handle the monthly volumes associated with a residential or small business roll out, as would the incumbent LECs. Those operating expenses are also a substantial barrier to entry.

The disruption caused by hot cuts makes their use for mass market customers even less tenable. In general, mass market services require seamless and rapid provisioning. Unless the competitive LEC has an ongoing relationship with a customer, the customer is unlikely to be willing to bear the disruption in service caused by a manual hot cut even if – as the BOCs posit – hot cut performance has improved in recent years. This is especially so given the extensive delays in provisioning that would occur if the hot cut process were used to serve a high volume of customers.

⁴⁶⁴ Z-Tel Comments at 35-36.

⁴⁶⁵ WorldCom Comments at 86; Z-Tel Comments at 31-34.

Despite the clear obstacles to UNE-loop competition, the BOCs suggest that competitive carriers should nevertheless be forced to compete via switch-based service. In making that argument, the BOCs rely on statistics that show growth in competitive LEC switch provisioning since 1999: for example, that competitive LECs today deploy almost 1300 switches, serving between 16 and 22 million lines,⁴⁶⁶ including approximately 3 million residential lines.⁴⁶⁷ The BOCs also allege that those switches are used to serve BOC wire centers containing approximately 86 percent of BOC switched access lines.⁴⁶⁸

The statistics cited by the BOCs are not correct. The 16-22 million line figure, for example, is vastly overstated. The Commission's *Local Competition Report*, using data reported by the competitive LECs themselves, shows that competitive LECs actually serve no more than 8.9 million lines using their own switches – less than five percent of the nation's access lines.⁴⁶⁹

The BOCs also assert that competitive LEC switches originated or terminated 493 billion minutes in 2001.⁴⁷⁰ Even aside from the fact that many of these minutes are those of large business customers, the most recent Monitoring Report shows that in 2001, about 4 trillion local minutes originated or terminated on incumbent LEC switches (assuming 10% growth in 2000 and 2001) – about ten times the number of local minutes the BOCs

⁴⁶⁶ BOC Report at II-4.

⁴⁶⁷ *Id.* at II-1.

⁴⁶⁸ *Id.*

⁴⁶⁹ See Industry Analysis Division, *Local Telephone Competition: Status as of June 30, 2001*, February 2002. The 8.9 million line “CLEC switched” figure is the sum of the 5.8 million “CLEC owned line” figure in Table 3 and the 3.1 million “UNEs without switching” in Table 4. The report shows a total of 192 million lines (Table 1).

⁴⁷⁰ BOC Report at II-4, Table 1.

attribute to competitive LECs.⁴⁷¹ Moreover, because competitive LECs process a high number of ISP-bound local calls, the BOCs have previously reported that, on average, competitive LECs terminate eighteen times more traffic than they originate.⁴⁷² Applying the 18:1 terminating/originating ratio to the 493 billion minute figure, the BOCs' own figures suggest that competitive carriers' share of originating local switching minutes is only 1-2 percent. In addition, the BOC Report's count of residential lines served by competitive LECs is almost certainly overstated. For example, the BOC Report states that Intermedia serves more than 25,000 lines using its own switches.⁴⁷³ However, Intermedia serves no residential customers. Moreover, the BOC Report's calculation of the number of residential lines served by competitive LECs is likely affected by the same errors that affect the Report's calculation of total lines served by competitive LECs.

Even if one accepts the BOCs' statistics, however, they do not support the proposition that competitive LECs can effectively compete for residential and small business customers without access to unbundled switching. First, 3 million is an extremely small 2.54 percent of the 118 million residential and small business access lines in the United States,⁴⁷⁴ and is hardly sufficient to show that competitive LECs have made meaningful entry into the residential sector by leasing only the local loop. Of the small group of competitors serving residential customers using their own switching,

⁴⁷¹ FCC, Common Carrier Bureau, Industry Analysis Division, *Universal Service Monitoring Report*, CC Docket No. 98-202, Table 8.3 (Oct. 2001), available at: <http://www.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/Monitor/mrs01-0.pdf>.

⁴⁷² *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, Order on Remand and Report and Order, 16 FCC Rcd 9151, ¶70 (2001).

⁴⁷³ BOC Report at I-9, Table 6.

⁴⁷⁴ HAI Report at 21.

some, such as Knology and RCN, are cable overbuilders. They focus only on high-density areas, and their future expansion is in doubt. Others such as TDS Telecom and ALLTEL are using their monopoly incumbent LEC base to expand into neighboring incumbent territories. This strategy is hardly a blueprint for national competition. Second, there is no evidence to suggest that the remaining lines served are small-business lines, rather than lines belonging to high-intensity users in core urban areas. Neither do these statistics show that any of these lines are being used profitably and on a sustainable basis. Indeed, the few small competitive LECs experimenting with a UNE-loop strategy are among the harshest critics of the BOCs' provisioning performance; Cavalier, for example, filed an antitrust suit against Verizon.

Moreover, to the extent that the BOCs mean to suggest that there are no longer substantial barriers to UNE-loop-based competition, they are simply mistaken. It may be true that competitors have deployed 1300 switches nationwide, but this does not mean that competitors have achieved the necessary economies of scale to make profits using even these switches, much less switches in the rest of the country. As noted above, many of the competitive LECs that have gone bankrupt were those that deployed switches and were unable to fill the capacity on the switches.

It may also be true that hot-cut performance has improved since 1999,⁴⁷⁵ but that by no means indicates that performance is now adequate to meet the demands of UNE-loop-based competition. Most important, incumbent LECs' performance of hot cuts says nothing about their costs. When the nonrecurring cost of a manual hot cut can run as

⁴⁷⁵ Qwest Comments at 26; Verizon Comments at 101-02.