elements") & Affidavit of David Kunde at 4 ("[s]elf-provisioned and third party provided dedicated transport is also not available on a uniform, widespread, cost-effective, and timely basis").

Feasibility of Deployment. Perhaps recognizing the reality that actual deployment of competitive transport is extremely limited, the ILECs fall back on the claim that "independent analysts" have concluded that deployment of fiber would be economically viable in any wire center that has at least 5,000 business lines. *See* Verizon at 106; SBC at 92; Qwest at 38. The entire basis of this claim is the *Broadband 2001 Report*. *See* ILEC Report at III-3. As an initial matter, the *Broadband 2001 Report* does not provide the underlying details regarding the costs, revenue, cost timing, discount rates, etc., that would be necessary to evaluate the reasonableness of their assumptions and study methodology. More fundamentally, however, the ILECs have completely misstated the findings of the report in three important respects.[219]

First, the report does not even purport to analyze whether collocation is viable in central offices with 5,000 or more business lines. Rather, the report's entire analysis is directed to determining the conditions under which a competitive LEC could enter a market and provide service using its own switch. And critically, the report never analyzes or offers any specific conclusions regarding the viability of collocation with self-deployed transport. As the report makes clear, the hypothetical CLEC it is examining, among other things, "operates Class 5 voice switches, uses *ILEC* or competitive interoffice facilities, and uses existing last mile copper

[219] In all events, this theoretical "analysis" is completely contrary to the actual market experience CLECs have directly reported in their comments and accompanying sworn declarations. And as the Commission made clear in the *Notice*, it will give more weight to proven facts, to which parties attest under oath, than to theoretical studies. *Notice* ¶ 17.

infrastructure to provide data connectivity." *Broadband 2001 Report* at 96 (emphasis added). Thus, the sole support for the ILECs' claim utterly fails to support the ILECs' proposition.

Indeed, the ILECs' conclusion is preposterous on its face. Five thousand business POTS lines would represent less than 8 DS-3s of demand, even assuming that all 5,000 lines required service at the same time. Of course, typically a LEC would deploy fewer DS-3s to serve 5,000 lines, assuming a concentration rate of 2:1 or 3:1. In other words, even assuming that the CLEC won a 100 percent market share (all 5,000 lines), and assuming (counterfactually) that it employed no concentration and thus used eight DS-3s to serve those customers, such an arrangement would represent only 17 percent utilization of a typical OC-48 transport facility – hardly a utilization level that would, by itself, justify a build.

Finally, the report offers no conclusions with respect to a competitive LEC's ability to serve central offices with more than 5,000 business lines. The report analyzes the ability to enter with a combination of facilities *and unbundled elements*, and concludes that penetration of central offices with 5000 business lines is necessary but not sufficient to succeed. As the report states, in context:

> First [category] are COs with more than 5,000 business lines which require no more than 8% share and therefore are well within the 'sweet spot' of even multiple CLECs per CO ... Of course, *we can't stop at economics on a per-CO level because there are issues of minimum market scale that must be considered.* In other words, there may be a CO or two in Boise, Idaho, that are large enough to support a CLEC, but the market itself may be too small.

Broadband 2001 Report at 95-99 (emphasis added). Indeed, the report explains that, even in central offices with 5,000 or more business lines, competitive LECs may nonetheless be unable to succeed because of the difficulties in receiving fair treatment *from the ILECs*. As the report explains, "[o]ne critical issue that limits hybrid-facilities/UNE insurgent operation is the challenge of interfacing with ILECs and legacy ILEC systems, and OSS performance issues are

well known." *Broadband 2001 Report* at 95. The report continues that "[t]he still limited reach of DSL, and dependence of UNE-based CLECs on ILEC infrastructure investments and OSS systems, have and continue to impose barriers to the successful implementation of the UNE model." *Id.*

CLEC Fiber Deployment. The ILECs claim that CLECs have deployed 184,000 route miles of fiber, although they concede (as they must) that this figure includes *both* local *and* long-haul fiber. ILEC Report at III-6. Even assuming that the total is correct,[220] the ILECs acknowledge that "many CLECs do not publicly report how many purely local fiber miles they operate." The ILECs' data are therefore meaningless, since there is no way to determine how much of the asserted fiber is actually local.[221] Rather than relying on a flawed report and guessing at how much CLEC-depoyed fiber might be local, the Commission can look to sworn testimony that provides a direct measure of deployed fiber. AT&T, for example, which is one of the largest CLECs in the country, has deployed over 17,000 fiber miles of local transport. *See* Frontera-Lesher Dec. ¶ 9. That is a tiny fraction of the amount the ILECs have deployed, which provide ubiquitous connections to 14,000 LSOs.

[220] The 184,000 fiber miles figure is derived from the *NPRG 2002 CLEC Report*, and as AT&T has previously demonstrated, there are numerous problems with relying on the NPRG data, including the fact NPRG does not account for joint builds and thus double- or even triple-counts fiber. *See* AT&T Use Restrictions Reply Comments, CC Docket No. 96-98, at 20 (filed Apr. 30, 2001).

[221] The ILECs assert that they have examined public statements from some CLECs and that this supposedly "confirms" that the "majority of this fiber is local," but this is a bare assertion provided without any supporting explanation or analysis. *See* ILEC Report at III-6 & n.4.

E. The Commission Must Eliminate All Rules That Force CLECs To Use Special Access Instead of UNEs.

It is long past time for the Commission to reject – once and for all – the ILECs' self-serving arguments that have prevented competitors from obtaining access to combinations of unbundled loops and transport UNEs to provide all types of telecommunications services. The Commission first sought comments on the important issue of "use restrictions" on loop-transport combinations nearly three years ago. *UNE Remand Order* ¶¶ 495-96. But the Commission failed to resolve this issue, and instead put in place an expanded set of "interim" restrictions that have utterly failed to serve any pro-competitive or pro-consumer purpose. The only result of these "interim" rules is that they have allowed the ILECs to retain their huge monopoly profits on special access services and forestall competitors' efforts to enter local markets.

Thus, the failures resulting from the Commission's use and commingling restrictions are multiple. First, they have improperly burdened IXC purchasers of special access services and their customers with billions of dollars in costs that are of increasing competitive concern as the ILECs enter the interLATA market and are able to benefit from significant economies of scope that they deny to their competitors. Second, these restrictions have imposed significant burdens on local competition, because their severe strictures prevent CLECs even from obtaining loops and transport as unbundled network elements to provide local exchange services, thus improperly raising their costs. This discriminatory burden is demonstrated by the fact that over 98% of AT&T's facilities-based local service for business customers using ILEC facilities of DS-1 level or higher is provided over ILEC special access services, not unbundled ILEC loops. *See* Pfau Reply Dec. ¶ 26 n.10. Meanwhile, the ILECs are earning huge rates of return on special access services. In 2001, the major ILECs reported average rates of return (at the holding company level) of 38 percent. *See* Lesher Reply Dec. ¶ 27 n.3.

As shown above – and repeatedly in comments filed with the Commission since 1999 – there is no question that requesting carriers remain impaired in their ability to provide telecommunications services if they cannot obtain loops and transport as unbundled network elements. And since such carriers are impaired as to both elements individually, it is obvious that they are impaired without access to *combinations* of those elements. Moreover, it is undisputed that local exchange services and exchange access services are provided over exactly the same facilities, so that the impairment applies as to both types of services. And the Supreme Court made clear in *Verizon* that CLECs are entitled to new loop-transport combinations, as the D.C. Circuit also recognized. *See Verizon*, 122 S. Ct. at 1685-87; *USTA*, 290 F.3d at 428.

The Commission's decision imposing "interim" restrictions on the use of loop-transport combinations was based on concerns that the ILECs' access revenues might be diminished and thus affect support for universal service. *Supplemental Order Clarification* ¶ 7. These concerns have been fully refuted in the many prior filings of AT&T and other parties. In sum, those filings show that:

> (1) there are no implicit universal subsidies in special access rates;
>
> (2) any possible question regarding subsidies in switched access rates was resolved in the *CALLS Order* two years ago;
>
> (3) notwithstanding the Commission's ruling that loop-transport combinations were supposed to be available to CLECs for the provision of local exchange service, the use and commingling restrictions have prevented CLECs from doing so; and
>
> (4) the commingling restriction is technically unjustified, discriminatory, and denies CLECs significant economies of scale and scope that ILECs enjoy from their own use of their network elements.

Despite the overwhelming showing of the affirmative harm created by the use and commingling restrictions that impair CLEC efforts to enter the incumbent's local markets, the ILECs now make two final arguments in an effort to hold onto their monopoly special access

profits. Both are frivolous and should be rejected out of hand. First, the ILECs assert that the Commission should find CLECs are not impaired without access to loop-transport combinations because CLECs have won some customers by using special access rather than loop/transport combinations. Verizon at 119-20; Qwest at 33-34. This argument has been repeatedly rejected, both by the Commission and the courts. The cited cases simply mean that the ILEC's supracompetitive prices have not appropriated all of the profits a CLEC might anticipate in serving a particular customer. On the other hand, it is irrefutable that under such conditions the CLEC can profitably compete for substantially fewer customers.

Second, the ILECs claim that the Commission's pricing flexibility rules show that they lack market power over the provision of special access and that the prices for such services are competitive. *E.g.*, Qwest at 35. This is both factually wrong and beside the point. The Commission's *Pricing Flexibility Order* expressly assumes that the ILECs retain market power over special access services, and the perverse result of that order is that ILECs have *increased* their special access rates. And in all events, unless the ILECs could show that the "market" rate is virtually the same as the TELRIC rate, the Act makes clear that requesting carriers are entitled to the latter. *See Verizon*, 122 S. Ct. at 1672.

1. There is no Legal Basis for the Commission's Use Restrictions, and the Commission's Use Restrictions do not Apply to New Combinations.

The comments confirm that the Commission's use restrictions on loop-transport combinations are unlawful, for two reasons. First, section 251(d)(2)'s impairment inquiry must be conducted on a network-element-by-network-element basis. As ASCENT notes (at 31-32), "[a]lternatives to a given network element are either available or they are not, and the contemplated service to be provided using the facility or the customer to which the service is to be provided are irrelevant to the impairment analysis." *See generally* AT&T at 112-13; AT&T

Use Restrictions Comments at 13-18. Second, permitting ILECs to restrict the services that CLEC can provide over loop and transport UNEs imposes discriminatory limitations on CLECs access that violate section 251(c)(3) and Commission Rules 51.307, 309, 311 and 313, because the incumbent itself can and does provide any and all services over those same facilities. *See* AT&T at 110-11; *Local Competition Order* ¶¶ 264. 356, 359; WorldCom at 55 ("Any rule that would allow competitors to use leased facilities for some purposes, but not for others, while the ILEC can use the same facility for all purposes, would place competitors at a significant disadvantage").

Moreover, the Commission and the courts have consistently held that ILECs cannot evade their unbundling obligations by offering access to network elements via a "service" such as special access that uses the same elements. In the initial appeal of the *Local Competition Order*, the Eighth Circuit held that "[s]imply because [UNE] capabilities can be labeled as 'services' does not convince us that they were not intended to be unbundled as network elements," and it "agree[d] with the FCC that such an interpretation would allow the ILECs to evade a substantial portion of their unbundling obligation under subsection 251(c)(3)." *Iowa Utils. Bd. v. FCC*, 120 F.3d 753, 809 (8th Cir. 1997), *aff'd in part and rev'd in part sub nom. IUB*, 525 U.S. at 389-90. The court explained that otherwise ILECs could always offer access to its facilities as a "service," so that including the availability of ILEC services in the impairment analysis would largely nullify section 251(c)(3). *Iowa Utils. Bd.*, 120 F.3d at 809.

In its review of that decision, the Supreme Court held that the "impair" inquiry must focus on whether a requesting carrier can offer service through "self-provision, or with purchase from another carrier" – *not* through services purchased from the incumbent. *IUB*, 525 U.S. at 389-90 (affirming the Eighth Circuit). Accordingly, in the *UNE Remand Order,* the Commission

expressly held that the impairment analysis focuses on the requesting carrier's ability to obtain alternative facilities *outside* the incumbent's network, "including self-provisioning by a requesting carrier or acquiring an alternative from a third party supplier." *Id.* ¶ 51. Thus, it held that "[w]e assign little weight in our impairment analysis to the ability of a requesting carrier to use the incumbent LECs' resold or retail tariffed services as alternative to unbundled network elements." *Id.* ¶¶ 67-70. Moreover, under any standard, competitive LECs are "impaired" if they must rely on special access instead of UNEs. The impairment inquiry hinges on whether CLECs would be impaired in their ability to offer service without access to the network elements in question, which are priced – correctly, as the Supreme Court has now held – at TELRIC. *See UNE Remand Order* ¶ 74; *Verizon v. FCC, supra.*

As the comments make clear, however, the ILECs' special access rates are often at least twice the TELRIC price of the comparable UNEs they would replace. *See, e.g.*, Covad at 70 ("[i]n some cases, the rates for special access are more than three times the rates for unbundled transport. As the Commission knows well, the access rates of ILECs often exceed their underlying costs by a wide margin"); AT&T at 140 ("ILEC special access charges are now nearly *twice* their economic costs"). By any measure, such significant increases in CLECs' transmission costs would undoubtedly "impair" their ability to offer their services. *See, e.g., UNE Remand Order* ¶ 73 ("[i]f the cost of the alternative element is materially greater than the cost of the corresponding element from the incumbent, the requesting carrier will not be able to provide service at prices that are competitive with the incumbent's prevailing prices"). Common sense also suggests that doubling the cost of obtaining access to these elements would at least

impair CLECs from offering service in most cases and in many cases would totally preclude CLEC entry.[222]

In addition, contrary to ILEC claims, the Supreme Court's recent decision in *Verizon* makes clear that CLECs are entitled to "new" loop-transport combinations. In the *UNE Remand Order*, the Commission concluded that "the incumbent is presently obligated to provide access to the EEL" under Rule 315(b), which had been reinstated by the Supreme Court in *Iowa Utils. Bd.* (525 U.S. at 393-94) – *i.e.*, ILECs had an obligation to provide *pre-existing* loop-transport combinations that were already combined in the incumbents' networks (subject to the use restrictions later adopted). *See UNE Remand Order* ¶ 480. As the Commission noted, whether ILECs had an obligation to provide *new* loop-transport combinations – *i.e.*, combinations not yet in existence and not yet combined in the incumbents' networks – turned on the validity of Rules 315(c)-(f), which at that time had been vacated and were being considered by the Eighth Circuit (and later by the Supreme Court in *Verizon*). *See UNE Remand Order* ¶ 480. The Supreme Court, however, has now upheld Rules 315(c)-(f) (*see Verizon*, 122 S. Ct. at 60-68), and accordingly, there is no longer any question that CLECs are entitled to new combinations of loop and transport. The D.C. Circuit also recognized that the Supreme Court had resolved the issue. *See also USTA*, 290 F.3d at 428 ("the Supreme Court appears to have definitely resolved" this issue, and has held "that the Commission has authority to require such combinations, affirmatively").

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[222] The mere fact that *some* CLECs have managed to win *some* customers by using special access does not mean that there is no impairment. Indeed, "impairment," by definition, means to be hindered, not necessarily precluded altogether. *See* Webster's II New Riverside University Dictionary at 612 ("impair" means "to decrease in strength, value, amount, or quality").

Verizon however, has recently suggested in an *ex parte* letter that the Commission's use restrictions would apply to these new loop-transport combinations. *See* Letter from W. Scott Randolph (Verizon) to Marlene Dortch (FCC), dated June 11, 2002 ("*Verizon EEL Letter*"). Verizon is mistaken. The language of the Commission's *Supplemental Order Clarification* is clear that the Commission's restrictions apply solely to the conversion of existing special access circuits to UNEs. As the Commission explained at the outset, its concerns arose from the fact that "section 51.315(b) of the Commission's rules precludes the incumbent LECs from separating loop and transport elements that are currently combined." *Supplemental Order Clarification* ¶ 2. As the Commission further explained, its specific (albeit mistaken) concern was that "allowing use of combinations of unbundled network elements for special access could undercut universal service by inducing IXCs to *abandon* switched access for unbundled network element-based special access *on an enormous scale*." *Id.* ¶ 7 (emphasis added). The Commission stated that such broad-scale conversions might "amount to a 'roundabout termination' of the access charge regime prior to the actual elimination of the implicit universal service subsidies contained in access charges." *Id.; see also id.* ¶ 18 (referring to the possibility of "[a]n immediate *transition* to unbundled network element-based special access" and "a *flashcut* approach with potentially severe consequences" (emphasis added)).

These statements make clear that the Commission's concern was that the *conversion* of existing special access circuits to UNEs might have significant implications for universal service.[223] Indeed, the Commission did not even consider whether use restrictions were necessary for new loop-transport combinations in the *Supplemental Order Clarification*, because

[223] *See also id.*, Separate Statement of Commissioner Ness ("I support the steps we have taken to clarify further the interim requirement that a carrier provide a significant amount of local service in order to *convert* special access services to unbundled network elements" (emphasis added)).

at that time there was no valid rule in effect requiring the incumbents to provide such new combinations.

In all events, there is no sound basis for continuing, much less extending the use restrictions to new combinations. The Commission has now removed all universal service subsidies from interstate access charges, and permitting CLECs to obtain new loop-transport combinations could not even theoretically undermine universal service. *See CALLS Order* ¶¶ 201-02. Indeed, permitting CLECs to obtain new loop-transport combinations would not have threatened universal service even under the Commission's assumptions in the *Supplemental Order Clarification*. The Commission's concern clearly was that a flashcut conversion of existing special circuits might affect the ILECs' revenues "on an enormous scale." *Supplemental Order Clarification* ¶ 7. Permitting CLECs to obtain new loop-transport combinations would affect the ILECs revenues only at the margins, and therefore could have had no significant impact on universal service subsidies – even if such subsidies still existed.

Indeed, contrary to Verizon's implications, the purpose of the *Supplemental Order Clarification* was not to protect all ILEC special access revenue from UNE-based competition. To the contrary, CLECs may use loop-transport combinations to provide special access services even under the *Supplemental Order Clarification*, as long as certain conditions are met. Permitting CLECs to obtain new loop-transport combinations would merely permit CLECs to use such combinations to provide access services on a scale that would not implicate any of the Commission's concerns in the order, even assuming those concerns were valid (which, as shown below, they were not).

2. The Commission's Use Restrictions Are Inhibiting Competition, Especially Facilities-Based Competition.

The ILECs' claim that the Commission can rely on special access as a substitute for UNEs because special access is "competitively priced" is nonsense. *See* Qwest at 35; Verizon at 120. As the commenters show, BellSouth and Verizon substantially *increased* their special access rates shortly after obtaining pricing flexibility. Such pricing behavior is starkly at odds with any notion that the special access market is competitive or that CLECs' very limited operations are placing any competitive pressure on ILEC rates. *See, e.g.*, ALTS at 66. And in all events, the Supreme Court has clearly held that requesting carriers that are entitled to purchase UNEs are also entitled to TELRIC-based rates. *Verizon*, 122 S. Ct. at 1692. The ILECs' ability to stifle competition through special access rates is especially indefensible given the enormous rates of return the major ILECs have earned on special access. In 2001, the major ILECs earned an average rate of return (at the holding company level) on special access of 38 percent, and certain individual ILECs earned even higher returns of 49.3 percent (BellSouth), 54 percent (SBC), and an astonishing 131.7 percent (Sprint). *See* Lesher Reply Dec. ¶ 27 n.3.

Although the Commission's rules correctly recognize that loops and transport must be made available as unbundled elements, the Commission's use and commingling restrictions have effectively precluded the use of loop-transport combinations altogether. The four principal effects of these restrictions has been (1) to protect the ILECs' monopoly rents collected through special access rates, which are already twice forward-looking costs – and which the ILECs have recently raised; (2) to prevent CLECs from reaching customers in a broader range of LSOs which, as a result, has shrunk the geographic scope of the markets CLECs can serve, (3) to prevent traffic aggregation at hub locations that enable CLECs to attain the scale they need to deploy additional transport facilities; and (4) to interject a regulatory tax on IXCs that employ

special access when competing with incumbents that have entered the interLATA market. All of these effects are strongly contrary to the public interest; thus the "interim" use restrictions – which have formally been in place for over two years and practically in place since 1996 – should be eliminated immediately. *See* Lesher Reply Dec. ¶ 31.

The comments also confirm that "[i]n practice . . . CLECs' ability to use unbundled elements to compete on those routes where they do not have their own facilities has been severely restricted." WorldCom at 23. To begin with, although the Commission has held that CLECs may convert special access facilities to loop-transport combinations if they are used to provide a significant amount of local service, the complex "safe harbor" procedures of the *Supplemental Order Clarification* (¶¶ 21-24) are so burdensome and difficult to satisfy that they have effectively precluded use of these combinations in all cases, even those the Commission has found permissible. *See* Lesher Reply Dec. ¶ 32; *see also* WorldCom at 23-24 ("[a]lthough the Commission in its Supplemental Order Clarification established three 'safe harbors' designed to assure that EELs would be used to provide a significant amount of local service, these safe harbors are virtually impossible to satisfy as a practical matter"); AT&T at 164 ("the 'safe harbors' depend on a burdensome, circuit-by-circuit certification process," which is "inherently unworkable because CLECs' systems – including AT&T's – are not built to provide the kind of data necessary to support such record keeping requirements"). As a result, CLECs are forced to incur excessive and discriminatory expense even when loop/transport combinations are actually used to provide local exchange service.

3. The Ban On Commingling Should Be Eliminated Immediately.

The Commission's separate ban on the "commingling" of access and UNE traffic on the same facility is equally burdensome and further exacerbates the competitive harm caused by the use restrictions. *See Net2000 Complaint Order* ¶¶ 28-30 (holding that Commission's current

rules absolutely ban commingling and refusing to consider policy arguments that ban should be modified). As AT&T and others have explained, both here and elsewhere, the commingling ban creates a huge competitive barrier, because it effectively requires CLECs to establish two parallel networks – one for local traffic and one for access traffic. Thus, it effectively prevents CLECs from converting access circuits to UNEs even when the CLEC is in fact using them to provide local service to the customer. AT&T at 106-08; AT&T Use Restriction Comments at 21-23. CLECs today typically provide local service using a combination of DS-1 channel terminations, multiplexing, and DS-3 transport, all purchased from interstate access tariffs. DS-1 loop facilities are typically associated with a single customer. As a result, in any given area, a CLEC such as AT&T may have some DS-1 loops that carry predominantly local traffic (for its local customers), and some that carry only special access traffic (for customers purchasing its long-distance but not its local service). However, higher capacity transport and multiplexing facilities – the most efficient way to aggregate traffic – almost always carry some traffic that is eligible for conversion to UNEs and some that (inappropriately) is not. As a result, the commingling ban effectively prevents a CLEC from converting *any* special access circuits to UNEs, unless it is willing to establish separate and parallel networks in the central office – one for access traffic and one for UNE traffic. *See* Lesher Reply Dec. ¶¶ 34-36.

These restrictions have absolutely no technical basis, are discriminatory and anti-competitive, deprive CLECs of comparable efficiencies of scale and scope, and serve no conceivable purpose other than to protect the ILECs' monopolies. The ILECs, who face no comparable restriction, are permitted to place *any* traffic on *any* facility, thus enabling them to achieve economies of both scale and scope in designing their networks. See Fea-Giovannucci Reply Dec. ¶¶ 69-75; Lesher Reply Dec. ¶ 33-34. In sharp contrast, the commingling ban

requires CLECs to adopt an extremely *in*efficient network architecture if they even attempt to use loop-transport combinations of UNEs.[224] *See, e.g.*, AT&T at 107-08; WorldCom at 55 ("No competitor could economically operate two redundant sets of facilities – one leased for services when the unbundled element has been approved for particularly services, and one owned and operated in some other way for uses that have not been approved"). As WorldCom explains (at 81), "there is no legitimate reason why requesting carriers should be prohibited from assigning unbundled loops or EELs to individual channel assignments on these multiplexers." Indeed, "[t]his practice would allow competitive carriers to operate their networks more efficiently," and "there is no harm to the incumbent LECs from this practice, except the harm of permitting competitors to operate more efficiently." *Id.*

Ironically, one of the principal effects of these restrictions is to deter increased facilities-based entry. As AT&T has shown, the ILECs typically operate fiber transport facilities at the OC-48 level, which is the equivalent of 32,256 voice-grade circuits. ILECs can justify the enormous fixed costs of fiber construction and associated electronics because the huge base of customers whose loops terminate at their LSOs allow in the incumbent to serve virtually all local demand and all interLATA demand, whether as access to IXCs or directly as the interLATA carrier following section 271 relief. Serving this immense base of demand allows the incumbent to fill its fiber facilities to reasonable utilization levels. CLECs can rarely match the ILECs' scale and scope efficiencies and incremental cost advantages on any individual transport route,

[224] In fact, the ILECs often attempt to expand the effect of the commingling limitation beyond mere loop/transport combinations. As WorldCom describes, "even when a CLEC seeks to convert only the channel termination portion of a special access circuit to an unbundled loop, the ILECs generally contend that the *Supplemental Order Clarification* prohibits conversion of loops that include multiplexing, since multiplexing is available only as an ILEC service, and services may not be 'commingled' with network elements." WorldCom at 23-24.

and accordingly they have very limited opportunities to replicate incumbent fiber transport facilities efficiently. As AT&T has shown, a CLEC must have a substantial number of DS-3s of traffic before it will consider extending a fiber facility to an LSO (*see* Lesher-Frontera Dec. ¶ 21; Fea-Giovannucci Reply Dec. ¶ 25), but given the small number of customers that most CLECs can expect to serve from a single LSO, there are only a few offices that by themselves have sufficient demand to justify construction of alternative fiber transport. *See* AT&T at 135, 138; Fea-Taggart Use Restriction Dec. ¶ 7; Fea-Giovannucci Reply Dec. ¶ 25; Lesher Reply Dec. ¶¶ 37-38.

Because of these unavoidable realities, the practical effect of denying requesting carriers the ability to use loop-transport combinations is to seriously inhibit facilities-based competition, because deployment of interoffice transport facilities between the CLEC network and ILEC network is usually economic *only* where traffic from multiple LSOs can be aggregated to a hubbing point (in an ILEC LSO) and then connected to the contemplated facility. *See* AT&T at 135-37 (giving example); *see also* WorldCom at 16-17 ("even if the scope of the analysis is limited to buildings where customers are served using dedicated access, the vast majority of such buildings are not connected to CLEC networks, and can therefore be reached only via ILEC facilities"). If a CLEC cannot use UNEs to gather traffic from additional LSOs, then its entire facilities-based entry plan must be severely reduced or rendered completely uneconomic, because the CLEC would be forced either to pay excessive access rates or build fiber facilities with enormous excess capacity (and substantial up front costs that would dwarf the reasonably anticipated revenue stream) to the LSOs where it will have little traffic. In either case, these costs – which the ILECs do not face – are true barriers to entry that make it virtually impossible

for a CLEC to enter the market and serve customers at retail prices competitive with the ILEC and still be profitable.

The Commission must therefore eliminate the use restrictions and ban on co-mingling immediately. These restrictions have no basis in the Act or its underlying pro-competitive policies. They are destructive of competition in both the local exchange and exchange access markets and serve only to allow ILECs to impose inefficiencies and higher prices on their competitors, in violation of the Act's basic principles. *See Verizon*, 122 S. Ct. at 1672. And critically, permitting CLECs to use EELs to aggregate both local and access traffic in this way will allow CLECs to "fill in" the parts of their networks where they do not have sufficient traffic to justify building their own facilities by creating efficient hubs. *See UNE Remand Order* ¶ 288 (availability of unbundled transport as a UNE allows CLECs "to aggregate loops at fewer collocation locations and increase their efficiencies by transporting aggregated loops over efficient-high capacity facilities to their central switching location").

4. The Commission Should Not Permit ILECs To Impose Termination Liabilities On CLECs Converting Special Access To UNEs

Finally, the Commission should not permit ILECs to impose termination liabilities when CLECs convert special access circuits to EELs. Elimination of termination liability for such conversions would indeed be equitable under the current circumstances. AT&T purchased many of the special access services that it seeks to convert to UNE combinations under duress after the passage of the 1996 Act, because that was the only option then available.[225] Equally important,

[225] For example, despite the passage of the Act, the ILECs refused to sell UNE combinations for AT&T services such as AT&T Digital Link ("ADL"), whose lines combined local and long distance traffic. Thus, AT&T was faced with the choice of either ceasing to serve customers or paying inflated special access charges. AT&T has been over-paying for these services – and ILECs has been receiving an unjustified windfall – for many years.

the ILECs have used their monopoly position to impose termination liabilities on CLECs as a way of locking them into purchasing special access, regardless of whether the Commission lifts the use restrictions on EELs or not. The Commission should not endorse such tactics.

Precluding the imposition of termination liabilities is critically important to the ability of CLECs to use EELs. In recent years, ILECs have used their market power to impose termination liabilities on CLECs and thereby effectively lock CLECs into long-term contracts for special access services at inflated rates. ILECs offer "optional pricing plans" ("OPPs"), which provide access purchasers a discount on special access rates (but which leaves access rates far above TELRIC). These discounted rates are conditioned, however, on the purchaser agreeing to guaranteed traffic levels for a fixed number of years (usually between 3 and 7 years), and they also contain very substantial penalties for early termination. *See* Lesher Reply Dec. ¶ 40. Thus, even if the Commission were to eliminate the use restrictions on EELs, the termination penalties would be so massive that they would effectively preclude conversion of circuits to EELs for the duration of these agreements.

The Commission's failure to resolve the use restrictions issue by June 2000, as it promised to do, has considerably exacerbated the situation. Since June 2000, AT&T has been forced to continue to use OPPs as the only method available to reduce AT&T's connectivity costs. If the Commission had acted on its promised schedule, AT&T could have significantly reduced the number of circuits subject to OPPs by now. Instead, today, both the embedded base of circuits, and all the new circuits ordered during the two years since 2000, are now subject to such contracts. *See* Lesher Reply Dec. ¶ 41 n.5. Indeed, special access usage has increased threefold since 1996, largely because CLECs must use special access almost exclusively to obtain connectivity for local services.

Therefore, if the Commission eliminates use restrictions and the ban on commingling (as it should), CLECs should not be held to the termination liabilities that the ILECs have unilaterally imposed by tariff or contract.[226] In concept, this is no different from the Commission's "fresh look" initiative that allowed customers to terminate Tariff 12 services without termination liabilities when 800 numbers became portable.[227]

To be sure, in the *UNE Remand Order*, the Commission stated that "any substitution of unbundled network elements for special access would require the requesting carrier to pay any *appropriate* termination penalties under volume or term contracts."[228] However, the Commission offered no guidance as to what would be "appropriate." But allowing ILECs to assess termination liabilities in 2002 would serve only to guarantee continuation of the ILECs' monopoly profits and are thus would clearly not be "appropriate." By definition, UNEs priced at TELRIC recover the carrier's costs and are fully compensatory. *See Verizon*, 122 S. Ct. at 1672-74. CLECs are legally entitled to purchase unbundled network elements, and ILECs cannot lawfully impose termination liabilities on CLECs that are designed to solely to recoup monopoly profits in excess of TELRIC as the price of exercising those rights. *See* 47 U.S.C. § 252(d)(1).[229]

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[226] In reaffirming its arbitration decision to not apply termination liabilities in special access conversions, it the Kentucky PSC ruled that "BellSouth should not benefit from the payment of termination liability charges for AT&T to convert to UNEs, when UNEs should long ago have been made available to AT&T." Kentucky Public Service Commission, *Petition by AT&T Communications of the South Central States, Inc. and TCG Ohio for Arbitration of Certain Terms and Conditions of a Proposed Agreement With BellSouth Telecommunications, Inc. Pursuant to 47 U.S.C. Section 252*, Case No. 2000-465, Order (June 22, 2001) ("Kentucky Order") at 5.

[227] *See e.g., Interexchange Competition Order*, 8 FCC Rcd 2659 (1993).

[228] *UNE Remand Order* ¶ 486 n.985 (emphasis added).

[229] Indeed, the very fact that ILECs have imposed such termination liabilities on its customers is simply confirmation of their market power in the special access market.

Moreover, in the recent Virginia interconnection arbitration, Verizon conceded that it waives termination liabilities in a variety of contexts for other customers. For example, even in the context of special access, Verizon stated that "a request to convert the existing discount plan to a longer commitment period will nullify termination liability."[230] It also admitted that "[t]ermination liability does not apply if the customer requests to upgrade service to a higher capacity . . . so long as the new service is purchased under a long-term agreement of equal or greater length."[231] Verizon further stated that "[i]n the event that Verizon initiates a rate increase that affects price of a service by 8% or more, customers may cancel their pricing plan for the affected service without termination liability."[232] Finally, Verizon admitted that "[t]ermination liability is not applicable if Verizon initiates a rate decrease for service purchased pursuant to a discount pricing plan."[233]

Nevertheless, Verizon has refused to renegotiate termination liabilities with AT&T in cases where AT&T seeks to replace special access services with UNE combinations. This is clearly not consistent with the way Verizon treats its retail customers, as admitted above, even though the same considerations should apply to eliminate (or at least significantly reduce) termination liabilities in connection with special access conversions. AT&T is merely attempting to optimize its use of Verizon's network, just like other Verizon customers that find a better or less expensive way to obtain the same functionality (and who often receive a waiver of

[230] *See* AT&T Virginia Section 252 Arbitration Initial Brief In Support Of Its Arbitration Of An Interconnection Agreement With Verizon Virginia, Inc., CC Docket No. 00-251, Issue III.7.c (filed Nov. 16, 2001).

[231] *Id.*

[232] *Id.*

[233] *Id.*

termination liabilities). If CLECs are to be treated like Verizon's other customers, the termination liabilities should not be enforced.

Finally, ILECs typically contend that termination liabilities are necessary to "compensate" them for "premature" cancellation of special access services, but that is nonsense. In fact, the very same plant and equipment will continue to be used (often with no physical work) and the TELRIC rates fully compensate the ILECs for the costs they incur in providing such functionality. In sum, any termination liability designed to recover ILEC monopoly profits must be considered unjust and unreasonable, because they are "made whole" in every reasonable meaning of the phrase, especially since they have avoided providing UNE functionality for so long.

IX. WITHOUT ACCESS TO UNBUNDLED SWITCHING AND UNE-P, CLECs CONTINUE TO BE IMPAIRED IN COMPETING FOR ALL CUSTOMER LOCATIONS SERVED WITH VOICE-GRADE LOOPS.

A. Introduction And Summary

The record already before the Commission clearly demonstrates that CLECs are impaired in at least three independent respects in attempts to use their own switches to serve all mass-market and small customer locations – *i.e.*, low demand customer locations served with voice-grade loops. First, the hot cut method of migrating voice-grade loops to CLEC switches is unworkable, and has never been performed in the volumes or at the cost and level of quality that would be needed for CLECs to serve such customer locations. Second, it is extremely expensive and inefficient to extend voice-grade loops from the ILEC switching center where all loops currently terminate to remotely deployed CLEC switches. Third, the increasing deployment of loops equipped with digital loop carrier ("DLC") equipment makes it practically impossible for CLECs to access voice-grade loops served over that infrastructure and connect them to their switches. As a result of these impairments, CLECs cannot now use their own switched-based

network and practically compete for any customer location that is served by voice-grade loops, which comprise the vast majority of all customer locations.

Each of these impairments satisfies even the standard set forth by the D.C. Circuit in *USTA*. Each of these impairments that CLECs face in serving customers who require only voice-grade loops originates directly from the ILECs' historic advantage as the monopoly providers of local exchange services. Because the prior monopoly regime allowed the ILECs to deploy loop plant to serve all customers in a locality, to introduce transmission architectures, like DLC, that foreclose competing carriers' ability to access loops, and to deploy switches that were hardwired to all customers' loops, the ILECs clearly have an "almost insuperable competitive advantage," *Verizon*, 122 S. Ct. at 1662, in serving customer locations that require only voice-grade loops.

Specifically, the ILECs designed their networks for use in a single carrier, non-competitive environment in which all loops terminate in the same office as the ILECs' switches. As a result of this fundamental fact, the ILEC connection between most voice-grade loops and the ILEC switch consists merely of a pair of wires that need only be a few feet long and that is hardwired to ILEC facilities. In addition, because the incumbents were designing their plant to serve a captive market, they could deploy DLC so that their high-capacity feeder facilities could terminate directly onto their switches without any need to demultiplex the signals carried over the feeder to the individual loop interface (analog) level. As a result, unbundled access to voice-grade loops provided over such a loop infrastructure is not practically or economically viable for switch-based CLECs, because of the service disruptions and other practical difficulties that are necessary to extract individual loops for which unbundled access is sought. Because of these features of the network architecture that were created under the prior monopoly regime, ILECs can readily serve customers with voice-grade loops.

By contrast, CLECs' ability to use their own switches to serve voice-grade loops are fundamentally different from those of the ILECs. Unlike the ILECs, CLECs never have and never will own an entire local exchange, in which the customers' loops are already connected to their switches through a hardwired connection. Thus, no CLEC has ever had or can ever expect to have a monopoly base of customers in a broad geographic area – instead, CLECs' customers are necessarily scattered over a wide geographic area, and those customers' loop facilities directly connect only to the ILEC central offices. As a consequence, CLECs must collocate facilities at the ILEC central offices, build additional transport facilities to extend those loops to CLEC switches, and then route all of their customers' traffic to their own switches – in effect, employing redundant feeder plant and associated electronics.

Further, as another necessary outgrowth of the ILECs' network architecture and low cost (but closed) loop plant, manual work is always required to sever the hardwired connection to the ILEC network and to reconnect a customer's voice-grade loop to the CLEC network. For voice-grade loops, the only method to accomplish this task is the hot cut process. As AT&T and other commenters explain, the hot cut process requires – for each customer voice-grade loop that must be connected to the CLEC switch – a physical re-wiring of the hardwired connection, which makes the hot cut process an inherently low-volume, manually-intensive migration process that leads to frequent service problems and is expensive. And for loops on which the ILEC has deployed a DLC, there are *no* practical or economically viable means for a CLEC to connect those loops to its own switch. Collectively, these impairments mean that CLECs are practically denied the ability to serve the vast majority of all customer locations with their own switches – an impairment that occurs over the "entire extent of the market." *See USTA*, 290 F.3d at 427.

Thus, CLECs do not require unbundled switching because they are unable to deploy their own switches, but rather because they cannot currently gain practical and economically viable access to customers' voice-grade loops and connect them to CLEC-owned switches. In both the *Notice* here and in other contexts, the Commission has recognized that "[t]o access an unbundled local loop's theoretical capability of providing a telecommunications service" a CLEC "must, as a practical, economic, and operational matter, be able to switch or route traffic to or from that loop." *Collocation Remand Order* ¶ 46, *aff'd, Verizon Collocation,* 2002 WL 1310605 *7 (recognizing that "switching and routing equipment activates th[e] capabilities of a loop that allow the loop to carry calls"). Thus, unbundled switching is a means to access unbundled loops, which clearly retain natural monopoly characteristics. Therefore, CLECs need continued access to unbundled switching – as part of the UNE-P combination – in order to access their customers' voice-grade loops, until the incumbents' numerous monopoly-derived advantages are neutralized.

Accordingly, and as a result of these impairments, CLECs of all types and sizes[234] together with State commissions, strongly support "the availability of UNEs, *including*

[234] *See, e.g.*, AT&T at 220-30; ASCENT at 14-15 ("The UNE-Platform alone among the multiple entry vehicles designed by Congress is providing the sort of local residential competition that has consistently been contemplated, as well as bringing the benefits of local telephone competition to small businesses and outlying areas"); BTI at 6 ("UNE-P is the most successful method of rapidly introducing competition into the local exchange marketplace"); Eschelon Telecom, Pickens Aff. ¶ 11 ("Without access to a UNE platform product, Eschelon would probably go out of business"); GCI at 49 ("all CLECs that seek to provide ubiquitous service to residential and business customers would be impaired without continued access to unbundled switching"); Navigator at 6 ("UNE-P provides the toehold necessary for a small company to begin to build a customer base and generate revenues necessary to provide a competitive alternative to residential customers in Arkansas and elsewhere"); McLeod at 1, 8; NewSouth at 21-24 ("UNEP thus enables NewSouth to provide service to smaller businesses, and to utilize mass marketing sales techniques," which " expands significantly the range of customers to whom the benefits of competition can be made available"); Talk America at 3, 6, 10, 14; UNE Platform Coalition at 4-11; WorldCom at 25-32; Z-Tel at I, 5; CompTel at 86.

unbundled switching, [because it] provides the most successful mode of entry for competitive carriers." Louisiana at 2 (emphasis added); *see also* New York at 3 ("CLECs' lack of access to the UNE-P [which includes unbundled local switching] will materially diminish their ability to provide local service"); California at iii ("urg[ing] the FCC to retain its requirement that the ILEC unbundle access to local switching and tandem switching capabilities"); *see also id.* at 5 ("given current market conditions, it may be appropriate to require more, not less, unbundling"); Georgia at 4-5 ("[l]ocal competition – particularly in the residential and small business markets – has yet to reach a level that is sustainable without competitors' continued reliance on critical network elements that are available on a ubiquitous basis only from the incumbent LECs"); Indiana at 9 ("[t]he FCC and state commissions must continue to promote entry by those carriers that purchase UNEs such as the loop, switch, or transport; or combinations, such as the UNE-P and EELs"); Illinois at 2-3 ("firmly oppos[ing] any action which would weaken currently existing unbundling requirements as premature and potentially damaging to the competitive market that has developed thus far"); Massachusetts at 4; Missouri at 7-8 ("[t]o effectively compete, competitors must be allowed to provide ubiquitously, substitutable telecommunications services to the customer base of the incumbent provider on a technology neutral basis," including a "combination of facilities and UNE-P"); Texas at 4. Summing up the views of State commissions in general, NARUC adopted a resolution supporting "universal availability of UNE-P," which necessarily includes access to unbundled local switching. NARUC UNE-P Resolution (adopted Nov. 14, 2001) (attached to letter from Joan Smith *et al.* to Chairman Powell and Commissioners Abernathy, Copps, and Martin, CC Docket No. 96-98 (December 5, 2001)) ("NARUC UNE-P Resolution"). Notably, *no* CLEC and *no* State commission submitting comments opposes the availability of unbundled switching and UNE-P.

In sharp contrast, the ILECs stand alone in advocating the extreme position that local switching should not *ever* be unbundled in any circumstance. BellSouth at 77-90; Qwest at 20-31; SBC at 65-81; Verizon at 94-105. At bottom, however, the ILECs' position rests on highly inaccurate claims regarding marketplace conditions and gross misinterpretations of the few accurate facts they do cite. In particular, the ILECs' principal claim here is that CLECs cannot be impaired without access to unbundled local switching as a UNE under any circumstances because CLECs have deployed a significant number of switches. SBC at 67-70; BellSouth at 78-79; Qwest at 29 (claiming that CLECs have deployed 1300 switches – about 5% of the number of switches the ILECs themselves have deployed). But that claim is deficient for the simple reason that CLECs have only been able to use their own switches to serve a limited market segment – high-volume customers with significant demand for local services and the ability to deploy sophisticated customer premises equipment so that they access the CLEC network with loops having capacities of a DS-1 or higher level facility. For these customer locations, CLECs can generally avoid the impairments of serving customers using voice-grade loops. Unfortunately, these customer locations where high-capacity loops are justified represent a minority of the customer locations in this country, are insufficient to allow CLECs to deploy switches that can be fully utilized, and thus cannot by themselves support a robustly competitive, facilities-based national market.

The ILECs have thus completely failed to come to grips with the marketplace evidence provided by CLECs and recognized by State commissions that CLECs are severely impaired in their efforts to *use* their local switches efficiently to serve the vast majority of customer locations. In order to achieve the Act's goals to replace the ILECs' local monopolies with full competition in all telecommunications markets, *see Verizon*, 122 S. Ct. at 1654, 1660-61, CLECs

must not be foreclosed from the practical and economic ability to access *all* customer locations – both large and small business locations as well as individual residences. Because unbundled switching provides the only reliable method for CLECs to serve low-demand customer locations, it is absolutely essential that local switching – included as part of the UNE-P combination – be made available as a UNE at TELRIC-based rates, without limitation to serve all such locations.

Accordingly, the collective evidence in this proceeding clearly demonstrates that the existing line limitation on the availability of unbundled local switching – and therefore the practical availability of the UNE-P combination – not only impairs competitors and impedes competition, it also discourages competitive investment in facilities. Thus, the existing limitation, which reflects an arbitrarily adopted threshold, should be eliminated in its entirety or, in the alternative, replaced by a limitation that reflects the marketplace realities faced by CLECs that seek to provide service to customer locations that require only voice-grade loops.

Finally, the Commission should also confirm that ILECs are required to provide "transiting" at TELRIC rates. Transiting involves the use of ILEC tandem switching and shared transport functionality to enable the termination of local or intraLATA traffic between CLECs, independent companies, or wireless providers that are not directly interconnected. Since the costs of direct interconnection with all such carriers would be cost-prohibitive – especially for the small amounts of traffic involved – transiting through an ILEC tandem is the only economic and practical method for such carriers to exchange traffic. Therefore, absent unbundled access to these functionalities (for which the ILECs would be fully compensated at TELRIC rates), CLECs would be significantly impaired in completing calls originated by or terminated to their customers, because they would either face prohibitive costs or be forced to block the affected calls, either of which would place them at a significant competitive disadvantage compared to

the ILEC.[235] Accordingly, even if (and to the extent) the ILECs were otherwise freed from obligations to provide local circuit switching as an unbundled network element under section 251(d)(2), that does not alter the ILECs' separate duty to make their tandem switching and related transport functionalities available to competitors for use in transiting.[236]

* * *

In sum, the CLECs' impairments in accessing customer loops – which the Commission recognized was a reason to require collocation of some types of switching – means that CLECs, as a "practical, economic, or operational matter," cannot *use* their own switches to offer service to customers served by voice-grade loops. *Verizon Collocation*, 2002 WL 1310605 *7. In light of *USTA*, these impairments are directly related to the ILECs' network architecture, apply to all customer locations served by voice-grade loops, and are present at all stages of a CLEC's market entry. As a consequence, there are no meaningful geographic differences that could apply to limit the availability of unbundled switching for such customers. Rather, the limit on unbundled switching properly depends upon the "customer class" (*USTA*, 290 F.3d at 422) that CLECs will serve – *i.e.*, low volume customer locations (both business and residential) that are served by specific types of loop plant. For all these reasons, CLECs must be allowed to continue to access

[235] As the Commission has previously recognized, *Local Competition Order* ¶ 264, UNEs are defined by their functionalities and capabilities, and not by specific services. Accordingly, CLECs are entitled to use UNEs for any function, including transiting functions used in providing a telecommunications service. *See Verizon*, 122 S. Ct. at 1683. Therefore, ILECs should not be permitted to impose time or capacity restrictions on CLECs' use of such UNEs.

[236] In all events, ILECs are also obligated by section 251(c)(2) to allow interconnection "for the transmission and routing of telephone exchange services and exchange access," which provides an additional basis to require ILEC to offer cost-based access to the UNEs needed to perform transiting functions. And, of course, ILECs are separately required by the reciprocal compensation provisions of the Act to allow CLECs to terminate traffic directly to ILEC customers. Thus, in all these cases, sections 251(c)(2), 251(c)(3) and 252(d)(1) require the ILECs to provide interconnection functionalities at TELRIC-based rates.

local switching as a UNE until such time the ILECs' monopoly loop advantages are effectively eradicated.

B. Actual Market Experience Shows That CLECs Are Impaired In Using Their Own Switches To Serve Customer Locations That Require Less Than A DS-1 Level Loop.

The comments and evidence submitted in this record unequivocally show that CLECs are impaired in their efforts to use their own switches to serve customer locations with modest communications requirements – *i.e.*, locations that require less than a DS-1 level loop. *E.g.*, WorldCom at 90 ("[c]ustomers with analog service . . . cannot be served economically via CLEC facilities"). Unlike the record the Commission was able to compile in 1999, when CLECs had virtually no experience in serving these customer locations – most of which are mass-market customers – the record here is fundamentally different, and contains abundant evidence of CLECs' actual marketplace experiences in attempting to serve such customers. These experiences demonstrate that, absent access to unbundled switching and UNE-P, CLECs have no feasible method to serve these low-volume customer locations, and that they will simply forego serving those market segments if such access is not made available both as a legal and a practical matter.

In particular, the evidence in this record overwhelmingly demonstrates that CLECs are simply unable to connect CLEC switches to the voice-grade loops used to serve the vast majority of customer premises – all residential and most business locations. This fact is evident not only from the wave of bankruptcies associated with CLECs that deployed their own switches *before* winning customers to fill them, but from the testimony provided by the remaining CLECs explaining how they have in fact deployed switches to serve large business locations, but that those switches lie severely underutilized because they cannot also be used to serve other customer locations. There are least three separate types of impairments associated with CLECs'

attempts to use their own switching to serve customer locations that justify only voice-grade loops: *first*, the hot cut method of migrating such loops to CLEC switches is unworkable and inherently incompatible with mass-market competition; *second*, it is extremely expensive and inefficient to extend voice-grade loops to remotely deployed CLEC switches; and, *third*, the incumbents' increasing deployment of DLC-equipped loops makes it practically impossible for CLECs to access such loops and connect them to their switches. *See* AT&T at 211-17 & Brenner Dec. ¶¶ 61-81.

Significantly, each of these impairments plainly meets *USTA*'s standard that cognizable impairments should be "linked (in some degree) to natural monopoly." *USTA*, 290 F.3d at 427. In each case, CLECs are seeking unbundled switching as means to access their customers' voice-grade loops, which, as described above in Part VI, indisputably have natural monopoly characteristics. Thus, these three loop-related impairments are directly linked to the critical fact that *only* the ILECs – as a result of their decades of monopoly control over their local markets – already have customers' loops connected to their own switches. *See Verizon*, 122 S. Ct. at 1662, 1683. And, at least to this point, availability of unbundled local switching as part of the UNE-P combination is the *only* means by which CLECs can mitigate the otherwise insurmountable impairments to accessing voice-grade loops. If such loops could quickly, easily, and economically be transferred between competing carriers' network at costs comparable to the ILECs' costs, it may be possible for a robust wholesale switching market to develop. While electronic loop provisioning (or its equivalent) could ultimately make this a reality, the fact is that today only the incumbents can practically use their own switches to serve customers who require only voice-grade loops.

At this juncture, therefore, these three impairments prevent CLEC from using their own (or a third party's) switches to replicate the ILECs' existing "loop-switch" combinations. Because of hot cut problems and increasing DLC deployment, CLECs cannot migrate voice-grade loops to their own switches. And because they alone must extend their customers' loops to their own switches, they incur additional and unique costs for collocation and transport that the ILECs do not. Thus, as the Commission recognized in its *Notice* (¶ 59) and as AT&T and other commenters demonstrated, *e.g.*, AT&T at 208-10, New York at 2-4, WorldCom at 84-87, BTI at 11, CLECs require access to unbundled switching primarily as a vehicle to access voice-grade loops and to mitigate the natural monopoly characteristics associated with their degraded and discriminatory access to such loops.

Significantly, the D.C. Circuit, in upholding the Commission's revised rules for collocation, has expressly acknowledged that "switching and routing equipment activates th[e] capabilities of a loop that allow the loop to carry calls." *Verizon Collocation*, 2002 WL 1310605 at *7. In that case, the ILECs challenged the Commission's collocation rules, which held that CLECs could deploy certain switching equipment in collocated space, because such equipment was "necessary" for access to UNEs and specifically to the loop. The Commission justified its rules by explaining that "[t]o access an unbundled local loop's theoretical capability of providing a telecommunications service . . . a requesting carrier must, as a practical, economic, and operational matter, be able to switch or route traffic to or from that loop." *Id.* (citing *Collocation Remand Order* ¶ 46). The Court "easily" upheld the Commission's reasoning – which applies with equal force to the impairment analysis here. As shown by the detailed facts presented on this record, CLECs cannot "access" unbundled voice-grade loops as a "practical, economic, and

operational matter." Thus, they are impaired in their ability to use their own switches, and they require unbundled switching in order to access customers' voice-grade loops.

Moreover, unlike the costs discussed by the court in *USTA*, these three impairments are not entry barriers that "any new entrant into virtually any business" must overcome. *USTA*, 290 F.3d at 427. Rather, they are directly associated with the natural monopoly characteristics of the local exchange business and unique to local telecommunications markets. *Cf. Verizon*, 122 S. Ct. at 1662, 1683 ("It is easy to see why a company that owns a local exchange . . . would have an almost insurmountable competitive advantage"). These impairments are the result of the ILECs' entrenched positions as monopolists for the last century, and in particular derive from the fact that regulators allowed ILECs to construct – free from risk of competition and funded by captive ratepayers who lacked any alternatives – ubiquitous embedded networks in which all customers' loops terminate at the very same location where ILECs placed their switches. Because of this regulatory history and the architecture of the ILECs' local networks, CLECs are impaired in their ability to use their own switches to serve customer locations that require voice-grade loops at any stage of their market entry. Thus, even if, for example, a CLEC were somehow able to gain a significant market share in a particular geographic market by winning all of the large business customer locations in that market), it would still remain impaired in seeking to use its own switches to win customer served by voice-grade loops. That is because hot cuts, DLC-equipped loops, and the costs of extending such loops to the CLEC's own switch would prevent even this hypothetical successful CLEC from efficiently serving such customers with its own switches.

In this regard, the specific costs and impairments that *USTA* cited as legally deficient – while they remain real disadvantages – are not the type of impairments that AT&T and other

CLECs have pointed to here as the basis for requiring ILECs to provide access to unbundled switching. In particular, *USTA* criticized the Commission for asserting that unbundling of local switching was appropriate based on the Commission's evidence that "it is cheaper to buy a 20,000-line switch than four increments of 5000 lines each, [*UNE Remand Order*] at 3813, ¶ 260," *USTA*, 290 F.3d at 427, and that CLECs were therefore impaired by their higher per-unit costs of deploying switches. According to the court, that fact was legally insufficient to justify unbundling because "average unit costs are necessarily higher at the outset for any new entrant into virtually any business." *Id.* Although AT&T disagrees with the court and does not believe that Congress meant to preclude the Commission from considering these types of costs, the record currently before the Commission makes this issue simply irrelevant, because CLECs have demonstrated that they suffer impairments that are *unique* to the local exchange market, and that do not rely on the (obviously correct) fact that CLECs' initial average unit costs for switching are higher than the ILECs' costs.

Likewise, in the *UNE Remand Order*, CLECs and the Commission relied on the fact that CLECs suffered significant cost and time delays in *deploying* their switches, which also impairs their ability to enter the market. *UNE Remand Order* ¶¶ 259, 268. Here, the ILECs' primary argument against unbundled switching is to point to the fact that some CLECs have been able to *deploy* switches to serve some customers in selected markets. *See infra* Part IX.E. Notably, however, the CLECs' costs and delays in deploying switches remain real, and are very substantial given the unique characteristics of the local exchange business. But it is also critical to note that a CLEC's mere physical ability to *deploy* a switch is only the tip of the iceberg in determining whether and when CLECs are impaired without access to unbundled local switching. In fact, in this proceeding, there is little dispute – assuming capital is available – that

a competing carrier could buy a switch and install it in a building so that it could be available to provide service. But that fact alone does not determine whether CLECs are impaired without access to unbundled switching. Rather, the impairment inquiry for local switching must assess the CLECs' *practical* ability to connect customers' voice-grade loop to those switches. *Verizon*, 122 S. Ct. at 1683 (the Commission should interpret the Act so that the ILECs' market-opening duties "get[] a practical result").

CLECs are impaired without access to ILEC unbundled switching because they cannot practically use their own switches to profitably serve customers in low volume locations. *UNE Remand Order* ¶ 256 (impairment analysis should consider "whether self-provisioning is *economically viable* in the long run") (emphasis added). Indeed, *USTA* does not require CLECs to construct their own facilities when to do so would be unprofitable, and thus "wasteful." *USTA*, 290 F.3d at 427. Thus, absent the availability of local switching in connection with voice-grade loops as part of the UNE-P combination, CLECs are faced with the equally impractical alternatives of either (i) building their own loop plant or (ii) relying upon the current inferior access to voice-grade loops, which precludes them from providing service to customers that require such loops.

The market-based evidence also shows that the CLECs' impairments are severe. Few CLECs are experiencing reasonably efficient levels of network equipment utilization, many have declared bankruptcy, and virtually no company has succeeded in using its own switches to serve any customers other than the locations of very large business customers (and even then, the CLECs must largely rely on special access rather than unbundled loops and transport). *See infra* Part IX.D (discussing plans of facilities-based CLECs to focus on larger business customers). Thus, over the past two years, CLECs have continually demonstrated to the Commission that

they cannot practically or economically *use* their own switches to serve low volume customer locations, *i.e.*, those locations with demand from an individual location that is too low to justify use of at least a DS-1 loop.[237] Critically, this limitation affects specific network elements and customer classes, *see USTA,* 290 F.3d at 422, and applies to all geographic areas because the impairments result from the physical architecture of local networks that were developed under monopoly conditions. Thus, even a "granular" analysis would dictate the unbundling of local switching as a part of UNE-P for all locations nationwide when only voice-grade loops are required to deliver service.

1. Hot Cut Impairments.

The record compiled in this proceeding contains ample evidence, virtually all drawn from actual marketplace experiences since 1999, demonstrating that hot cuts preclude the development of broad-based local competition. In particular, this evidence demonstrates that hot cuts:

- are a manual process that could never be performed in volumes that are necessary to support full-blown, mass-market competition;
- frequently lead to provisioning delays and service outages, which mass-market customers refuse to tolerate; and
- are often priced at rates that prohibit facilities-based competition for the mass-market.

See, e.g., AT&T at 212, 214-17; New York at 2-4; BTI at 11; UNE-P Coalition at 49-50; WorldCom at 86-87; Z-Tel at 38-47.

Only the ILECs dispute the existence and impact of these practical impairments. But their principal response to these significant real-world problems is to ignore them, and claim that

[237] Even where a DS-1 loop is used, CLECs are impaired in using those loops, and those loops should still be made available on an unbundled basis. However, provided that EELs are practically available and unrestricted as to their use, the impairments in using self-deployed (continued . . .)

hot cuts are "diversionary considerations" that the Commission may not even consider as an impairment. *See, e.g.*, SBC at 74-76; *see also* Verizon at 99, BellSouth at 81, 83 (hot cuts are "inherent costs of doing business in this industry"). According to the ILECs, if there is a problem with hot cut performance, the Commission should address it directly by ensuring adequate performance. *E.g.*, Verizon at 99.

This is nonsense. As described in detail below, AT&T and other CLECs have shown that the problem is that "the complexity and labor-intensive nature of the cutovers [means] a high error rate and accompanying service disruptions are inherent in [the hot cut] process." Z-Tel at 47; *see infra* (describing comments of New York and others demonstrating that hot cuts cannot be provided in commercially significant volumes). This is not a new lesson. Indeed, the Commission has routinely recognized from early on that *automated* operational support is the only kind of support that will foster full and effective competition. *E.g.*, *Michigan 271 Order* ¶ 172; *South Carolina 271 Order* ¶ 107; *Second Louisiana 271 Order* ¶ 96. In this regard, the *Notice* (¶ 46) recognizes that access to unbundled local switching and UNE-P may be necessary at least until there is an automated process for transitioning customers' loops. Accordingly, the Commission cannot rationally ignore the problems associated with hot cuts, because they present an undeniable practical barrier that prevents CLECs from using their own switches to serve low-demand customer locations.

Inherent Limits On Hot Cut Volumes. The evidence submitted both by CLECs and by State commissions – including the NYPSC, the State commission with the most experience in overseeing hot cut performance – clearly shows that hot cuts cannot be performed in the volumes

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(. . . continued)
switch functionality is substantially mitigated for DS-1 and higher loops because of, for example,
(continued . . .)

needed to support mass-market competition. For example, Z-Tel's testimony – from their employee who was the "principal [New York] DPS Staff member assigned to monitoring Verizon's 'hot cut' performance" from 1998 to 2000 – is completely convincing on this point. Z-Tel, Rubino Dec. ¶ 5. Based on her experiences, which included "devis[ing] proper hot cut processes, monitor[ing] Verizon's compliance with that process, engag[ing] in weekly and sometimes daily conference calls between Verizon and competitors, and ensur[ing] that proper procedures and reporting were undertaken," Ms. Rubino concludes that, even for ILECs with hot cut processes that are "as effective as any ILEC's in the country," there are "inherent limitations of the manual 'hot cut' process" that make it unable "to support commercial volumes sufficient to support mass-market competition." *Id.* ¶ 6; *see id* ¶¶ 22, 32, 41.

Similarly, GCI is a CLEC that "currently predominantly uses an ILEC UNE-loop, its own switch, and its own transport fiber ring to provide local exchange and exchange access services." GCI at 5. However, GCI has had "continual problems with [the ILEC's] provisioning [of] unbundled loops, especially for business loops, which require a 'hot cut.'" GCI at 8. These problems so adversely affected its business plans that GCI determined that it would "pa[y] the costs" for the ILEC "to hire 25 additional workers to increase 'hot-cut' volume," which "cost GCI over $3 million per year." *Id.* at 34, Hitz Dec. ¶ 14. Nevertheless, even though GCI's business plans called for 500 hot cuts per day, the ILEC, "at its peak averaged only approximately 100 per day" – a problem that continues to be "unresolved." *Id.* at 8. AT&T's evidence also demonstrates that hot cuts cannot be performed at commercially reasonable volumes. Despite years of effort to serve low-volume business locations with a "UNE-L"

(. . . continued)
the lack of need for hot cuts.

strategy that relied on hot cuts, hot cuts could not be provided in the volumes demanded by AT&T's customers, leading to massive cancellations of orders for AT&T's competitive service offerings. *See* AT&T at 219-20 & Brenner Dec. ¶¶ 39-42.

New York's comments corroborate these CLEC claims and demonstrate precisely why hot cuts impair CLECs that seek to provide services to mass-market customers. New York is one of the states that has devoted the most resources to managing the hot cut process and to assure that the ILEC's performance meets objective standards. In approving Verizon's section 271 application for New York and therein developing the standards for hot cut performance for such proceedings, the Commission relied heavily on the NYPSC's expertise. *See BA-NY 271 Order* ¶¶ 7-13, 292-95. But the New York commission's conclusions concerning hot cuts since both the *UNE Remand Order* and Verizon's section 271 approval make clear that hot cuts cannot support mass-market competition:

> "[T]he hot cut process is labor intensive and involves extensive coordination between [the ILEC] and the CLECs. . . . [In New York,] Verizon provisioned an average of approximately 205,000 orders per month via UNE-P in years 2000 and 2001. Those orders should increase in 2002 . . . . Verizon performed approximately 56,000 hot cut orders in 2001 or an average of 4,700 hot-cut orders per month. Verizon would need to dramatically increase the number of hot-cut orders per month if UNE-P was terminated and CLEC customers were switched. In fact, if all 205,000 UNE-P orders were to become . . . UNE-L orders, *Verizon's hot-cut performance would have to improve approximately 4400 percent.* Such an improvement would be unlikely absent major changes to streamline the hot-cut process."

New York at 4 (emphasis added). Indeed, because the hot cut process is not reliable and could not support mass-market competition, New York is examining ways to "migrat[e] large volumes of customers from Verizon's switches to CLECs' switches more efficiently." *Id.* at 3; *cf. infra* Part IX.F and AT&T at 235-39 (describing need to adopt electronic loop provisioning or other automated process for migrating customers so that a wholesale switching market may develop).

Significantly, the New York's comments completely undermine the ILECs' claims that the Commission's findings of checklist compliance in section 271 proceedings demonstrate that hot cuts provide CLECs a meaningful opportunity to compete using their own switches. *See* Verizon at 101-02; SBC at 76. New York concludes that, even if Verizon were deemed to be in compliance with the standards for hot cut performance announced in section 271 proceedings, that level of performance is not sufficient to overcome the impairment presented by the limited number of hot cuts that a BOC can feasibly complete. New York at 4.

Indeed, the Commission's finding in section 271 orders do not even address the issue here, *i.e.*, whether the ILECs' hot cut performance is sufficient to remove local switching as an unbundled network element. In *every* approved section 271 application, UNE-P has at least been nominally available to CLECs.[238] Thus, the Commission's 271 orders do not demonstrate that CLECs can rely on hot cuts to serve the entire mass-market, and thereby use their own switches with reasonable levels of efficiency – for the simple reason that no ILEC has ever performed hot cuts in the volumes that would support unfettered mass-market competition. As the comments of CLECs and the New York commission demonstrate, *see e.g.*, New York at 2-4, UNE-P Coalition at 47-48; AT&T at 214-17; GCI at 8, 34-35, Z-Tel at 47, the hot cut process simply cannot be "fixed" to enable it to support mass-market competition.

[238] In this regard, the Commission should ignore the claims of the ILECs that their performance in providing hot cuts is "outstanding" and has "not even been challenged" in recent 271 proceedings. *See* SBC at 76, App H; Verizon at 101-02; Qwest at 26; BellSouth at 84, 85 n.293. As an initial matter, the BOCs have not yet even applied for 271 approval in most states, let alone been found by the Commission to provide hot cuts consistent even with the minimum standards the Commission has set forth in earlier section 271 proceedings. But in the states where section 271 approval has been granted, UNE-P has been nominally available and the BOC's hot cut performance has generally been limited to certain market segments. For more recent applications, if hot cut performance has not been contested, that is because, as described below, many CLECs including AT&T have stopped marketing competitive services that rely on hot cuts.

Customers Will Not Accept The Service Delays And Outages That Necessarily Accompany Hot Cuts. Commenters also agree with AT&T (AT&T at 219-20 & Brenner Dec ¶¶ 34-42) that the delays and outages associated with hot cuts significantly impair a CLEC's ability to compete, because customers simply will not accept the poor service quality typically associated with hot cuts. For example, Z-Tel (at 32) states that, in its experience, "residential consumers and small businesses generally do not have the time, inclination, or ability to fix, tolerate, or address service or billing problems . . . . Accordingly, one glitch or delay in the cut-over process for a mass-market customer may be sufficient to convince the customer to go back to the incumbent." *See also* Navigator at 4. In some cases, service quality problems resulting from hot cuts were so bad that GCI "ultimately resorted to holding a monthly drawing for a free trip to Hawaii for all its customers" waiting for service because of hot cut provisioning delays. GCI at 24, Hitz Dec. ¶¶ 14-15; *id.* ¶ 14 (stating that the delays that GCI encountered in obtaining hot cut loops initially stretched from *3 to 6 months*) .

These experiences are entirely consistent with AT&T's experiences in attempting to serve low volume customer locations using voice-grade loops and its own switches. As AT&T explained, its "UNE-L" entry plans, which relied on hot cut loop provisioning, were simply not successful in the marketplace, and *over half* of AT&T's orders were cancelled prior to conversion. AT&T at 219 & Brenner Dec. ¶ 40. As AT&T and other CLECs demonstrate, the impairment that results when they attempt to serve low volume customer locations by relying on hot cuts is real, and it materially affects CLECs' ability to win and retain customers. AT&T at 218-20; Z-Tel at 47 (service disruptions "fundamentally influence customer perceptions of CLECs' ability to provide quality service, and thus CLECs' ability to attract customers"); UNE-P Coalition at 49-50; Navigator at 4 ("If a Navigator customer (or potential customer) is denied

service, or if their service is delayed, or doesn't work" then regardless of cause, "Navigator loses the customer . . . [and along with] the entire competitive community[] also gets the black eye").

These customer-affecting problems also demonstrate precisely why the impairment associated with hot cuts is linked to the natural monopoly characteristics of the local exchange, and is an entry barrier faced uniquely by CLECs. As a threshold matter, hot cuts are unique to local service markets. The manual work needed to move an ILEC customer to a competitor's switch is certainly not a "universal characteristi[c]" that "any new entrant i[n] virtually any business" must face. *See USTA*, 290 F.3d at 427. Moreover, because the ILECs already have a large customer base by virtue of their entrenched monopoly position, they stand to lose nothing if the hot cut process ultimately fails to support competition. Indeed, the comments cited above show that the outages, delays and other customer-affecting problems associated with hot cuts only heighten customers' fears of switching service and ultimately reinforce the ILECs' monopolies. These problems provide the ILECs with every incentive to assert here that the solution is simply to "fix" the hot cut problem, secure in the knowledge that the so-called solution presents virtually no risk to their entrenched customer base.[239] Rather, it places all the risk on new entrants, who must convince customers to switch to a new provider. And notably, the ILECs face no similar problems in winning and transitioning long distance customers. *See* AT&T at 236 & Att. G.

Hot Cut Costs Are Often High, And Are A Cost Borne Only By New Entrants. Finally, hot cut costs are significant – an impairment that alone can prevent CLECs from offering a

[239] In this regard, the ILECs have also sought a competitive advantage because of these customer-affecting risks. SBC, for example, has been running a series of advertisements suggesting that business customers could face massive quality problems if they switch local carriers. *Cf. New York 271 Order* ¶ 309.

competitive local service to the mass-market. *See, e.g.*, ASCENT at 36 (noting "repeated attempts by ILECs to dramatically increase hot cut charges," which "confirm that cost will continue to be a highly adverse factor"). As AT&T and others have demonstrated, the current charges for hot cuts in many states forecloses the use of UNE-L, even in narrow situations. AT&T at 216, ASCENT at 36, GCI at 36; WorldCom at 86.[240] Further, CLECs face the "regulatory risk of change in these [hot cut] costs." Z-Tel at 35. As Z-Tel explains, the New York PSC recently adopted a hot cut charge of $185 – a nearly eight-fold increase from the previous rate of $24. *Id.* at 35. Although that charge was recently reduced to $35 as a result of a settlement, Verizon still maintains that $185 is the correct cost, and has advocated charges that recover that level of cost in other states. *Id.* At that price, Z-Tel concludes that "to cut over even half of [its existing] customer base" in New York using hot cuts "would cost $18.5 million" and "would drain Z-Tel of virtually all of its cash." *Id.*, Rubino Dec. ¶ 39. Finally, the costs associated with hot cuts are completely unlike those sustained by any start-up firm in any industry. CLECs alone incur these costs because of the unique design of the incumbents' local exchange network. Thus, it is critical that the Commission provide the regulatory certainty that the hot cut process and hot cut charges do not become ILEC tools that can be used to stifle competitive entry.

2. Collocation And Transport Cost Impairments.

AT&T (at 211-12) and other commenters also demonstrated that, contrary to the ILECs' claims, CLECs cannot use their switches efficiently to serve low-demand customer locations

[240] Moreover, as described below, excessive non-recurring costs for conversions also prevents CLECs from migrating customers from UNE-P to service based on the use of CLEC switches. In states where these NRCs are low, CLECs can begin to consider such migrations, at least where other cost barriers can be overcome.

because of the unique costs that CLECs alone must incur to extend customers' loops to their switches. The impact of these differences is obvious. Talk America is a CLEC that focuses on residential customers in urban and rural areas, and serves about 180,000 lines, 80% of which are residential. However, these lines are "widely disbursed across numerous exchanges in [] 25 states." Talk America at 14. Talk America explains that it would be "impossible to financially justify deployment of switches to serve such a dispersed customer base." *Id.*; *see also* UNE-P Coalition at 43-44; AT&T at 211-12 & Brenner Dec. ¶¶ 79-81. Moreover, as WorldCom explains (at 86):

> [i]t is almost always prohibitively expensive to concentrate and transport the traffic of a limited number of low-intensity analog [loop] customers back to a CLEC switch. The necessary economies of scale and scope still can be achieved only by leasing ILEC facilities. Additionally, the costs of collocation and backhauling traffic to the CLEC switch alone are prohibitive.

As the Commission has previously found, "one of the primary purposes of UNEs is to enable new entrants to share in the economies of scale and scope that incumbent LECs enjoy by virtue of their previous *de jure* monopoly status." *See* NewSouth at 22 (citing *Local Competition Order* ¶ 11); WorldCom at 26.

It is also obvious that these transport and collocation impairments result directly from the natural monopoly characteristics of the local exchange market and are uniquely faced by new entrants to that market. First, under the longstanding monopoly regime, ILECs were able to deploy their switches at the same location where their customers' loops terminated – the ILEC central office. Because of the space limitations in the central office, only the ILEC can deploy all types of switching equipment (including traditional circuit switching) in the central office. The ILECs are thus able to connect their switches to customers' loops simply by using the most basic and inexpensive equipment – a simple jumper wire across the main distribution frame

(MDF) in the serving central office. Unlike ILECs, CLECs must plan for, purchase, install, and then operate an assortment of equipment and facilities in order to perform the same basic function of connecting and extending customers' loops to CLEC switches.

Second, as AT&T and other commenters explained, these CLEC-only costs are significant and are more than offset any advantages the CLECs may obtain because they are not obliged to serve all customers. *USTA,* 290 F.3d at 423. Third, the costs of collocation equipment are also significant. AT&T at 211-12; AT&T 1999 Comments at 93-97 & Pfau Declaration ¶¶ 25-26; BTI at ii; WorldCom at 86. Fourth, a CLEC must also construct or obtain transport facilities to carry traffic from its collocation to the site where it has deployed its switch. Collectively, all of these steps are both costly and time-consuming. Indeed, as AT&T described in its initial comments, the estimates that it and other CLECs have provided indicate that these costs can be as high as $100 to $145 *per line*. AT&T at 212. By contrast, because of its prior status as the monopoly carrier, the ILEC accomplishes this same function at virtually no cost by installing a simple cross-connect jumper wire across its MDF.[241]

Notably, the Commission has previously recognized these cost differentials in promulgating the collocation rules that require ILECs to establish cross-connects between two CLEC collocations in a central office. *Collocation Remand Order* ¶ 64. There, the Commission explained that without such cross-connects, "each [CLEC] would have to carry its own telecommunications traffic into its collocation space and then . . . have the [ILEC] transport that traffic" to an interconnection point outside the collocation space. *Id.* From there, "the other

[241] Of course, a CLEC also incurs other costs to establish a site for its switch, and to operate the switch. Although such costs are legitimate – and are in fact likely greater for CLECs than for incumbents – the CLECs have not generally relied on these types of costs to demonstrate impairment with respect to local switching.

[CLEC] would then likely carry the traffic back to its own collocation space in the same central office to be transported through the [CLEC's] network." *Id.* As the D.C. Circuit explained the Commission's reasoning when it recently upheld this rule, "[s]uch 'back hauling' . . . would impose 'significant *wasteful* economic costs' on CLECs that 'incumbent LECs themselves do not face'" *Verizon Collocation,* 2002 WL 1310605 at *3 (citing *Collocation Remand Order* ¶ 64 & nn.163, 166) (emphasis added). The very same reasoning applies here: a CLEC must incur the "significant wasteful economic costs" of transporting traffic from the central office to its remotely deployed switch to be terminated – all the while incurring costs that "incumbent LECs themselves do not face."

To be sure, as the Commission has recognized, a CLEC can deploy a single switch to serve the same geographic area that the ILEC serves with numerous switches. *See UNE Remand Order* ¶¶ 261, 269. According to the ILECs, this fact means that the CLECs cannot be impaired in deploying their own switches, because the CLECs' ability to deploy switches in this manner allows them to create efficiencies that the ILECs cannot achieve. *E.g.* ILEC Report at II-8; Qwest at 22-23; BellSouth at 79-80. But the ILECs' argument is flawed, for at least two reasons. First, the ILECs' claims do not at all account for the transport, collocation, and hot cut-related costs that CLECs alone incur. Second, even if CLECs could theoretically gain efficiency in using their own switches, they would not be able quickly to take advantage of that deployment because they do not have the same customer base as the ILECs. Without customers to fill them, even facilities that are deployed in the most efficient manner possible will not in fact generate real cost savings. *See* AT&T at 203-04; WorldCom at 26 ("until it builds a substantial customer base, a CLEC using its own switches and transport cannot achieve all of the scale economies the ILEC enjoys"). Thus, any purported cost offsets from allegedly "more efficient" CLEC switch

deployment are academic, because CLECs still cannot place enough retail customers on their switches to achieve these efficiencies, at least until they, like the ILECs, can access all customers' loops – including voice-grade loops – in a nondiscriminatory manner.

3. Lack of Access to DLC Loops.

AT&T (at 212-14) also demonstrated that CLECs are impaired in their efforts to use their own switches due to the growing number of loops that the incumbent have placed on DLC. Competitors cannot practically access DLC loops, because the traffic from those loops is aggregated, and is not disaggregated before it arrives at the ILEC switch. The alternatives available to disaggregate the traffic on an individual loop are not practical for CLECs, and can result in an inferior level of service to the customer. *See* AT&T at 213 & Gerszberg Dec. ¶¶ 14-16. Under one alternative, if spare copper is available and suitable for service, the CLEC could request the customer's loop to be transferred from the DLC to the spare copper facility, and then use the hot cut procedure to switch the alternate loop to the CLEC switch. *Id.* However, because the spare copper loop has by definition been replaced, this procedure will often result in a degraded signal for the customer's traffic (particularly data traffic). *Id.* The second alternative is equally problematic. If spare copper is not available, then the CLEC must face the extraordinarily expensive prospect of "de-muxing" all of the traffic on the DLC feeder to a voice-grade interface, and then sending the traffic over a facility that, through the hot cut process, allows the loop to be terminated to the CLEC switch. *Id.*

Because both of these alternatives have very significant competitive drawbacks, CLECs cannot practically connect DLC loops to their own switches. And this DLC-related impairment is again clearly related to the natural monopoly characteristics of the ILECs' local loop plant – an impairment that is unique to new entrants to the local exchange market and that occurs throughout all stages of entry. The *only* practical means to bring competitive services to any

customer served via DLC loops is through UNE-P. Other CLECs corroborate AT&T's showing. For example, GCI explains that where the ILEC has deployed an IDLC architecture it "simply cannot obtain access to the unbundled UNE loop in order to interconnect and direct that traffic to its collocation space." GCI at 9, 49-50. This architecture affects between 25 to 50 percent of the ILEC lines in the markets GCI serves. *Id.* at 50. The only way GCI can serve such lines is through UNE-P. *Id.*; *see also* Z-Tel, Rubino Dec. ¶ 12 n.2.

Critically, there is a large and growing number of DLC loops that cannot be reasonably reached by competitors without access to UNE-P. By the end of 2000, the RBOCs employed DLC on an average of 29% of their access lines. RHK, *Optical Access: North America*, (Dec. 2001). And the proportion of access lines carried on DLCs is significantly greater in BellSouth's (43.5% by 2000) and Verizon's (37.6 percent) entire operating regions. Overall, since passage of the Act, the RBOCs have almost doubled the number of loops they have made inaccessible to competitors. *Id.* (in 1995 the proportion on DLC was 15.4% and by 2000 the level was 29.4%). Thus, even excluding all other the impairments related to switching, CLECs are faced with a shrinking addressable market, where, on average, nearly one in three customer loops cannot practically be served by a CLEC switch. UNE-P (including unbundled local switching) is the only alternative in such cases.

C. The Existing Line Limitation On CLEC Access To Unbundled Local Switching Is Arbitrary, Impedes Competition, And Discourages Sensible Investment

Given the significant impairments CLECs face in using their own switches to serve customer locations requiring only voice-grade loops, the existing switching "carve-out" is arbitrary and unsupportable on a either technical or market-focused basis. Because the CLECs' impairments are not affected by geographic differences but rather by the design of the ILECs' networks and the type of loop facility that a location requires, CLECs must be permitted to use

unbundled switching and UNE-P to serve any customer location that uses such loops.[242] *E.g.*, WorldCom at 90. This threshold is directly responsive to CLECs' need for access to unbundled switching and UNE-P as a method of accessing customers' voice-grade loops. *See Notice* ¶ 59.

Such a modification to the carve-out is fully responsive to *USTA*'s concerns that the impairment analysis should be linked to "specific markets or market categories." *USTA*, 290 F.3d at 426. Under the modification proposed by AT&T and other commenters, unbundled switching would be made available in all geographic markets – which is entirely appropriate, given that the impairments that arise from the uniform design of the ILECs' monopoly networks occur in every geographic market.[243] Where carriers are impaired throughout the country by the lack of access to a specific element – which is the case with lack of access to local switching as part of UNE-P – then *USTA* clearly does not preclude nationwide unbundling, especially where the unbundling rule is linked to the natural monopoly characteristics' of the ILECs' networks and focused on a specific class of customers, *i.e.*, those at locations requiring only voice-grade loops. *See USTA*, 290 F.3d at 422, 426 (the Commission should consider whether unbundling can be limited to particular "market categories" or "customer class[es]").

Here, the record completely supports a finding that unbundled switching is required to serve a particular "customer class" – specifically, customer locations served with voice-grade loops. Assuming EELs are practically available and unrestricted as to use, for other customer

[242] As AT&T has shown, AT&T at 233, a line-level carve-out would apply at 18 or 19 lines, which is the point at which competitive carriers would serve customers using DS-1 facilities rather than voice-grade loops.

[243] As described above, CLECs have experienced hot cut problems, for example, in every geographic market. The problems that AT&T encountered occurred primarily in large markets in New York and in Texas. GCI, on the other hand, experienced its difficulties with hot cuts in Alaska. GCI at 2, 8. And other carriers have had similar experiences in other areas of the country. *See* Z-Tel at 44-47; WorldCom at 86; UNE-P Coalition at 49-50; New York at 2-4.

classes – *i.e.*, larger business locations that are served with DS-1 or higher level facilities – CLECs would generally not be impaired without access to unbundled switching (although they are impaired with respect to the loop and transport UNEs for a variety of other reasons). Indeed, the evidence in this proceeding demonstrates that it would be arbitrary to maintain the existing carve-out or, as the ILECs propose, to expand it to make unbundled switching unavailable in more circumstances.[244]

Critically, the evidence demonstrates that retaining the existing carve-out impairs CLECs and impedes competition in at least three significant and distinct ways. *First*, and most fundamentally, the Commission's 3-line limit was arbitrarily chosen, in an effort to define the "mass-market." *Texas UNE-P Order* at 66-69;[245] Z-Tel at 55; WorldCom at 91. *Second*, the ILECs' litigation tactics have made even that apparently straightforward rule difficult to apply. *Third*, application of the rule disserves the specific goal of the Act to end ILEC monopolies and boost competition in broader markets. *See Verizon*, 122 S. Ct. at 1654, 1660-61.

In the *UNE Remand Order*, the Commission admitted that it had little evidence in the record before it from which to develop a rational definition of the mass-market. *UNE Remand Order* ¶¶ 291, 294; *see also* Statement of Commissioner Furchtgott-Roth at 2-3 (carve-out may violate Act's nondiscrimination provisions, because from a "technological and economic

[244] Although *USTA* cited the existing carve-out as an example of a "partial rule" for unbundling of the type that the Commission could consider adopting for other elements, *USTA*, 290 F.2d at 423, the record in this proceeding shows that the specific "partial rule" adopted by the Commission is unworkable, and nothing in *USTA* prevents the Court from adopting a different rule where the Commission considers the application of the rule to specific customer segments or classes.

[245] Arbitration Award, *Petition of MCIMetro Access Transmission Services, et al., For Arbitration With Southwestern Bell Telephone Company Under the Telecommunications Act of 1996*, PUC Docket No. 24542 (Tex. PUC, issued April 29, 2002) ("*Texas UNE-P Order*")

perspective, there is no difference between a carrier that serves four one-line customers and a carrier that serves one four-line customer"). As the Texas PUC recognized, the 3-line limit was based on single piece of evidence submitted by Ameritech. *Texas UNE-P Order* at 67.

In sharp contrast, the record both here and on reconsideration of the *UNE Remand Order* clearly shows that the mass-market refers to low-volume customer locations and includes many premises than covered by the existing carve-out. As AT&T and other commenters showed, the mass-market cannot be defined simply by a marketing classification and a line count, but most fundamentally depends upon the level of demand for telecommunications at a particular location. AT&T at 207 n.12 & Brenner Dec. ¶ 18. Where the demand is low and only voice-grade loops can be economically employed, the customer location is within the mass-market. It is the usage directed to a particular carrier from an individual customer location that governs the type of facilities that will be used, not the usage of the customer's entire enterprise. And as many commenters explain, if a CLEC cannot efficiently serve the small locations of the largest businesses, the CLEC may not be in a position to serve the entire accounts of even the largest of these business customers. *E.g.*, WorldCom at 90; Eschelon at 12-13, 27; GCI at 49; NewSouth at 21-22.

Thus, the CLECs' impairment in using their own switches is a function of their practical ability to serve a particular customer's individual demand at a specific location, and as shown above, CLECs are impaired in using their own switches to provide service to *any* location that would ordinarily be served by voice-grade loops. AT&T at 206-07; Z-Tel at 51-52; WorldCom at 91. As a result, the current 3-line rule does not address the full range of fundamental impairments that CLECs actually face, and means that CLECs effectively cannot serve a significant portion of the local market, especially small business locations. *See, e.g.*, AT&T at

231-33; WorldCom at 87 (because of "economic realities," WorldCom "is not offering voice service to small business customers with analog lines even where it is collocated at the ILEC end office serving those customers"); Eschelon at 12-13, 27; GCI at 49; NewSouth at 21-22.

In particular, the evidence on this record shows that there are substantial numbers of business locations served with voice-grade loops where CLECs are severely impaired in their ability to use their own switches to provide service but, at the same time, are effectively precluded from employing UNE-P because of the existing carve-out. According to information gathered by PACE, as many as 79% of business lines are above the existing 3-line limit, and thus not eligible to receive UNE-P. *See* PACE *Ex Parte*, CC Docket 96-98, Apr 27, 2001. Moreover, about one-third of the entire business market needs about 4-20 lines. *Id.* These are customers that are too small to be served with high-capacity loops, but too large under the current carve-out to be eligible to receive UNE-P service. For this significant market segment, there is no viable competitive service offering. Based on these figures, Z-Tel estimated that elimination of the existing restriction would increase competition for mass-market business customers by 60%. Z-Tel *Ex Parte*, CC Docket 96-98, Nov. 21, 2001. As these data clearly demonstrate, "small businesses have benefited the least from the market-opening provisions of the 1996 Act." Z-Tel at IV; *see also* Indiana at 6; WorldCom at 29, 91. Retaining the current 3-line limit will make such limitations permanent.

Second, the ILECs' ceaseless litigation tactics have made the existing carve-out difficult to apply. In particular, since it was promulgated, CLECs and State commissions have been confounded by the ILECs' efforts to unreasonably expand an already overly broad carve-out by engaging in extended disputes over how "lines" are to be counted. *See* AT&T at 206 n.211, 232-33 (citing state decisions that have improperly applied the limitation based on the total number of

lines a customer has in an entire LATA); WorldCom at 92.[246] Thus, contrary to the assumption in *USTA*, 290 F.3d at 423, more precise unbundling rules can result in litigation – further slowing competition – unless the rule is entirely unambiguous. As the California PUC concludes, unbundling rules should be "as simple and clear as possible so as to reduce the ability of ILECs to take advantage of any loopholes or ambiguities that lessen their unbundling obligations." California at 5; *see also UNE Remand Order*, Statement of Commissioner Furchtgott-Roth at 3 ("the administrative costs of implementing and enforcing" the existing carve-out's "meaningless distinction between three- and four- line customers are daunting"). Indeed, in Texas, the PUC found that even the ILEC was "unclear as to the process by which it would accurately and consistently count lines for the purposes of invoking the [switch carve-out] exception." *Texas UNE-P Order* at 68. The Texas PUC therefore found that the carve out was neither "accurate [n]or practicable," and rejected its use in Texas. *Id.*

In this regard, the disputes regarding how the number of lines should be counted demonstrates precisely why it is imperative for the Commission to adopt unbundling rules that are based on a complete record and that are both clear and administrably workable. Critically, the record here demonstrates that the existing carve-out fails to meet any of these criteria. The court criticized the Commission because it "appear[ed]" that the Commission "simply . . . assume[d]" that a non-universal unbundling rule "would be unpredictable and hard to apply." *USTA*, 290 F.3d at 423. After years of experience with the switch carve-out, the Commission need no longer merely "assume" that the switch carve-out and other "partial" unbundling rules are hard to apply in practice: the marketplace experiences documented in the comments of

[246] Accordingly because many ILECs and some State commissions have broadly interpreted the carve-out to apply, for example, to all lines by a customer within a given LATA, *see, e.g.*, AT&T at 232-33, the carve-out in fact applies to a far greater number of lines.

CLECs and State commissions like the Texas PUC and California PUC demonstrate precisely why unbundling rules must be clear and easy to administer. If they are not, the ILECs have the incentive and ability to exploit loopholes or ambiguities in unbundling rules that reduce their unbundling obligations. California at 5.

Third, the carve-out prevents CLECs from maximizing one of the primary benefits of UNE-P – the ability to provide both immediate and widespread competition. *See Verizon*, 122 S. Ct. at 1661 (the Act is "designed to give aspiring competitors *every possible incentive* to enter local retail telephone markets, short of confiscating the incumbents' property") (emphasis added). If UNE-P is not available in a particular area because of the carve-out, the impairments described above preclude a CLEC from serving all customers in that area. The comments demonstrate how this in turn increases CLEC marketing costs, because the existing carve-out effectively reduces the target audience for the mass-market advertising that CLECs typically employ. *See* Z-Tel at 53 ("Z-Tel does not generally even try to sell its small business product . . . in areas where the restriction applies"); WorldCom at 91-92.

Further, because loops served via DLC cannot be practically accessed by CLECs that use their own switches, UNE-P is the only effective method for serving customers with DLC-equipped loops. AT&T at 212-14, GCI at 9, 50. If the carve-out is not modified, customers that are encompassed within the carve-out and served by DLC are, for all practical purposes, denied access to competition. Thus, the carve-out must also be modified to allow CLECs to use UNE-P to serve customers that have DLC loops and to ensure that CLECs are able to serve this large and growing market segment – and thereby to provide a ubiquitous service offering.

For all these reasons, the commenters – including numerous State commissions – strongly support AT&T's position that the existing carve-out should be expanded to allow

CLECs to use UNE-P (priced at TELRIC) to serve any individual customer location that the CLEC serves with less than a DS-1 loop or its equivalent (about 18-19 lines). *See, e.g.*, ASCENT at 36-37; Z-Tel at 50-56; WorldCom at 91-92.

D. UNE-P Competition Provides Real Economic Benefits To Consumers

Because CLECs cannot practically and economically connect their switches to voice-grade loops, the only viable alternative they have to provide service to customer locations that require such loops is through UNE-P. In its initial comments, AT&T described its own growing success in employing unbundled switching as part of UNE-P to serve customer locations with low telecommunications demand. AT&T at 217-30 & Brenner Dec. ¶¶ 47-55. Other CLECs also report increasing success in serving the mass-market using UNE-P.[247] Based upon these marketplace achievements, the CLECs' comments – and critically, the considered views of *all* the State commission commenters (*see infra* Part IX.D.4) – overwhelmingly support broad access to unbundled switching when used as part of UNE-P.

Significantly, UNE-P competition is thriving in all market segments to which it is being offered, including in both urban and in more rural areas. In New York, for example, the state where UNE-P has been available for the longest period of time, carriers are using UNE-P to serve customers both in the New York City area, as well as in rural areas of upstate New York. And in AT&T's case, the "take" rate for its UNE-P based offer is about the same in all parts of the state. These marketplace facts disprove any notion that UNE-P based competition – particularly in markets where the ILECs purportedly offer local service at rates that are below costs – does not constitute true competition but is artificial and merely an arbitrage opportunity.

[247] *See* ASCENT at 14-15; BTI at 10-11; Eschelon, Morrissette Aff. ¶ 11; GCI at 48-51; Louisiana at 2; Navigator at 4-5; NewSouth at 21-22; Talk America at 2-3, 13-14; UNE-P Coalition at 1, 4-5, 11, 42-43, 59-60; WorldCom at 25-32; Z-Tel at I, 5.

See, e.g., SBC at 77-78. In fact, the comments clearly explain why CLECs are choosing to use UNE-P, and have been successful in using it to begin to deliver the pro-competitive benefits intended by the Act to mass-market consumers. Moreover, the comments also show that UNE-P is not merely an arbitrage opportunity, but in fact encourages CLECs to deploy their own facilities.

1. Limiting Access to Unbundled Local Switching and UNE-P would Stifle Newly Emerging Competition

The data on newly emerging competition demonstrate the critical importance of UNE-P in implementing the Act's pro-competitive goals. First, the data show that the number of customers that CLECs serve via UNE-P is – after six years of ILEC litigation – just now beginning to become significant.[248] And, as should be expected given the impairments CLECs face in using their own switches, CLECs serve a higher portion of residential and low volume business locations where UNE-P is available. Thus, in New York, the state where UNE-P has been practically available for the longest time, 65 percent of the local service provided by CLECs is for residential and small business customers – the *only* state in the country where CLECs serve as a high a percentage of residential customers as of business customers. WorldCom at 29-30 & n.67. In recognition of these indisputable facts, the Commission itself told the Supreme Court that "the UNE Platform has been *the most important vehicle for competitive entry* into local markets for residential and small business customers." Brief for

[248] *See, e.g.*, WorldCom at 25 ("UNE-P is without question the leading delivery mechanism for competitors to offer service to residential customers"); Z-Tel at i, 3 ("nearly five million American residential and small business consumers . . . have taken advantage of the innovative products that UNE-P has allowed competitors to bring to market"); ASCENT at 14 ("the number of switched access lines provided by competitors making use of the UNE-Platform is increasing dramatically").