to prepare cageless space. All the same real estate, equipment planning, and power engineering functions that are required for caged collocation are also required for cageless collocation. The time it takes to place a cage around the CLEC's equipment is a relatively small amount of the overall preparation time, not the month or longer that these commenters suggest. *See* BellSouth Comments at 21. In fact, cageless collocation may involve more time because of the work necessary to provision space within an ILEC's lineup. SBC Comments at 43-45.

AT&T notes that the Public Utilities Commission in Texas determined that cageless collocation arrangements could be completed in 70 days or less, and that the time period could be reduced to 55 days if a collocating carrier installs its own racks and bays. AT&T Comments at 70; *see also* GSA Comments at 9; Joint Comments at 64. AT&T further notes that Qwest provides cageless collocation in 45 days where space and power are available. AT&T Comments at 70. These isolated examples, however, fail to establish that a *national* provisioning interval based on the unique circumstances in those instances is appropriate. And, in fact, the commenters submit no evidence that suggests these shortened intervals are appropriate for all states and for all ILEC networks. Nor do these commenters show that the demand patterns for collocation will be the same nationwide as in those instances, even though state commissions evaluate such factors in setting provisioning intervals. *See* SBC Comments at 45-46. In sum, these commenters have failed to provide evidence that a national standard is necessary or that the standards they propose would be appropriate.

B. Virtual Collocation

Some commenters assert that a shortened interval is appropriate for virtual collocation. AT&T, Sprint, and CoreComm, for instance, argue that the Commission should adopt a 60-day interval. AT&T Comments at 71; CoreComm Comments at 33; Sprint Comments at 28; *see also*

Joint Comments at 63. CoreComm points out that Florida has adopted a 60-day interval for virtual collocation under "ordinary conditions." CoreComm Comments at 33.

As Verizon points out, virtual collocation often takes longer than physical, because the incumbent must install the bay and the collocator's equipment, in addition to the other space preparation that is necessary. Verizon Comments at 23. That is, virtual arrangements also require the ordering and purchasing of cable, racking, and miscellaneous equipment, which depends on availability. In addition, that equipment, racking, and cabling must be installed. This requires the engineering of cable paths, power, and equipment, and the scheduling and completion of training for LEC employees if the equipment is new to the eligible structure.

C. Augmentation Intervals

Many commenters have requested that the Commission establish a national provisioning interval for augmentation of existing collocation arrangements. Some commenters have requested *blanket* augmentation intervals for existing collocation arrangements. *See, e.g.*, Allegiance Comments at 75-78; Joint Comments at 61-64; @Link Comments at 31-32; CoreComm Comments at 32-34; DSLnet Comments at 60-61; Mpower Comments at 32-33; Rhythms Comments at 62-64. AT&T, for instance, would have the Commission adopt a 30-day interval for *all* modifications and augmentations, except for "routine augmentations," which should be completed within 15 days. AT&T Comments at 71; *see also* CoreComm Comments at 33. Covad asks for a 15-day interval for collocation augments, including augments to power capacity, cable facilities, and racking. Covad Comments at 38-39. The Joint Commenters claim that modifications to existing arrangements should be provisioned within 30 days. Joint Comments at 4. NorthPoint suggests a 45-day interval for augments. NorthPoint Comments at 22. None of these commenters provides support or explanation for these requests.

As an initial matter, these commenters provide no evidence that a national standard is either necessary or appropriate. In fact, "augmentation" encompasses such a broad variety and complexity of activities and conditions that a national, uniform standard would be unworkable. Augmentation requests can range from relatively simple operations, like running 28 DS1's on existing overhead racking to existing panels and relay racks, to complex operations, such as 168 DS1's that require additional overhead racking and new interconnection panels. As the scope and complexity of an augmentation request becomes greater, so should the time frame in which such augmentation can be completed. For example, Allegiance states that "30 days is a suitable interval for augmenting collocation space." Allegiance Comments at 76. While 30 days may be adequate for certain types of augmentation requests, it would not be enough time for all "augmentations." A one-size-fits-all national standard in light of such variation would be wholly inappropriate. Rather, state commissions should retain the authority to establish augmentation intervals, as they can take into account these differences, as well as regional differences in conditions, collocation demand, and the particular needs of carriers in the shaping of their collocation tariffs.

Commenters' more specific augmentation requests are also meritless. For instance, Covad asks the Commission to require ILECs to provide completed cabling and power in 15 calendar days. Covad Comments at 38-39. Covad bases its request on a Texas tariff. *Id.* at 38-39 & nn. 49, 50. In Texas, however, 15-day augmentation intervals are allowed for 28 DS1s, 3 DS3s, and/or 100 copper cable pairs where panels, relay racks and overhead racking exist.[28] The only power operations allowed under the 15-day augment interval are those where only a fuse

[28] SWBT's Local Access Service Tariff Application – Texas, Sec. 5, Sheet 13.11, ¶ 6.1.3 (issued Nov. 2, 1999).

change is required.[29] Covad indicates that the Texas interval applies to "cabling, power, lighting, and conduit collocation augment[s] of 15 calendar days." Covad Comments at 39 n.50. But the Texas tariff simply does not support Covad's claim that Texas allows 15-day augmentation intervals for any amount of cabling, power, lighting, or conduit arrangements. The Texas tariff provides augmentation intervals of 15, 30, 60, 90 or even 120 days, *depending on the size* of the augmentation request. Thus, Covad has failed to provide any support, from any state, for its sweeping request.

D. Remote Terminals

CoreComm argues, with no support at all, that the interval for collocation in remote terminals should be 60 days. CoreComm Comments at 33. The Joint Commenters make the same request. Joint Comments at 63. But these commenters offer no reason why the intervals should vary based on the type of premises. The time required is based on what is being collocated and how, not where it is being placed. There is no reason – and the commenters have offered none – for applying a shorter interval to the remote terminal.

IX. A National Space Reservation Policy Is Unnecessary and Inappropriate

Several commenters endorse a national space reservation policy. *See, e.g.*, Covad Comments at 47-48; CTSI Comments at 48-49; Sprint Comments at 32-33; Allegiance Comments at 94-102; Joint Comments at 65-67; @Link Comments at 34-37; CoreComm Comments at 63-65. Aside from rhetoric and citations of their favorite state reservation policies, these commenters provide no support that a national standard would be workable or appropriate.

In fact, this Commission has already concluded that space reservation policies are best left to the state commissions. In its *Local Competition Order*, the Commission pointed out that

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[29] *Id.*

"Section 251(c)(6) requires the incumbent LEC to demonstrate *to the state commission's satisfaction* that there are space limitations on the LEC premises or that technical considerations make collocation impractical." 11 FCC Rcd at 15805, ¶ 602 (emphasis added). The Commission has found that space limitation issues "are best handled on a case-by-case basis" because they "will vary considerably depending on the location at which competitor equipment is to be collocated." *Id.* Accordingly, the Commission has required ILECs to "provide the state commission with detailed floor plans or diagrams of any premises where the incumbent alleges that there are space constraints," *id.*, and to allow CLECs to tour such premises and have disputes reviewed and resolved by the states, *Advanced Services Collocation Order*, 14 FCC Rcd at 4792, ¶ 57. Thus, the Commission has already recognized that questions of space and space reservation properly rest with state commissions because they alone have the ability to address the location-by-location differences that necessarily impact the appropriate policy choices. Commenters have also acknowledged the variation. AT&T concedes that "engineering limitations . . . relative scalability and environmental constraints of the various types of equipment" must all be considered in setting a reservation policy, not to mention technological and market developments. AT&T Comments at 72.

A national standard could not possibly reflect these vast differences among locations. Moreover, there is no evidence – and the commenters have provided none – that the state commissions are not carrying out this task or that the requirements they have adopted are lenient toward ILEC reservations of space.

If the Commission nevertheless ignores the enormous location variation and adopts a national standard, it must protect the interests of all service providers, including ILECs and CLECs, and their customers. The proposed intervals in the comments fall short of this goal.[30]

AT&T, CTSI, GSA, Sprint, CoreComm, DSLnet, Covad, the Joint Commenters, and Mpower all suggest that space reservation for transport should be limited to one year. AT&T Comments at 73; CTSI Comments at 48-49; GSA Comments at 10; Sprint Comments at 33; CoreComm Comments at 64-65; DSLnet Comments at 54; Covad Comments at 47; Joint Comments at 67; Mpower Comments at 66-67. Reserving space for one year for transport equipment is wholly inappropriate. As SBC explained in its initial comments, ILECs and CLECs have similar space reservation needs concerning transport equipment. SBC Comments at 50-51. They both need to be able to reserve space for transport equipment for a long enough period of time that, if the ILEC runs out of space in the central office, there will be a reasonable likelihood that the ILEC may have added more space by the time the reserved space runs out. Construction of an addition to a central office normally takes two to three-plus years, and construction of a new central office normally takes three and one-half to four years.[31] Therefore, the minimum period that either ILECs or CLECs should be allowed for reservations of space for their transport equipment should be the remainder of the current planning year (current year) plus

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[30] Mpower's suggestion that *no* space reservations should be made and that an incumbent should provide space regardless of its demand forecasts, Mpower Comments at 38, is completely at odds with the Commission's conclusion in the *Local Competition Order* that "[a]llowing competitive entrants to claim space that incumbent LECs had specifically planned to use could prevent incumbent LECs from serving their customers effectively." 11 FCC Rcd at 15805-06, ¶ 604.

[31] Declaration of Ross K. Ireland in Support of Pacific Bell's Petition to Modify D.98-12-069 at 5-6, ¶ 13 ("Ireland Decl."), attached as Exhibit A to Petition of Pacific Bell (U 1001 C) to Modify D.98-12-069, *Rulemaking on the Commission's Own Motion to Govern Open Access to Bottleneck Services and Establish a Framework for Network Architecture Development of Dominant Carrier Networks*, R.93-04-003 *et al.* (Cal. Pub. Utils. Comm'n filed Mar. 24, 1999).

two years. A shorter period, such as one year, would create a shortfall from the period required for expansions and could result in held orders for critical transport services for both retail and wholesale customers.[32] This will impact CLECs the most, as they are the largest users of transport facilities today.

Some commenters have also urged the implementation of intervals as short as one year for common systems, such as switch, MDF, power, DSX, and DCS. *See, e.g.*, CTSI Comments at 48-49; Sprint Comments at 32-33; CoreComm Comments at 63-65; DSLnet Comments at 53-56; Mpower Comments at 65-68. Such a policy would severely impair the ability of both ILECs and CLECs to serve their customers.[33] Each of the aforementioned common systems elements requires growth architectures that use space adjacent to the existing equipment. If ILECs run out of technically required growth space in central offices because collocators had to be placed in space initially planned for common system growth, ILECs will not be able to attain the utilization specifications of common system equipment and thus will not be able to support as much traffic, including collocation traffic, in the existing central offices. For example, the Communications Module bays of the Lucent 5ESS-2000 switch must be grown contiguously; the extension of an MDF must occur adjacent to the existing frame; and power equipment requires double floor-load ratings and additional space for air circulation. Additionally, switching and DCS equipment have lead-length limitations based on the design of the equipment and the need for signals to be sent and responses to be received within specified time frames. The equipment cannot be grown into areas that do not meet these limitations, which means that the equipment cannot be grown as necessary to serve the customer base. Thus, a certain amount of space must

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[32] Ireland Decl. ¶ 15.

[33] Indeed, some CLECs in this proceeding recognize that a longer interval is needed. *See, e.g.*, AT&T Comments at 73-74 (requesting a three-year period for DCS and for switching

be reserved to accommodate these growth needs. Indeed, that is why states have recognized longer space reservation periods – of up to 20 years or the ultimate footprint of the equipment – for common equipment, depending on the conditions in offices in those states.

Moreover, as SBC noted in its initial comments, switching equipment must be fed by a single power source. SBC Comments at 53. If space is not available to accommodate the power source, the switching equipment cannot grow. Therefore, ILECs would need to build new wire centers or expand existing ones prematurely. Any required premature construction of new central offices and a split of existing wire centers would require CLECs to establish additional collocation arrangements in the new central office building to be able to continue to access loops previously served out of the original building.

For these reasons, common system equipment should be covered under a space reservation standard of the current year plus ten years. Commenters have provided no evidence that a briefer period would be appropriate, or that a national standard makes sense.

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equipment); Covad Comments at 47-48 (suggesting a five-year period for switching equipment).

FIFTH FURTHER NOTICE OF PROPOSED RULEMAKING IN CC DOCKET NO. 96-98

The Commission must apply two statutory provisions before modifying its unbundling rules to include new technologies and equipment. First, the Commission must conclude that the equipment satisfies the "necessary" and "impair" test of section 251(d)(2). Second, the Commission must consider section 706's mandate to make advanced telecommunications capabilities available to all Americans.

The Commission has already applied these provisions to packet switching, concluding that it should not be unbundled. The Commission was especially concerned that an unbundling requirement could deter investment in packet switching technologies and, in turn, keep these advanced technologies from benefiting consumers. *UNE Remand Order*, 15 FCC Rcd at 3840, ¶ 317. The Commission made clear that "in such a dynamic and evolving market, regulatory restraint on our part may be the most prudent course of action in order to further the Act's goal of encouraging facilities-based investment and innovation." *Id.* at 3840, ¶ 316. "[R]egulatory action should not alter the successful deployment of advanced services that has occurred to date." *Id.*

The Commission must heed those words in this proceeding. Commenters seek a host of onerous regulatory requirements that will stifle incumbents' incentives to deploy these next-generation technologies in the first place. Moreover, these carriers have fallen woefully short of establishing that they are "impaired" without the various new UNEs they seek. On the contrary, CLECs are thriving in the advanced services marketplace, and there is no evidence on this record that further regulatory interference in this market is necessary. New regulations will serve only to widen the already substantial gap between the Commission's treatment of ILECs and cable

providers, even though both are providing the same advanced services. The Commission must work to narrow that disparity, not widen it, as these commenters suggest.

I. Commenters Have Provided No Basis for Expanding the List of UNEs or the Definition of a Loop

Several commenters ask the Commission to use this proceeding to create new UNEs (or to expand the definition of a "loop" to include additional network elements). None of the requested elements, however, passes the "necessary" and "impair" threshold. Moreover, there are grave technical feasibility questions associated with many of the UNEs sought by commenters. And, in all cases, the requested unbundling will certainly chill incumbents' incentives to deploy this equipment in the first instance. AT&T concedes that ILEC deployment of these new architectures "will be of enormous benefit in supplying the bandwidth that will permit consumers to derive maximum value from the telephone network." AT&T Comments at 43. But these new architectures will never get off the ground if incumbents face burdensome regulatory requirements and sharing obligations.[34] *See* Verizon Comments at 33.

A. Optical Wavelength

Some commenters claim that ILECs should be required to offer optical wavelengths as separate UNEs or as part of the loop UNE. *See, e.g.*, Allegiance Comments at 31-34; Conectiv Comments at 29-31; CoreComm Comments at 47-48; CTSI Comments at 40-42; DSLnet Comments at 15-17; Mpower Comments at 51-53; @Link Comments at 7-8; Joint Comments at 68-70.

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[34] Mpower's proposed "Rocket Docket" for UNE applications ignores the critical statutory and policy questions implicated by the UNE determination. *See* Mpower Comments at 56-57. The Commission cannot take its responsibilities under section 251(d)(2) and section 706 lightly. Its prior UNE determinations have taken considerable time because of the enormity of the questions at stake. The room for error and the threat to competition and innovation presented by Mpower's suggestion is an affront to administrative process.

These commenters fail to get past the "impair" standard of section 251(d)(2). They make no showing that they are impaired without access to individual optical wavelengths. Indeed, dense wavelength division multiplexing ("DWDM") is not even widely available. The SBC ILECs currently anticipate *starting* trials of DWDM for transport next year, and they "do not yet have interoperability or design standards available for this equipment." SBC Comments at 57-58; *see also* Qwest Comments at 33-34. Thus, these commenters would have to claim impairment without access to something that is not even available.

Even if these commenters could clear the statutory hurdle of section 251(d)(2), the Commission should hold off on regulating this emerging technology. First and foremost, regulating DWDM prematurely and creating an unbundling obligation would assuredly deter ILECs from using this technology at all. The Commission made it clear in the *UNE Remand Order* that it would not interject regulatory obstacles in the path of technological advances. 15 FCC Rcd at 3840, ¶ 317. If the Commission determines that these wavelengths must be unbundled before they are even deployed, incumbents will inevitably be inclined to use alternative technologies. After all, the incumbent would be forced to bear all the risk associated with employing such a nascent technology but would have to share any benefits. As Justice Breyer pointed out, "a sharing requirement may diminish the original owner's incentive to keep up or to improve the property by depriving the owner of the fruits of value-creating investment, research, or labor." *Iowa Utils. Bd.*, 525 U.S. at 428-29 (Breyer, J., concurring in relevant part and dissenting in part).

Second, because this technology is in such a nascent stage, it is unclear whether and how unbundling could be accomplished. Verizon notes that it is not possible to separate DWDM into separate wavelengths. Verizon Comments at 34-35. There are no interoperability standards yet

in place, and commenters have provided no evidence that it would be technically feasible to unbundle these wavelengths. In contrast, before the Commission ordered the unbundling of the high frequency portion of the loop, it required extensive proof that such a shared facility would be feasible and would not deleteriously impact service quality.

B. Constant Bit Rate

A variety of commenters seek a Commission designation that they are entitled to unbundled access to "constant bit rate" ("CBR"). *See, e.g.*, Allegiance Comments at 35-38; Conectiv Comments at 31-32; CoreComm Comments at 48-49; CTSI Comments at 43-44; DSLnet Comments at 17-18; Mpower Comments at 49-51; Sprint Comments at 36; Rhythms Comments at 85-87. Others similarly ask for access to all quality of service ("QoS") classes, including CBR and variable bit rate ("VBR"), even if the incumbent does not offer such QoS classes itself. *See, e.g.*, Joint Comments at 68.

Before the Commission can order access to CBR – or any other QoS – it must determine that the equipment that houses this functionality passes the "impair" test. As SBC discussed in its initial comments and repeats here, commenters have failed to show that the electronics attached to the loop that provide this function satisfy that standard.

Moreover, there are substantial questions of service quality degradation if carriers are granted access to CBR because the bandwidth available is a shared resource. As SBC explained in detail in its initial comments, if CLECs are entitled to CBR and VBR, other uses of the shared facility will suffer. Specifically, unspecified bit rate ("UBR") users will experience service degradation. *See* SBC Comments at 65-70. As the number of CBR and VBR users grows, the degradation will increase and be manifested in traffic delay and traffic loss. *Id.* at 69. Moreover, because there is a finite amount of bandwidth, allowing CLECs access to CBR and VBR will

also decrease the number of customers that can be served. *Id.* at 69-70. Because CBR and VBR users are today generally business customers and UBR users are residential customers, allowing CLECs access to CBR and VBR will limit the reach of advanced services to mass market customers. This cannot be condoned under section 706 and the purpose of the 1996 Act. Rather, the Commission must allow the owner of the shared resource to control the traffic to maximize the use of these limited facilities.

C. Optical Concentration Devices

Some commenters ask the Commission to include optical concentration devices ("OCDs") in the definition of the loop UNE, or to declare the OCD itself a UNE. *See, e.g.*, @Link Comments at 10, Conectiv Comments at 25-28; CoreComm Comments at 44; Focal Comments at 28-29; CTSI Comments at 34-35.

As SBC explained in its initial comments, the Commission cannot simply decree that anything that is connected to the loop is part of the loop and thereby bypass the impair standard. Rather, the Commission must conclude that each element, whether attached or not to the loop, satisfies section 251(d)(2)'s standard. *See* SBC Comments at 58-59. The OCD fails to pass that test.

An OCD is technically an ATM switch, which is a packet switch. Under the Commission's unbundling rules, there is no general duty to unbundle packet switching. *UNE Remand Order*, 15 FCC Rcd at 3835, ¶ 306. Rather, an incumbent LEC's duty to provide packet switching is limited to situations in which (i) the incumbent LEC has deployed digital loop carrier systems; (ii) there are no spare copper loops capable of supporting the xDSL services the requesting carrier seeks to offer; (iii) the incumbent LEC has not permitted a requesting carrier to deploy a DSLAM at the remote terminal, pedestal or environmentally controlled vault or other

interconnection point, nor has the requesting carrier obtained a virtual collocation arrangement at these subloop interconnection points; and (iv) the incumbent LEC has deployed packet switching capability for its own use. *Id.* at 3838-39, ¶ 313.

Commenters have offered no grounds on which the Commission could reverse its decision not to unbundle packet switching. Although AT&T suggests that the Commission should no longer consider the availability of spare copper in determining when packet switching should be unbundled, AT&T Comments at 50-52, 60, the availability of spare copper assuredly *does* give CLECs an alternative means of providing DSL service. AT&T makes no effort to apply the Commission's test for impairment if spare copper is available. AT&T instead claims, with no support, that CLECs cannot match the service capabilities of ILECs with spare copper. Even if true – and it is not – that falls far short of the 1996 Act's limiting standard, which is "impair[ment]."

Nor has any other commenter shown impairment without access to the OCD. Carriers are not impaired in their ability to provide voice service without the OCD because carriers still have access to unbundled loops. Nor are carriers impaired in their ability to provide advanced services. As SBC detailed in its initial comments, this is a thriving market with multiple modes of entry. SBC Comments at 60-61. The incumbents do not own bottleneck facilities in the marketplace for advanced services; cable has the commanding lead. *Id.* Potential entrants can make no claim that they are impaired in their ability to be successful providers of broadband services without access to additional UNEs, and they have made no such claim in their comments.

Even if carriers could show impairment – and they plainly have not – they have no response to the grave chilling effect unbundling packet switching would have on incumbents. As

the Commission concluded in the *UNE Remand Order*, unbundling packet switching such as the OCD would curb the incentives of incumbents to invest in new technologies, to the detriment of consumers. *See* 15 FCC Rcd at 3839, ¶ 314, 3840, ¶ 316. This fundamental analysis has not changed since the Commission released its *UNE Remand Order*. If anything, it is even more critical that the Commission refrain from over-regulating incumbents. The gap between cable and incumbent LEC regulation places incumbents at a decided disadvantage in the broadband marketplace. Cable's enormous lead is a testament to the obstacles the Commission has placed in front of incumbents. It is critical that the Commission not block incumbents from competing in the advanced services marketplace or detract them from making the enormous investments that are critical to bringing advanced services and competition to the mass market.

AT&T, however, tries to claim that the competitive landscape has changed. AT&T argues that incumbents are capturing a greater percentage of ADSL customers than CLECs. AT&T Comments at 58-59. AT&T bases this sweeping claim on SBC's performance in a single state. The Commission's own factual findings, which reflect the entire advanced services market, show that CLECs lead ILECs in subscribership growth rates. *Section 706 Report*[35] ¶ 191 (ILECs reported increases of between 25 percent and 50 percent, whereas CLECs reported increases of between 50 percent and 80 percent). In any event, AT&T makes no attempt to respond to the Commission's valid concern that unbundling would chill incumbents' incentives. None of AT&T's claims go to the question of an incumbent's incentives; if anything, they are relevant to the "impair[ment]" inquiry. As SBC has shown, carriers are not impaired; but, in the

[35] *See* Second Report, *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable And Timely Fashion, and Possible Steps To Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996*, CC Docket No. 98-146, FCC 00-290, 2000 WL 1199533 (rel. Aug. 21, 2000) ("*Section 706 Report*").

UNE Remand Order, the Commission did find impairment as to small business and residential customers *and* still declined to order unbundling because of the negative effects such a requirement would have on investment in advanced services. Neither AT&T nor any of the other CLEC commenters has shown that this disincentive effect is illusory.

D. Line Cards

A host of commenters seek unbundled access to the ILEC's line cards, either as part of the loop or as a separate UNE. *See, e.g.*, CoreComm Comments at 43; CTSI Comments at 31-39, 44-46; Focal Comments at 27-29; @Link Comments at 5-7.

Line cards provide the same functionality as a DSLAM. A line card is an integrated piece of technology having both POTS and DSLAM capabilities as well as the "splitter" functionality. Thus, it falls well within the Commission's definition of packet switching, which is defined as:

> In packet-switched networks, messages between network users are divided into units, commonly referred to as packets, frames, or cells. These individual units are then routed between network users. The switches that provide this routing function are "packet switches," and the function of routing individual data units based on address or other routing information contained in the units is "packet switching."

UNE Remand Order, 15 FCC Rcd at 3833, ¶ 302.

The same analysis regarding packet switching and advanced services that applies to OCDs applies with equal force to line cards. The Commission has already concluded that carriers are not impaired without access to packet switching equipment, such as line cards, in serving the medium and large business segment of the market. *Id.* at 3835, ¶ 306. And the Commission's factual findings in the *Section 706 Report* demonstrate that carriers are not impaired without access to packet switching in serving the small and residential segment of the market. Without having unbundled access to this equipment, CLECs have still led ILECs in

subscribership growth rates, and the number of CLECs providing advanced services is on the rise as well. *See Section 706 Report* ¶¶ 191-194.

Moreover, requiring incumbents to unbundle line cards would, as with packet switching generally, create a disastrous chilling effect on the deployment of this technology. As several incumbents have pointed out to the Commission, comprehensive regulation will discourage the deployment of this type of equipment. *See, e.g.*, Verizon Comments at 33-36; BellSouth Comments at 6-9; SBC Comments at 62-63.

And, finally, unbundling line cards would result in inefficient network utilization that would deprive customers of advanced services. If carriers were able to obtain unbundled access to line cards, they could prematurely exhaust the system capacity. As SBC noted in its initial comments, its Project Pronto architecture transports data over a shared OC-3c, which has a maximum, unexpandable capacity. SBC Comments at 63. If a CLEC had unbundled access to a line card, it could prematurely exhaust the system's capacity and prevent others from using the service. Moreover, as discussed above, unbundling the line card will not permit carriers to provide different "flavors" of DSL because of incompatibility issues with the software. Thus, it would be both unauthorized and unwise for the Commission to mandate the unbundling of this equipment.

E. Broadband Loop UNEs

Some commenters make vague requests for access to a so-called "broadband loop UNE." *See, e.g.*, Rhythms Comments at 92 (arguing for such access where a CLEC cannot collocate a line card). Others ask the Commission to invent a new network element that they call the SEEL: the sub-loop enhanced extended loop. *See* Joint Comments at 89-92.

Before any such UNE combination could be declared, however, each element that comprises the combination would have to satisfy the "necessary" and "impair" test. *See Iowa Utils. Bd.*, 525 U.S. at 392 (noting that the UNE platform could become "academic" once the Commission properly applies section 251(d)(2) to each element that comprises that combination). Although commenters do not specify what, exactly, they wish to have unbundled as part of a "broadband loop UNE," it is clear that some elements of the "broadband loop UNE," as well as the "SEEL," fail that standard.

The broadband loop UNE sought by these commenters includes packet switching, either the OCD at the central office or the line cards in the remote terminal, or both. As discussed above, commenters have failed to establish that either of these elements passes muster under the "impair" standard. Carriers have ample opportunities to provide advanced services without access to packet switching. Aside from the various available technologies outside the incumbent's network – such as cable, fixed wireless, and satellite – carriers have several options using the incumbent's network. CLECs may access unbundled copper loops and provide DSL service by using a DSLAM. In service areas of SBC ILECs, carriers have access to the SBC ILECs' end-to-end wholesale Broadband Service at UNE rates. Moreover, the Commission has already concluded – and there is no basis for departing from that conclusion – that unbundling packet switching would be contrary to section 706 of the Act. *See UNE Remand Order*, 15 FCC Rcd at 3835, ¶ 306 ("we will not order unbundling of the packet switching functionality as a general matter").

In addition, even if each element that comprises the "broadband loop UNE" could somehow pass the "impair" test and section 706, the *combination* of these elements would not itself be a UNE. Rather, as the Eighth Circuit recently reiterated, the incumbents would be under

no obligation to combine the elements that comprise the combination. *See Iowa Utils. Bd. v. FCC*, 219 F.3d 744, 757 (8th Cir. 2000).

This same analysis condemns the Joint Commenters request for the "SEEL." The Enhanced Extended Link (EEL) is defined by the FCC in its *UNE Remand Order* as the unbundled loop, multiplexing/concentrating equipment, and dedicated transport. 15 FCC Rcd at 3908, ¶ 477. The FCC has declined to define the EEL as its own network element, instead recognizing that it is the product of separate network elements. *Id.* ¶ 478. The "SEEL" is also not its own network element, but a combination of elements, not all of which satisfy the "impair" standard. In particular, to the extent the "SEEL" includes packet switching functionality – which is the only way it could be provided – it fails to satisfy section 251(d)(2) and 706.

F. Splitters

IP Communications asks the Commission to declare splitters part of the loop. IP Communications Comments at 3-4. Again, the Commission cannot simply expand the loop UNE to include other network elements. Section 251(d)(2) requires that the Commission conduct the "necessary" and "impair" analysis before unbundling splitters.

In the *Line Sharing Order* and the *Texas Order*, the FCC made clear that ILECs have no obligation to provision line splitters for purposes of line sharing or line splitting. *See Line Sharing Order*, 14 FCC Rcd at 20949, ¶ 76 (whether to own splitter subject to ILEC discretion); Memorandum Opinion and Order, *Application by SBC Communications Inc., et al. Pursuant to Section 271 of the Telecommunications Act of 1996 To Provide In-Region, InterLATA Services in Texas*, CC Docket No. 00-65, FCC 00-238, ¶ 327 (rel. June 30, 2000) ("incumbent LECs therefore have no current obligation to make the splitter available"). It is not surprising that IP Communications makes no effort to conduct an "impair" analysis in its attempt to get the

Commission to override these decisions, for splitters are readily available on the open market, and there is simply no evidence that CLECs are impaired without ILEC splitters. On the contrary, a multitude of CLECs are deploying their own splitters, including Rhythms and SBC's separate affiliates, ASI and AADS.

II. The Commission Should Not Restrict Incumbents' Ability To Retire Copper Loops

Some of the commenters ask the Commission to impose severe restrictions on an incumbent's ability to retire copper loops. Some would limit ILECs' ability to retire copper loops until requesting carriers are able to provide all the services from remote terminals that they now are capable of providing. *See* CompTel Comments at 15-17. Another suggestion is that incumbents be prohibited from retiring copper loops for 10 years so that CLECS can "adequately finance and implement business plans." Mpower Comments at 61 (internal quotation marks omitted); CoreComm Comments at 51; Joint Comments at 94; Allegiance Comments at 6-7; @Link Comments at 14; Conectiv Comments at 36; DSLNet Comments at 5. Rhythms goes as far as to argue that CLECs should have the right to plan the incumbent's network. Rhythms Comments at 71-72.

These requests are completely at odds with the 1996 Act, the Eighth Circuit's decision in *Iowa Utilities Board*, and fundamental tenets of competition. Incumbent LECs – just as much as CLECs – have the right to design their own services and manage their networks. The Commission and the courts have repeatedly and consistently rejected proposals that would require incumbents to maintain obsolete equipment solely for the use of their competitors. The Eighth Circuit's decision in *Iowa Utilities Board* explains that the incumbent is under no obligation to provide interconnection that is better than what the ILEC has chosen for its own operations. *Iowa Utils. Bd. v. FCC*, 120 F.3d 753, 812-13 (8th Cir. 1997), *aff'd in relevant part*,

219 F.3d 744 (8th Cir. 2000). If an incumbent chooses to remove copper for its own use, CLECs cannot force the incumbent to maintain that copper for their benefit. Indeed, to do so would impede the progress of technology and competition – a result in direct conflict with the goals of the 1996 Act.

It was for this reason that the Commission recently held in its *Line Sharing Order* that an incumbent is under no obligation to refrain from upgrading its plant. The incumbent is free to construct new facilities or decommission existing ones, or migrate its customers from copper to fiber. 14 FCC Rcd at 20950-51, ¶ 80. CLECs can use alternative UNEs, construct their own facilities or lease them from an alternative provider, "or find another alternative to maintain service." *Id.* Commenters have offered no reasonable explanation for the Commission to depart from this conclusion. Such a departure, moreover, would surely curb an incumbent's incentives to invest in new technologies. If an incumbent must simultaneously maintain old facilities when it deploys new ones, it will be less inclined to make the investment in advanced technologies.

Nor have commenters shown that carriers have adopted unreasonable loop decommissioning practices. SBC, for example, will notify a CLEC six months in advance when a copper home run cable will be retired, which gives ample opportunity for any CLEC to purchase and use these loops for its benefit. Indeed, the CLEC can purchase the cable without having to incur any installation costs or time delays.

III. No Modification to OSS Systems Is Necessary

Some CLECs ask the Commission to reiterate that incumbents have the obligation to provide mechanized real-time, electronic access to ILECs' OSS functions for pre-ordering, ordering, provisioning, maintenance and repair, and billing of loops. *See, e.g.*, IP Communications Comments at 11-12; Joint Comments at 86-87; Rhythms Comments at 82. The

Joint Commenters argue that the Commission must amend its rules to ensure that CLECs have access to remote subloop testing. Joint Comments at 86.

CLECs already have access to these functions. The Commission has already ordered ILECs to make available through its gateways, graphical user interfaces, and proprietary systems, *e.g.*, Electronic Data Interchange (EDI), Local Service Request Exchange (LEX) and Service Order Retrieval and Distribution ("SORD"), respectively. *See UNE Remand Order*, 15 FCC Rcd at 3884-87, ¶¶ 426-431.[36] In addition, the deployment of NGDLC has not impeded a carrier's ability to engage in testing. "Carriers are able to test and monitor an SBC ILEC's loop and subloop facilities using a mechanized loop test ("MLT") system." SBC Comments at 72. Moreover, as new products and technologies are developed, SBC ILECs will continue to provide such access to OSS functions required by the CLECs.

To that end, the SBC ILECs host a number of two-way collaborative sessions with all interested CLECs to identify *further* OSS functionality enhancements in an attempt to meet the needs of CLEC customers. One such meeting is the Change Management Process ("CMP") meeting that SBC ILECs conduct. The CMP meetings cover all changes to SBC ILECs' OSS. The meeting's format includes a "Development View" of proposed system changes over the next 12 months, a flow-through matrix shared with the CLECs, an Action Item matrix for review, and CLEC Change Requests ("CCR"). In this forum, all interested CLECs can present to the SBC ILECs their OSS requests, as well as understand the SBC ILECs' schedule for meeting agreed-

[36] The Commission has made clear that CLECs are entitled to access to ILEC *information*, not direct access to back office systems. *See UNE Remand Order*, 15 FCC Rcd at 3885-86, ¶ 428 ("[T]he incumbent LEC must provide access to the underlying loop qualification *information contained in* its engineering records, plant records, and other back office systems.") (emphasis added).

upon deployments and Commission mandates. CMP meetings are held monthly or quarterly as requested by the industry or individual state commissions.

A second type of meeting that the SBC ILECs host to meet the needs of CLECs is the CLEC User Forum ("CUF"). The CUF was developed during the SBC/Ameritech merger negotiations and is designed to address all non-OSS-related issues. In this forum, SBC ILECs and CLECs discuss elements of providing local service that are manual in nature. This may include items like Coordinated Hot Cuts or Slamming. CLECs are encouraged to bring their concerns to these meetings and an ongoing Action Item log is maintained to track issues. The CUF also provides a website for CLECs to use to communicate with SBC ILECs between meetings.

These collaborative meetings have been quite successful. For example, the SBC ILECs have agreed to provide 45 elements of loop qualification as part of its collaborative sessions with CLECs to implement SBC/Ameritech Merger Conditions.[37] Moreover, if a CLEC identifies –

[37] These 45 elements are: loop length (includes both the feeder pair (F1) and the distribution pair to the customer's terminal (F2); loop length by segment; length by gauge; 26 gauge equivalent loop length (calculated); presence of load coils; quantity of load coils (if applicable); presence of bridge taps; length of bridge taps (if applicable); presence of pair gain/Digital Loop Carrier ("DLC"); qualification status of the loop based on specified Power Spectral Density mask ("PSD"), and if no PSD class is specified, the default PSD is class 5 (ADSL); source of data – actual or designed; location of load coils; presence of repeaters; type of repeaters; location of repeaters; quantity of repeaters; type of plant (aerial or buried); type of loop (copper or fiber); availability of spare facilities; location of bridged tap; quantity of bridged tap by occurrence; location of bridged tap by occurrence; quantity of range extenders; location of range extenders; location of pair gain devices; type of DLC; location of DLC; quantity of DLC; presence of DAML; presence of disturbers in same or adjacent binder groups; loop medium; whether the loop originates at a Remote Switching Unit (RSU); location of RSU; type of RSU; resistance zone; whether the loop originates at an ADSL Capable Remote Terminal (RT); whether the loop originates at a Non-ADSL Capable Remote Terminal (RT); indicator of whether ADSL Capable RT is available; target date of when ADSL Capable RT will be deployed; location of ADSL Capable RT by address; location of ADSL Capable RT by CLLI; location of non-ADSL Capable RT by address; location of non-ADSL Capable RT by CLLI; Wire Center Code; Taper Code.

either in a collaborative session or otherwise – any additional loop qualification element that it believes is not currently being provided electronically, and it is technically feasible to provide it through an OSS interface, then the SBC ILECs and CLECs can prioritize the work of providing that new information as part of a future OSS system release.

Thus, it is plain that no modification to existing OSS rules is necessary because the current process already accommodates new technology.

IV. The Commission Cannot Require ILECs To Modify Their Facilities To Allow Carriers Greater Access to the Subloop at the RT

GSA urges the Commission to require incumbent LECs to provide cross-connect facilities at "any technically feasible point," including RTs. GSA Comments at 14. IP Communications suggests that cross-connects are more efficient than hard splicing of cable. IP Communications at 16-17.

The Eighth Circuit has made clear, however, that incumbents cannot be required to modify their existing network for CLECs to have greater access. CLECs are entitled access "only to an incumbent LEC's *existing* network – not to a yet unbuilt superior one." *Iowa Utils. Bd.*, 120 F.3d at 813; *see also Iowa Utils. Bd.*, 219 F.3d at 757-58.

These commenters also ignore the fact that forcing ILECs to build additional access points would involve significant additional costs. If ILECs were required to redesign the plant and place additional access points at all RT locations, on the chance a CLEC might want access, the cost would be astonishing. For example, in the SBC ILECs' service area, approximately 20,000 additional RT sites are being installed or retrofitted to provide ADSL service. Given that the typical RT serves no more than two thousand living units, the cost per subscriber would be significantly in excess of the revenue generated, thus making high speed access from the home uneconomical.

In addition to the excessive costs of constructing additional access points at all RT locations, there would be increased costs associated with maintenance and OSS modifications. As NorthPoint notes in its comments, "[t]he fewer transport links used in NorthPoint's DSL service, the fewer opportunities there are for transport circuit failures." NorthPoint Comments at 7 n.14. Operational support systems will also need to be assessed to determine what impact the additional cross-connect point will have on existing automated assignment and provisioning systems. Additional time and cost will also be involved when provisioning the network for the service. A technician will be required to place another cross-connect jumper to provide the path from the CLEC equipment to the subscriber location, thus increasing the cost of the service.

Finally, commenters have failed to demonstrate a need for this arrangement. As SBC pointed out in its initial comments, hardwire arrangements are now available, and they decrease the potential for service interruptions and lower provisioning and maintenance costs. SBC Comments at 75-76. Moreover, if there is a need to access the subloop at locations other than existing access points or locations, a process similar to the SCA process that SBC has agreed to in its voluntary commitments in the *Pronto Modification Order* could provide a means to that access. This type of modification, on a site-by-site basis, would permit a CLEC to access all subscribers served by that location.

V. An Advanced Notification Requirement for Fiber Deployment Would Be Unlawful and Would Stifle Incumbent Incentives

Some carriers ask the Commission to require incumbents to "publicly disclose," either to the Commission or to state commissions, "in advance any plans it may have to deploy NGDLC systems that affect a specified percentage of subscribers within its region." CompTel Comments at 13. For example, the Joint Commenters argue that they need at least twelve months notice of any planned roll-out. Joint Comments at 92-94. Some commenters go still further and ask that