According to AT&T, a single CLEC switch can serve customers over a 125-mile radius.[46] Using AT&T's own estimate, existing CLEC switches could serve customers in areas accounting for 99% of Ameritech's access lines.

Not only do these switches reach most customers, they offer sufficient *capacity* to accommodate even the most optimistic market share projections of CLECs for the next few years. Assuming conservatively a capacity of 50,000 lines per switch, the 724 CLEC switches could serve 36 million lines – more than 21% of all U.S. access lines. They could serve 64% of all business lines and 33% of all residential lines.[47] In the Ameritech region, existing CLEC switches have the capacity to serve 27% of all access lines.[48]

These data demonstrate that the unbundled local switching is not, for the most part, necessary to bring the benefits of competition to consumers in many areas of the country. The existing CLEC switch infrastructure can already be used to that end, even without further switch deployment. But switch deployment continues apace. Indeed, if CLECs continue to deploy switches at their current pace, they will have deployed more than 1000 switches by the end of this year. Assuming, again, a conservative 50,000 line capacity, CLECs would have deployed by the end of this year a sufficient number of switches to serve almost one third of the nation's access lines.

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[46] *Id.* AT&T is, in fact, using switches to serve customers over even greater distances. For example, it uses a switch in Grand Rapids, Michigan to serve Perkins, Michigan, which is 217 miles away. *id.*

[47] Table 2.4 of the *Preliminary Statistics of Communications Common Carriers* reports 109.5 million residential switched access lines and 56.6 million business switched access lines in the United States in 1998.

[48] *See* Aron-Fitzsimmons-Harris Reply Affidavit at n. 86.

The reason for this explosion in CLEC switch deployment is simple. CLECs can deploy switches quickly, easily, and on a cost-effective basis. No less than ten switch vendors compete vigorously for CLEC business. This competition has spawned dramatic decreases in switch prices over recent years, making switches much more affordable than they were when most ILEC switches were purchased.

Equally important, vendors have targeted CLECs as a key growth market, and they have developed a range of switching options that cater to specific CLEC needs. For example, CLECs can purchase fully scalable (*i.e.* expandable) switches, thereby acquiring switch capacity only as they actually need it.[49] They can also deploy switches far more quickly and with less technical expertise than would have been possible three years ago. Hence e.spire reports that its typical switch installation now takes no longer than 28 weeks from the time an order is placed until the time the switch is turned up.[50]

Vendors also provide CLECs generous financing arrangements which further minimize up-front expenses. For example, Winstar's Chief Executive Officer said in an interview with Dow Jones that:

> Winstar's pact with Lucent made Winstar 'fully funded to free cash flow' and that the company now has the financing in place to increase its roll-out to 50 cities in the US and another 50 overseas. [Up to the point of the Lucent pact], we were the *only* CLEC not to tap vendor financing in any meaningful way."[51]

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[49] One switch, sold by Coyote Technologies, can be installed at a line threshold below 500. *UNE Fact Report* at n. 69.

[50] *Id.* at I-30. Lucent even offers "prefab"switches that can be installed in just 40 days. *Id.*

[51] Craig Karmin, *"Winstar-Lucent Pact: CEO Says Fully Funded to 100 Cities,"* Dow Jones News Service, Oct. 22, 1998 (emphasis added).

Indeed, vendors finance more than just the capital cost of the switch itself; they also finance engineering, deployment and testing expenses. They may even provide financing to cover unrelated cash-flow needs – so much so that the CEO of Star Telecom commented facetiously: "One vendor was offering me 125 percent financing, so every time I needed to make payroll, I bought a switch."[52]

Given the existing deployment of CLEC switches and the ease with which CLECs can deploy (and are deploying) additional switches, there is simply no basis for AT&T's and MCI WorldCom's claim that mass market competition is impossible without ubiquitous access to unbundled local switching. Mass market competition could begin today in many areas of the country if CLECs were so inclined to decentralize their focus.

That is not to say that CLECs could compete *everywhere* with their own switches. Ameritech recognizes that these switches do not yet serve every geographic area. But Ameritech does not ask the Commission to eliminate unbundled local switching in *every* wire center. It asks only that unbundled local switching not be required in wire centers where collocation is available and that are located in a rate center to which a CLEC switch *has been* assigned. Indeed, the collective capacity of CLEC switches in these rate centers (*i.e.,* the percentage of lines CLEC switches could accommodate) is greater than indicated above because the percentages cited above were for the entire country and Ameritech's entire territory, not just rate centers in which CLECs had already obtained collocation and to which they had assigned switches.

Ameritech also recognizes that some of these CLEC switches have not been scaled to capacity. Once a switch is installed, however, capacity can be readily added as

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52 *Id.* at I-31.

and when needed. Certainly no credible claim could be made that the cost of adding capacity to an existing switch infrastructure is too expensive or time-consuming to be economically viable.

In short, by combining unbundled local switching with switches that already have been deployed, CLECs could compete in every market for every customer. They could do so without deploying new switches, and they could do so for the next several years. There simply is no basis to the claim that a massive and unrealistic investment would be required before switch-based competition can become a reality.

iii. Collocation Costs Are Not a Barrier to Switch-Based Competition.

AT&T and MCI WorldCom argue further that CLECs are at a disadvantage in using their own switches because of the costs they incur in bringing unbundled local loops to those switches.[53] While MCI WorldCom does not elaborate, AT&T cites, in particular, (i) the non-recurring charges for coordinated hot cuts; and (ii) the costs of establishing and equipping collocated space and of hauling traffic from the ILEC switch to the CLEC switch.[54]

Ameritech addresses these arguments in detail in the Aron-Fitzsimmons-Harris Reply Affidavit. As shown therein, AT&T has it exactly backwards: it is not CLECs

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[53] AT&T Comments at 93-98; MCI WorldCom Comments at 51.

[54] AT&T also claims that CLECs face difficulties in determining where they should place their switches and what size and type switch they should use. It goes so far as to assert that "[t]o enter the local market on a broad scale using their own switches, CLECs would have to deploy those switches relying on little more than guesswork about the location and calling patterns of those customers they are able to win from the incumbent." AT&T Comments at 97. This is just silly, but is particularly silly coming from AT&T, which has been operating the largest telecommunications network in the country for decades. The simplest answer to this claim is that AT&T would not have invested $100 billion-plus purchasing cable networks to provide local service if it could rely on "little more than guesswork" in placing and sizing its switches.

that are at a cost disadvantage in using their own switches; it is ILECs. While it is, of course, true that CLECs face collocation costs that ILECs do not face, CLECs enjoy overall cost advantages in the provision of switching that are not available to ILECs.[55] Specifically, as mentioned above, dramatic reductions in transport costs and improvements in both digital line carrier and switch technology enable CLECs to employ a much more efficient switching architecture than that used by the ILECs. It enables them to haul traffic much further distances and to serve equivalent customer bases with much fewer switches.

As shown in the Affidavit of William Fitzsimmons, attached to Ameritech's comments, these efficiencies translate into significant savings which can easily offset the costs of collocation.[56] Significantly, in his analysis, Dr. Fitzsimmons fully considered CLEC collocation costs. Indeed, he assumed *higher* collocation costs than are alleged by AT&T. He also made a number of other overly-conservative assumptions that likely overstate CLEC costs and understate their revenues. He found, nevertheless, that CLECs

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[55] As indicated above, it is particularly ironic that AT&T would claim that it cannot compete viably with self-supplied switching by pointing to one of many costs entailed in the provision of switching. That is precisely the type of argument that AT&T previously characterized as "completely misplaced[.]" *See* AT&T Reply in the *AT&T Streamlining Proceeding supra* at 22. Indeed, when confronted with arguments by smaller interexchange carriers that AT&T enjoyed significant access cost advantages, AT&T responded by arguing that some carriers have certain kinds of advantages while others have different advantages and that "[t]he issue for the Commission, therefore, is not to weigh and compare the different 'advantages' each carrier possesses, but to determine whether any of those advnatages precludes the effective functioning of a competitive marketplace." *Id.* at 22-23. AT&T has either a short memory or an extremely adaptible world view.

[56] Recall, for example, that the median wire center of the major ILECs serves fewer than 5000 lines and that eighty percent of ILEC wire centers serve less than 20,000 lines. To the extent a CLEC can deploy digital loop carrier to aggregate traffic and build one large switch, instead of many small switches, the costs of the DLC equipment are offset in large part by the switching economies. For example, a CLEC in Indianapolis could use one single large switch to compete against the 27 switches used by Ameritech.

can provide competitive local exchange service to both residential and business customers using self-supplied switching and transport on a highly profitable basis in both large and small metropolitan areas for both business and residential customers.

Of course, Dr. Fitzsimmons' model only proves the obvious. If collocation costs were the barrier to self-provisioned switching that AT&T claims, CLECs would not have installed switches at a rate of two every three days for the past three years. Nor would CLECs be *obtaining* collocation space on ILEC end offices at such a rapid pace. Already at least one CLEC is collocated in 30% of Ameritech's wire centers. On a national basis, the FCC estimated last year that as of mid-1998, CLECs were collocated in some 5000 wire centers.[57] Given the phenomenal rate at which CLECs are expanding their collocation arrangements, that number is bound to be much higher today.

B. The Hot-Cut Process is Not a Barrier to Mass Market Competition.

In addition to arguing that the cost of collocation effectively precludes CLECs from using their own switches on a mass market basis, AT&T and MCI WorldCom also argue that the so-called "hot-cut" process – the process by which unbundled local loops are disconnected from ILEC facilities and reconnected to CLEC facilities – is inherently incompatible with mass market competition. They argue, in particular, that ILECs are unable to perform coordinated cut-overs for unbundled loops in quantities sufficient to support mass market entry and that ILEC's loop provisioning processes are ill-defined and error-prone.

As detailed in the Affidavit of John Mayer, attached hereto as Exhibit B, these claims do not square with the facts. Ameritech, not only has more than enough capacity

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[57] *Local Competition*, FCC Industry Analysis Division, Dec. 1998 at 6.

to provision unbundled loops at a rate that far exceeds any reasonably forseeable level of demand, it has well-established, published procedures to ensure that these processes are both efficient and reliable. Indeed, Ameritech has already provisioned 185,000 unbundled loops to CLEC switches (without a single request for unbundled local switching), and CLECs have submitted forecasts to Ameritech indicating that they will need another 117,000 unbundled loops by the end of 1999. That would not be occurring if the provisioning process were as cumbersome and flawed as AT&T claims.

Even more telling is that AT&T would not have invested $120 billion (thus far) in a cable telephony strategy if, as it claims, even the coordinated hot-cut process is too labor intensive to support mass market competition. The conversion of a customer to cable telephony is far more labor intensive than the hot-cut process. As AT&T explained in an *ex parte* filed last fall, that conversion does not merely require a significant amount of manual work, it requires a *site visit* to the customer's premises to install a cable splitter and then to cross-connect to the existing inside telephone wire.[58] It also requires that the customer be out of service for a period of time and that AT&T coordinates with the ILEC to permit the telephone number to be ported. Given these requirements, AT&T's claim that the "hot-cut" process is too labor-intensive is nothing more than posturing.

This is confirmed by Schedules 1 and 2 in the Affidavit of John Mayer. These schedules show Ameritech's ability to accommodate CLEC demand for cross-connect work. Schedule 1 shows the number of frame technicians currently assigned, on average, to large, medium, and small central offices. It also shows the capacity of these technicians to complete coordinated cut-overs, assuming they work a 40-hour week.

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[58] *See ex parte* letter from Robert Quinn, Jr., Director- Federal Government Affairs, AT&T, to Magalie Roman Salas, Secretary, FCC, Nov. 17, 1998, filed in CS Docket No. 98-178.

With these staffing levels, Ameritech will provision an estimated 170,000 CLEC loops this year.

Column 3 of Schedule 1 and Columns 1-4 of Schedule 2 show Ameritech's ability to augment capacity in the event of an increase in the number of cut-overs it must perform. Column 3, Schedule 1, for example, shows the incremental cut-over capacity that Ameritech could achieve if its existing technicians worked two hours of overtime per day and six to eight hours on Saturdays. Schedule 2 shows the incremental capacity that Ameritech could achieve by hiring additional technicians and, if necessary, using overtime. Significantly, new technicians can be trained in four weeks, giving Ameritech ample time to add technicians, assuming CLECs provide reasonably accurate forecasts of their unbundled loop needs.

These schedules show that, contrary to the assertions of AT&T and MCI WorldCom, Ameritech can more than accommodate any reasonably forseeable provisioning requirements attendant to mass market competition. In large offices, for example (those with 50,000 to 165,000 lines),[59] Ameritech can increase its capacity by forty percent just by using overtime. This increase in capacity alone would enable Ameritech to cut-over 18% of all the lines in a large central office in a single year. By adding technicians, and, if necessary using overtime as well, Ameritech could cut-over the entire central office in less than a year, just by using the incremental capacity.

For medium-sized offices (those with 15,000 to 50,000 lines), the story is identical: the incremental capacity from overtime alone could be used to cut-over 18% of

[59] Large central office may contain more than one switch; hence they may serve as many as 165,000 lines. To the extent these offices contain multiple switches, Ameritech is able to (and does) assign multiple teams of technicians to handle loop cut-overs in those offices.

an end offices' lines in a year; additional hiring would permit the entire office to be cut-over. For small-sized offices, the numbers are even higher.

Significantly, these percentages are not based on pie-in-the-sky speculation. They are based on records of actual performance - specifically Ameritech's Operations Activity Based Time Reporting System and jumper activity tracked in its Frame Operations Management System.[60] Given these facts, which stand in stark contrast to AT&T's and MCI WorldCom's speculation, no credible claim can be made that Ameritech cannot provision in a timely fashion all of the loop cut-overs that would be necessitated if CLECs chose an aggressive mass market strategy.

Equally specious are claims that Ameritech's processes are undefined or error-prone. Ameritech has been provisioning unbundled loops since before the 1996 Act took effect and has a great deal of experience in this area. As noted, it has provisioned 185,000 loops during this time and projects an additional 131,000 cut-overs before the end of the year. The intervals and processes for provisioning loops are largely established in Ameritech's interconnection agreements. Those agreements also establish deadlines for Firm Order Commitments, coordination activity, and testing. If Ameritech misses these deadlines, it is subject to contractual remedies. In addition, Ameritech provides all CLECs who purchase unbundled loops with monthly performance reports. If those reports show that Ameritech is not meeting its contractual obligations, the interconnection agreements specify escalation procedures and other remedies. Of course,

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[60] These records show that each frame technician can run a jumper in, on average 6.9 minutes. Ameritech then adjusted this figure upward to account for time spent on other miscellaneous activities, such as reading and closing out orders and for employee breaks.

parties may also file a formal complaint with regulatory authorities. To date, none have done so.

Given these facts, claims that the hot-cut process are a barrier to mass market competition are lacking in credibility. Ameritech can provision all conceivable loop cut-overs on a timely basis, and in accordance with standardized procedures and performance reporting requirements that are spelled out in its interconnection agreements.

C. CLECs Have No Intention of Using the UNE-P To Provide Ubiquitous Mass Market Service Even if They Could.

Since it is readily apparent that both AT&T and MCI WorldCom could, if they so chose, serve the mass market ubiquitously with their own switching equipment, it is reasonable to ask why they nevertheless seek access to unbundled local switching. The answer is simple: they can earn enormous profits using the UNE-P to serve business customers, whose services are priced above cost to finance cheap residential service. In addition, they can earn large profits serving high-end residential customers who make lots of long-distance calls because of access cost savings.

These carriers have no intention, however, of using the UNE-P to serve mass market customers, as they claim. Indeed, MCI WorldCom has little interest in the residential market at all. As the New York Times reported just this week:

> As MCI discussed its investment plans at [its first meeting for analysts and investors in more than two years], *the focus was not on household telephone service but on Internet and overseas expansion. Before acquiring MCI, Worldcom served hardly any residential customers, and none of the top former Worldcom executives seem particularly enthusiastic about consumer markets now. They have that luxury*

largely because they have Uunet, the No. 1 Internet service provider, which mostly serves businesses and other Internet service providers.[61]

AT&T, on the other hand, is pursuing a residential strategy, but it does not need or want the UNE-P to serve the "mass market." Indeed, the UNE-P would be of no utility in serving most residential consumers. For most consumers, resale is the better option. Because business services have historically subsidized residential services, the rates for basic residential service are generally below even the forward-looking costs of providing that service. Consequently, the wholesale cost of providing competitive residential service through the UNE-P is almost always above the cost of providing that service through resale. Indeed, use of the UNE-P for residential service is advantageous vis-à-vis resale only for customers who make large numbers of long-distance calls, where switched access savings offset the cost disadvantage of the UNE-P for local service.

As seen in this light, AT&T and MCI WorldCom's purported need for the UNE-P is sheer pretense. Their comments reflect a cynical manipulation of a political climate in which the Commission faces increased pressure to "deliver" residential competition.

Analysts understand why residential competition has yet to develop on a widespead basis. They recognize that "the real issue regarding local service is the historical treatment of consumer prices versus business prices. Consumer phone service is subsidized by more expensive business phone service. This often-overlooked reality is at the root of the problem regarding residential competition."[62] Analysts also recognize

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61 Seth Schiesel, "*Market Place Notes on corporate culture and possibilities as MCI Worldcom meets two years after its creation,*" New York Times, June 7, 1999 at C 13 (emphasis added).

62 "*Residential CLECs: Consumers on Hold,*" Yankee Group, Nov. 1998 at 7.

that "[t]he size and profitability potential of the business local telephone market remains significant and is ripe for continued cream skimming."[63] AT&T and MCI WorldCom understand this as well. They can use TELRIC-based UNE-P prices to launch a full scale attack on this "low hanging fruit." That is their intention and the Commission should not be fooled by their mass market decoy.

b. Advanced Telecommunications Capability.

In its comments, Ameritech clearly demonstrated that ILECs should not be required to unbundle network elements used in the provision of advanced services. It showed that ILECs have no legacy or other advantages in the installation and use of the facilities used to provide advanced telecommunications capability (ATC), such as digital subscriber line access multiplexers (DSLAMs) and packet switches, because such facilities are new technology. As a consequence, requiring ILECs to unbundle such facilities could not meet any reasonable formulation of the necessary and impair standard. It also showed that requiring ILECs to unbundle such facilities would undermine one of the fundamental goals of the 1996 Act by strongly discouraging ILECs from deploying advanced services to end users throughout their service areas.[64]

In particular, Ameritech showed that there is no justification for requiring ILECs to unbundle the facilities used to provide advanced data services over copper loops. The technologies used to provide these services were developed only recently, and were not

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[63] Goldman Sachs, *"Telecom Services CLECs 1999: Issues and Outlook,"* January 1999 at 2.

[64] Ameritech at 125. *See also* Information Technology Industry Council at 2 (noting that unwarranted unbundling obligations for electronics associated with advanced services would create economic disincentives for ILECs to deploy advanced services).

widely deployed by ILECs prior to the 1996 Act.[65] ILECs therefore must deploy the very same new equipment as their advanced services competitors.

CLECs can acquire and install this equipment on an equal footing with ILECs. Because this equipment is produced by multiple vendors, it is available to both CLECs and ILECs at competitive rates, and on reasonable terms and conditions.[66] The only difference is that CLECs have purchased and deployed more of this equipment than ILECs,[67] and therefore presumably can, if anything, negotiate better terms and conditions than ILECs. CLECs offering advanced services also have substantial market capitalization, and have entered strategic alliances with equipment vendors and others.[68] Indeed, many of these CLECs are actually financially backed by equipment manufacturers, and have a substantial base of agents and resellers to distribute their services.[69] As a consequence, CLECs are no less able than ILECs, and may even be better able, to obtain and install the equipment necessary to provide advanced services, provided they have access to loop facilities (either their own, or unbundled ILEC loops through collocated facilities).[70]

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65 *UNE Fact Report* at VI-4.

66 *See* Information Technology Industry Council at 7.

67 *UNE Fact Report* at VI-26.

68 *See* Ameritech Comments at 123. *See also UNE Fact Report* at VI-24-25.

69 *See* Quentin Hardy and Scott Thurm, *Technology: Motorola and Cisco Jointly Purchase Bosch Telecom, Inc.*, Wall Street Journal via Dow Vision, June 8, 1999.

70 Information Technology Information Council at 7-8 ("[W]here an ILEC complies with its co-location, interconnection, and loop unbundling obligations, CLECs would face no impairment to their provision of advanced services *other than an investment of the same time and money required of ILECs* who purchase and install the equipment associated with the service.") (emphasis added).

Given the ease with CLECs can acquire and install advanced services facilities, it is not surprising that many CLECs are providing advanced services by attaching their own facilities to ILEC copper loops. CLECs are aggressively ramping up their provision of advanced services, starting essentially from zero two years ago and providing broadband services in each of the ten largest metropolitan statistical areas (MSAs) and 25 of the top 50 today. They are not, however, offering service only in the largest urban areas. CLECs are in 21 states and 273 cities, the majority of which are served by multiple CLECs.[71] And they are continuing to expand rapidly deployment of advanced technologies in markets (large and small) across the country.[72]

Covad, for example, states that it will provide xDSL services in places like Santa Rosa, CA, Bel Aire, Maryland, the far eastern portions of Long Island, New Hampshire, and West Virginia,[73] and is aiming to reach over 20-million business and residential customers by the end of the year.[74] It has collocated in 166 central offices, and plans to collocate in 1,075 offices by year-end 2000.[75] Rhythms, which is currently operating in 12 major urban and suburban markets throughout the country, plans to collocate networking equipment in at least 1,000 central offices and be operational in 33

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71 Ameritech Comments at 120; *UNE Fact Report* at VI-19.

72 Ameritech Comments at 120; *UNE Fact Report* at VI-19.

73 Covad at text accompanying note 62.

74 Economics and Technology, Inc., *Building a Broadband America: The Competitive Keys to the Future of the Internet*, May 1999 (*Building a Broadband America*), at 68 (citing Covad Press Release, "Covad Communications Broadens Service Availability to New York, Boston and Announces National Expansion," August 17, 1998).

75 Salomon Smith Barney, Telecommunications Services, Apr. 9, 1999 at 28.

metropolitan markets by the end of 1999.[76] As of April 1999, NorthPoint had obtained collocation (installed or under contract) in 460 central offices, with an additional 185 pending. It plans to have collocation in 935 offices by year-end 2000.[77] Dakota Services currently has collocations in over 100 central offices in 27 metropolitan areas throughout the Midwest, and applications for over 120 additional collocations have been processed in conjunction with its next deployment.[78] Dakota also had 16 operational packet switches by year-end 1998, and plans to deploy an additional 98.[79] Other data CLECs also are deploying xDSL service in smaller markets.[80]

Most of these CLECs did not even exist three years ago, or were just starting operations. For example, at the end of 1997, Dakota Services had not collocated in any LEC central offices; by year-end 1998, it had collocated in 92 central offices, was operational in 32 markets, and had an additional 920 DSL markets under development.[81] Covad too began offering xDSL services in December 1997 over unbundled loops and transport in only one market, and "within a few short months" was "able to acquire the

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[76] Rhythms NetConnections Inc. at 1. ICG announced that it planned to deploy DSL service by the end of last year in 100 central offices in Colorado, California, the Ohio Valley, and parts of the Southeastern United States. *Building a Broadband America* (citing ICG News Release, "ICG Offers High-Speed Data Services," March 25, 1998).

[77] Salomon Smith Barney, Telecommunications Services, Apr. 9, 1999 at 28.

[78] New Paradigm Resources Group, Inc., *1999 Annual CLEC Report*, Chap. 9, Dakota Services, Inc., at 3.

[79] *Id.* at 1.

[80] Covad at text accompanying note 62 (noting that Dakota Services, Inc. is offering xDSL services in dozens of Midwestern towns, including Viborg, South Dakota, Wuakesha, WI, and Laverne, MN; and Vitts Corporation provides xDSL services in eight New Hampshire cities).

[81] New Paradigm Resources Group, Inc., *1999 Annual CLEC Report*, Chap. 9, Dakota Services, Inc., at 1.

capital to export that same business plan to *twenty-two* markets nationwide," and plans to expand to many additional markets – including many smaller markets.[82] Likewise, Rhythms initiated service in a single market on April 1, 1998, and now is operational in markets across the country.[83] NorthPoint Communications also initiated service a little over a year ago, and now serves markets across the country.[84]

Today, these companies lead ILECs in the deployment of advanced telecommunications services.[85] In contrast to the CLECs, which, as noted above, serve each of the top ten MSAs and half of the top 50, ILECs serve only seven of the top ten, and 22 of the top 50.[86] The Commission itself has acknowledged that CLECs have already deployed *more* advanced services equipment than ILECs over ILEC loops.[87]

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82 Covad at text accompanying note 11 (emphasis in original).

83 Rhythms at 1.

84 NorthPoint at 2. *See also* NorthPoint Communications, Press Release, *A National Data CLEC, Launches Business-Class DSL Services in Bay Area and Silicon Valley*, http://www.northpointcom.com/press/press_980323.html.

85 *Building a Broadband America* at 10 ("Competitive service providers and smaller local exchange carriers, not RBOCs, are leading the way toward the ubiquitous availability of broadband services both in urban as well as in rural areas.").

86 Ameritech at 121. *See also* NorthPoint Communications, Press Release, *NorthPoint Communications Will Surpass Combined Bells' DSL Deployment*, http://www.northpointcom.com/press/press_981215a.html ("'In the second half of 1999, we will be able to provide DSL service to more business customers than all the Baby Bells combined,' said Michael Malaga, president and CEO of Northpoint Communications."). According to NorthPoint, as a result of its 1999 expansion, "40 percent of all businesses in the U.S., a total of 4 million, will be eligible for NorthPoint DSLSM," and "more than 20 percent of all residences will also be eligible." *Id.* In contrast, "the combined RBOCs will only reach 14 percent of businesses." *Id.*

87 *UNE Fact Report* at VI-19-20 (citing *Advanced Service Report*, paras. 53, 56, 58).

These figures are reflected in Ameritech's region as well. As of March 1999, CLECs had collocated equipment in 319 central offices in Ameritech's region.[88] Ameritech's advanced services subsidiary, Ameritech Advanced Data Services (AADS), has obtained collocation and offers advanced data services in only a fraction of these offices. Multiple CLECs have also deployed at least 57 packet switches in geographic markets, large and small, throughout Ameritech's region.[89]

CLECs have come to surpass ILECs in the provision of advanced data services despite the fact that, in many cases, they started from scratch only a couple of years ago, and have never had unbundled access to ILECs' advanced telecommunications equipment. Consequently, the notion that CLECs are impaired in offering advanced services if they do not have access to ILEC advanced telecommunications equipment is demonstrably false.

As might be expected, the majority of CLECs offering advanced data services do not claim any general need for unbundled access to ILEC advanced telecommunications electronics. To the contrary, they assert that access to such equipment generally is not necessary. NorthPoint, for example, states:

> To date, all of the competitive LECs that have entered the advanced services market [have done so] by installing their own DSLAMs in central office collocation cages purchased from the incumbent LECs. Where competitive LECs enjoy access to loops and collocation, *any competitive LEC can provide the necessary infrastructure (DSLAMs and packet switches) required to provide advanced service.*[90]

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88 Internal Ameritech data.

89 Ameritech at 122.

90 NorthPoint at 18 (emphasis added) (noting that "the fact that all DSL competitive LECs have chosen a facilities-based DSL entry strategy suggests that concerns over the loss of a resale option may be misplaced").

Rhythms too concludes that "[DSLAMs], which are readily available commercially do not in most circumstances meet the unbundling standards."[91]

Likewise, the Information Technology Industry Council asserts:

> [W]here an ILEC complies with its co-location, interconnection, and loop unbundling obligations, CLECs would face no impairment to their provision of advanced services . . . The quality of service a CLEC can offer, without access to the ILEC's advanced services electronics, will not decline nor will the cost of providing the service rise.[92]

The Public Utilities Commission of Ohio similarly concludes that, assuming a CLEC has purchased a conditioned loop, access to the ILEC's DSLAM "does not meet the 'impaired' standard and [the DSLAM], therefore, would not qualify as an UNE."[93]

Indeed, data CLECs assert that unbundled access to ILEC advanced services equipment (such as DSLAMs and packet switches) is appropriate only in narrow circumstances. Rhythms, for example, states that "[t]here are only narrow circumstances when DSLAMs would satisfy the 'necessary' and 'impair' standards," such as where a CLEC is denied collocation space or is unable to access a full clean copper loop (such as where a loop passes through a digital loop carrier or remote teminal).[94] Similarly,

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91 Rhythms at 3.

92 Information Technology Industry Council at 7-8.

93 Public Utilities Commission of Ohio at 15-16.

94 Rhythms at 25-26. Covad too expresses concern about how to serve customers whose lines pass through digital loop carriers (DLCs) or remote terminals (RTs). Covad asks the Commission to require ILECs to permit CLECs to collocate their DSLAM at the RT, or to deploy next-generation RTs and DSLAMs at those RTs that accept several different types of digital line cards. Covad at text accompanying note 71. *See also* Network Access Solutions at 32-37 (arguing that the Commission should require ILECs to provide a combined loop/transport/packet switching UNE for loops provisioned through DLCs). Ameritech notes that its advanced services subsidiary, AADS, does not provide DSL to end users using loops provisioned through DLCs. If a subscriber whose loop passes through a DLC orders DSL service, the DLC-based loop is reassigned to a physical copper pair connecting the end user to the central office. If no suitable

Network Access Solutions asserts that ILECs should "provide DSLAM functionality as a UNE, but only in one narrow situation," that is, "in a (hopefully rare) case where no form of physical collocation is possible in [a given central office] on economic terms."[95] NorthPoint too asserts that an ILEC should be required to provide unbundled access to its DSLAM only where loops or collocation are unavailable.[96]

The Commission has, however, already addressed the concerns expressed by these data CLECs, and taken the only steps necessary to ensure that CLECs have access to the ILEC facilities they need to provide competitive advanced services. It has previously required ILECs to provide unbundled access to local loops. Presumably, in this proceeding, it will reaffirm that requirement in those areas where alternative loop

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spare copper facilities are available, Ameritech searches to see if there are existing customers served by copper facilities in the same area that can be transferred to the DLC system. If so, Ameritech rearranges such copper facilities to permit AADS to provide DSL service. Ameritech treats CLECs no differently. It provisions spare loops to them in precisely the same manner as it does AADS. In addition, it charges CLECs no more to provision such spare copper facilities than it does AADS. Consequently, CLECs in Ameritech's region do not need a combined loop/transport/packet switching UNE to offer competitive DSL service.

[95] Network Access Solutions at 37. Network Access Solutions asserts that providing service via virtual collocation impairs the ability of a CLEC to provide service efficiently because ILECs have less of an incentive to operate, manage and repair the CLEC's equipment in an efficient and cost-effective manner. *Id.* at 37-38. Network Access Solutions, however, presents no evidence whatsoever that suggests that ILECs have been derelict in operating or managing virtually collocated equipment, or that they have discriminated in any way against CLECs in this regard. Moreover, numerous data CLECs have obtained virtual collocation in ILEC central offices. Dakota Services, for example, has obtained virtual collocation in numerous Ameritech central offices and, as noted above, plans to significantly expand the number of offices in which it has collocation. *1999 Annual CLEC Report*, Dakota Services, at 3 (noting that Dakota has obtained cageless collocation in Ameritech central offices, and that local ILEC technicians are trained to work on Dakota's equipment if a hands-on solution to technical problems is necessary). *See also id.*, InterAccess Co. at 2 (noting that InterAccess has leased rack space in Ameritech's central offices to collocate their DSLAMs, and that InterAccess has trained Ameritech personnel to work on their collocated equipment in emergencies). Plainly, therefore, reliance on ILECs to manage and repair collocated equipment is not the impairment that Network Access Solutions makes it out to be.

[96] NorthPoint at 18-19.

facilities are not reasonably or practicably available. It has also addressed the availability of adequate collocation and interconnection arrangements by adopting additional collocation requirements in the *Advanced Services Order.*[97] These requirements ensure that CLECs can attach their equipment to ILEC loops on the same premises and on the same basis as ILECs, and, as the Information Technology Industry Council aptly stated, "further erode arguments for requiring ILECs to offer the electronics associated with advanced services."[98]

It should go without saying that if start-ups like NorthPoint, Rhythms, Covad, and Network Access Solutions do not need access to ILEC advanced services electronics except in extremely narrow circumstances (which have already been addressed by the Commission), then neither does any other reasonably efficient CLEC. Not surprisingly though, incumbent long distance carriers (with far greater resources than any of these data CLECs), and a few other CLECs,[99] urge the Commission to require ILECs to offer unbundled access to the electronics used to provide advanced data services ubiquitously.

These parties, however, fail to offer any evidence demonstrating that they cannot provide advanced data services using their own DSLAMs and packet switches, like NorthPoint, Covad, Rhythms, Dakota, and others. Instead, they rely on hyperbole and

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[97] *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, CC Docket No. 98-147, First Report and Order and Further Notice of Proposed Rulemaking, FCC 99-48 (rel. Mar. 31, 1999) (*Advanced Services Order*).

[98] Information Technology Industry Council at 9.

[99] Level 3 Communications at 28; KMC Telecom, Inc. at 29; Joint Comments of Choice One Communications, *et al.* at 31; McLeod Telecommunications Services, Inc. at 8-9; Joint Comments of e.spire Communications, Inc. and Intermedia Communications, Inc. at 30-31; ALTs at 73-74; CompTel at 32-33; and TRA at 42-43.

the hope that the Commission will ignore market facts and once again disregard the clear limits of section 251(d)(2).

For example, Level 3 Communications, KMC Telecommunications, e.spire, Intermedia, and others assert that DSLAMs are not available from alternative sources at comparable cost, quality, ubiquity, and timeliness.[100] These parties, however, offer no evidence whatsoever to support their claims. They ignore that a competitive market for advanced telecommunications equipment exists.[101] They ignore that ILECs purchase precisely the same equipment, albeit in smaller quantities, from precisely the same vendors as CLECs.[102] And they studiously ignore that, to date, CLECs have deployed advanced services equipment far more widely than ILECs. Moreover, they disregard that a number of facilities-based data CLECs, such as Covad, NorthPoint and Rhythms, are offering wholesale xDSL service.[103] Thus, they offer no evidence to suggest that advanced services equipment is not reasonably and practicably available from alternative sources. Nor do they explain why they cannot do what other data CLECs (like

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[100] Level 3 Communications at 28; KMC Telecommunications at 29; Joint Comments of Choice One Communications, *et al.* at 31; Joint Comments of e.spire Communications, Inc. and Intermedia Communications, Inc. at 32 (contending that without access to data UNEs, CLECs will be forced to back haul unbundled loops to their own data switches on dedicated transport facilities, which are less efficient for purposes of data transmission); McLeodUSA Telecommunications Services at 8-9; and ALTs at 73-75 (same).

[101] Information Technology Industry Council at 6-7.

[102] *Id.*

[103] *See* Salomon Smith Barney, Telecommunications Services, Apr. 9, 1999 at 28 (noting that Covad is providing wholesale xDSL service to ISP and enterprise customers; NorthPoint is offering wholesale xDSL service targeting ISPs, broadband data service providers, and other CLECs; and Rhythms also is offering wholesale xDSL services). *See also* 1999 Annual CLEC Report, Chap. 9 at 11 (noting that "MCI's DSL service is really Rhythm's DSL," and that Flashcom, which bills itself as a national DSL provider, is actually an ISP-network integrator that has contracted to resell DSL service provided by Covad, NorthPoint, Pacific Bell and GTE).

NorthPoint and Covad) have done, which is to provide advance services using their own DSLAMs, packet switches and other advanced telecommunications equipment.

The CLECs' other arguments are no more convincing. MCI Worldcom, for example, concedes that DSLAMs are inexpensive, off-the-shelf equipment, but nevertheless claims that access to DSL-equipped loops (that is loops with advanced services equipment, such as DSLAMs and packet switches, attached) is necessary because, it asserts, the delay and costs of collocation can be substantial.[104] Sprint likewise acknowledges that "some carriers in some instances" can provide advanced services through collocated DSLAMs,[105] but asserts that the fixed costs of collocation would prevent CLECs from offering advanced services in low density areas.[106]

These parties, however, disregard that Commission's collocation orders ensure that CLECs can attach their equipment to ILEC loops on the same physical premises as ILECs can. As a consequence, CLECs confront no greater costs or delay than ILECs in deploying advanced telecommunications equipment. Indeed, the costs and delay confronted by ILECs in deploying such equipment in many instances are, if anything,

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[104] MCI Worldcom at 50. MCI Worldcom adds that unless ILECs are required to make DSLAMs available as part of the loop, CLECs will be unable to provide ubiquitous DSL service because the density of traffic and revenue opportunities will make it difficult to justify the costs in rural areas. *Id.*

[105] Indeed, Sprint asserts that it is currently requesting collocation in more than 1,000 ILEC end offices so that it can install its own DSLAM equipment and provide Sprint ION service through DSLAMs and xDSL-capable loops to small businesses and residential customers. Sprint at 37. Clearly, collocation cannot be the impediment the incumbent interexchange carriers make it out to be. Otherwise, Sprint would not be pursuing collocation in so many ILEC central offices.

[106] Sprint at 37. *See also* AT&T at 80-81 (baldly asserting that competition will be forestalled if new entrants are required to collocate in every central office or remote terminal).

greater than those of CLECs because of the substantial network inefficiencies mandated by LATA restrictions.

In any event, these parties ignore that CLECs are leading ILECs in the deployment of advanced telecommunications capability using ILEC loops, including in many smaller markets. Plainly, they would not be doing so if collocation were the impediment that MCI Worldcom, AT&T and Sprint make it out to be.

MCI Worldcom, AT&T and CompTel further assert that DSLAMs, digital multiplexers, and other advanced telecommunications equipment are nothing more than loop electronics that enhance transmissions, and therefore must be provided together with the loop.[107] They even go so far as to characterize such a package of network elements as a "DSL-equipped loop."[108] The Commission, however, already has determined that DSLAMs, digital multiplexers, and other advanced telecommunications equipment are not merely transmission facilities, but rather are multifunctional equipment used to provide switching and enhanced services functionalities.[109] These pieces of equipment are no more an integral part of the loop, or mere "loop electronics," than are switches,[110] and MCI Worldcom, AT&T and CompTel might as well ask for a "switch-equipped" loop. Any such request would, of course, be absurd. Likewise, these parties' attempt to

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107 MCI Worldcom at 48-49, AT&T at 74-75, CompTel at 32-33.

108 *See e.g.* AT&T at 74.

109 *See Advanced Services Order* at para. 30.

110 MCI Worldcom concedes as much in requesting the Commission to make DSLAMS, digital multiplexing and other equipment available as part of the loop element as well as separately. MCI Worldcom at 48.

characterize a combination of loops, DSLAMs and other equipment as a "DSL-equipped loop" is inane and should be rejected.

MCI Worldcom and Sprint next attempt to bootstrap access to unbundled packet switches by claiming that packet switching is necessary to obtain access to ILEC DSLAMs. Specifically, they argue that a CLEC offering advanced service using an ILEC's DSLAM must have access to unbundled packet switching because there is no practical way to obtain the traffic carried over the loop from the ILEC without first going through the ILEC's packet switch.[111] No other rationale is offered. As demonstrated above, however, CLECs do not require access to ILEC DSLAMs and other advanced telecommunications equipment to provide advanced services. As such there is no justification for requiring ILECs to unbundle packet switches. The Commission should, therefore, reject MCI Worldcom's and Sprint's sleight of hand and decline to require ILECs to provide unbundled packet switching.

Finally, TRA and Level 3 Communications argue that the Commission should require ILECs to unbundle advanced telecommunications equipment in order to promote the deployment of advanced services to all Americans.[112] Such a requirement, however, would have precisely the opposite effect. In the first place, such a requirement would not hasten the deployment of ATC by CLECs that purchase unbundled access to ILEC facilities because such CLECs bring nothing to the table, and rely entirely on ILEC deployment schedules. More importantly, however, requiring ILECs to share advanced telecommunications equipment with their competitors would create strong economic

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[111] MCI Worldcom at 55; Sprint at 39-40.

[112] Level 3 Communications at 28, and TRA at 42.

disincentives for ILECs to deploy such facilities by forcing them to bear all the risk, but reap little or none of the reward, of their investment in new technologies.[113] As Michael Armstrong, Chairman of AT&T, acknowledged: "[n]o company will invest billions of dollars to become a facilities-based . . . services provider if competitors who have not invested a penny of capital nor taken an ounce of risk can come along and get a free ride on the investments and risks of others."[114] Indeed, so great is the disincentive effect of unbundling that just three days ago AT&T announced that it will not offer @Home and other advanced services over its cable system in Portland and Multnomah County, Oregon in the wake of a district court decision permitting the municipality to impose open access requirements.[115]

Requiring ILECs to unbundle advanced services equipment therefore would eviscerate incentives on the part of ILECs and CLECs alike to innovate and invest in new technologies and services, and retard, if not squelch altogether, deployment of advanced data services to all Americans – contrary to one of the fundamental goals of the 1996 Act. Only by rejecting calls to require ILECs to unbundle advanced telecommunications facilities will the Commission "encourage ILECs to deploy advanced services technologies expeditiously, *allowing consumers to obtain competitive access to the*

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113 *See* Information Technology Industry Council at 2 ("unwarranted unbundling obligations for the electronics associated with advanced services would create economic disincentives for the ILECs to deploy advanced services").

114 Remarks of Michael Armstrong, Chairman and CEO, AT&T Corporation, before the Washington Metropolitan Cable Club, Washington, D.C. (Nov. 2, 1998).

115 "*Other Cities May Impose Open Access After Portland Decision*, Communications Daily, June 8, 1999 (reporting that AT&T General Counsel James Cicconi told investors that AT&T would not offer AtHome and other advanced services in the areas affected by the court's decision).