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January 31, 2003

Ex Parte

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th H Street, SW, Portals
Washington, DC 20554

Re: Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers, CC Docket No. 01-338; Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, CC Docket No. 96-98; and Deployment of Wireline Services Offering Advanced Telecommunications Capability, CC Docket No. 98-147

Dear Ms. Dortch:

The attached documents were filed as part of Verizon's Comments in RM-10593 AT&T Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Special Access dated December 2, 2002. Verizon is placing it on the record in the above proceeding. Please let me know if you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Ann D. Berkowitz".

Attachments

cc: W. Maher
J. Carlisle
C. Libertelli
M. Brill
J. Goldstein
D. Gonzalez
L. Zaina
M. Carey
R. Tanner
J. Miller
S. Bergmann
B. Olson
T. Navin

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

In the Matter of)
)
AT&T Petition for Rulemaking) RM 10593
To Reform Regulation of Incumbent)
Local Exchange Carrier Rates for)
Special Access Services)

COMPETITION FOR SPECIAL ACCESS SERVICES

December 2, 2002

the FCC data ignore that revenue, which is substantial. At the same time, it is difficult to quantify that revenue. Not all of the local and long distance private line revenue that these carriers report as toll carriers is necessarily special access revenue, and there is no precise way to back out the portion that is.¹¹⁰

In any event, even using FCC data and methodologies endorsed by CLECs yields a very high CLEC market share. According to the most recent *Telecommunications Industry Revenues* report, CLECs and IXCs earned \$4.2 billion in the provision of local private line and special access and long distance private line services in 2000.¹¹¹ AT&T also has acknowledged that the access that AT&T and WorldCom supply to themselves was worth approximately \$900 million as of 1999.¹¹² Assuming that the value of these two carriers' self-supplied special access increased in the last two years (2000 and 2001) by the same amount as it did in previous years (1999), the value of this self-supply was approximately \$1.3 billion in 2001.¹¹³ That brings total CLEC special access revenues to \$5.5 billion under FCC data. This represents a market share of approximately 30 percent.¹¹⁴

II. COMPETITION FOR SERVICES THAT USE SPECIAL ACCESS AS AN INPUT

Special access is frequently used as an input to provide various services – including long distance, ATM, Frame Relay, and switched local services – to large business customers. The big three interexchange carriers dominate the provision of long distance, ATM, and Frame Relay services to large businesses, while the Bell companies are only minor players. In the provision of switched local services to business customers, CLECs have already captured between 17 and 24 million switched lines, and these totals are growing rapidly. While competitors have long claimed that ILECs have theoretical incentives to discriminate in the provision of special access, the success of competitors in providing services that rely on special access as an input proves that no such discrimination is actually occurring. CLECs have instead been able to obtain access

¹¹⁰ See *AT&T's Pfau 2001 Special Access Decl.* ¶¶ 16-17 (acknowledging that the FCC data is incomplete and estimating the percentage of AT&T's and MCI WorldCom's "toll carrier" revenues which are actually from special access to make an "adjustment" to the special access market share calculation).

¹¹¹ *FCC Telecommunications Industry Revenues, 2000 ed.* at 14 (Table 5, Lines 305 & 312), 18 (Table 6, Lines 406 & 415).

¹¹² *AT&T's Pfau 2001 Special Access Decl.* ¶ 16.

¹¹³ *AT&T's Pfau 2001 Special Access Decl.* ¶ 16 (value of AT&T and WorldCom self-supply increased from \$627 million in 1998 to \$856 million in 1999).

¹¹⁴ This figure is undoubtedly too low. It excludes completely any special access revenue that AT&T and other interexchange carriers report as long distance private line revenue and that is earned by reselling the services of other CLECs and ILECs. This amount is substantial, as the interexchange carriers are the largest special access customers of both many CLECs and the ILECs, and purchase such services in order to resell them to end users. AT&T has acknowledged that adding this total to CLEC local access and private line revenue would bring total special access revenues in line with the totals reported by New Paradigm. See *AT&T's Pfau 2001 Special Access Decl.* ¶ 19 n.4. AT&T has nonetheless argued that it is appropriate to exclude such revenues because the ILECs do not typically compete in the provision of long distance private line service. But the extent to which ILECs provide long distance private service obviously is irrelevant; the only relevant question is the extent to which competing carriers provide private line and special access services that compete with the private line and special access service that ILECs provide.

to special access facilities at prices that enable them to compete – either by deploying such facilities themselves, leasing them from other competitive suppliers, or by reselling special access service obtained from ILECs.

Enterprise Long Distance Services. Special access is used in large part to provide large business customers dedicated connections to long distance networks.¹¹⁵ It is frequently sold as a bundle together with the long-distance transport itself. As noted above, approximately half of Verizon’s special access revenues are generated by the three big IXCs, while another 10 percent is generated by other smaller interexchange carriers.

Today, AT&T, WorldCom, and Sprint dominate the provision of long distance service to large business customers. As a group of large customers recently informed the WorldCom bankruptcy court, these three carriers “account for over 90% of enterprise telecommunications usage and are widely viewed as the only interexchange carriers capable of providing the full suite of network services required by major corporations.”¹¹⁶ The Department of Justice has likewise found that “[n]early all large businesses look to AT&T, WorldCom, and Sprint for competitive [Custom Network Service] bids, and a significant number are unwilling to give serious consideration to any carrier other than the Big 3.”¹¹⁷ The Bell companies have only recently begun providing long distance service to business customers in some states. Analysts recognize that the Bell companies face enormous challenges in competing against the entrenched incumbents in these markets.¹¹⁸ AT&T has recently stated that Verizon has “a long way to go” before it will be able to build a long-distance network that competes effectively against AT&T’s.¹¹⁹

¹¹⁵ The Commission has recognized that there is a distinct market for long distance services provided to larger business customers. *Application of WorldCom, Inc. and MCI Communications Corp. for Transfer of Control of MCI Communications Corp. to WorldCom*, Memorandum Opinion and Order, 13 FCC Rcd 18025, ¶ 26 (1998) (“*WorldCom/MCI Order*”). The Commission deregulated long distance services provided to large business customers several years before it deregulated mass-market long distance services. See *Competition in the Interexchange Marketplace*, Report and Order, 6 FCC Rcd 5880 (1991); *Competition in the Interexchange Marketplace*, Second Report and Order, 8 FCC Rcd 3668 (1993).

¹¹⁶ Motion of the Ad Hoc Committee of WorldCom Enterprise Customer for Entry of an Order Directing the United States Trustee To Appoint an Official Committee of Enterprise Customers Pursuant to 11 U.S.C. § 1102(a)(2), *WorldCom, Inc., et al.*, Chapter 11 Case No. 02-13533-AJG, at 6 (filed Oct. 8, 2002).

¹¹⁷ Complaint ¶ 158, *United States v. WorldCom, Inc. and Sprint Corp.*, No. 00-CV-1526 (D.D.C. filed June 27, 2000). The Department of Justice noted that “[l]arge businesses typically purchase a substantial majority of their telecommunications services in a bundle of customer network services (‘CNS’) that is tailored to meet their particular needs.” Although the requirements of these large businesses vary, most large business customers require outbound long distance voice, in-bound/toll-free voice services, data network services, ancillary services such as teleconferencing and broadcast fax, Internet services such as dedicated access, and international voice and data services. *Id.* ¶ 149.

¹¹⁸ See, e.g., See, e.g., J. Halpern, *et al.*, Bernstein Research Call, *AT&T: Gauging the Benefits to AT&T When the Wheels Fly Off at WorldCom* at 4 (Sept. 17, 2002) (“At present, only AT&T, WorldCom, Sprint and, to a lesser degree, Qwest, have been able to satisfactorily provide a more or less full suite of services to large corporate customers.”); R. Krause, *Bells On Brink Of Going Long Distance*, Investor’s Business Daily (Aug. 2, 2002).

¹¹⁹ See B. Charny, *Verizon Hungers for Corporate Data*, CNET News.com (Nov. 4, 2002), <http://news.com.com/2100-1033-964419.html>.

ATM and Frame Relay Services. The Commission has recognized that large business consumers typically use different high-speed technologies than mass-market consumers.¹²⁰ The two most common packet-switched services provided to large business customers are ATM and Frame Relay.¹²¹ Special access is used extensively to provide large business customers access to ATM and Frame Relay networks.

The largest providers of both Frame Relay and ATM services are AT&T, WorldCom, and Sprint, which control two-thirds or more of the nationwide market for these services. *See* Figure 2.¹²² As one analyst has noted, “[t]he Big 3 IXC’s own the U.S. frame relay market, have scale economies and are best positioned to influence users and move the market.”¹²³ AT&T describes itself as “the frame relay market leader”¹²⁴ and reports “healthy growth in high-speed private line facilities” and in “frame and ATM ports.”¹²⁵ By contrast, the Bell companies collectively represent less than 15 percent of nationwide ATM and Frame Relay revenues.¹²⁶ And as noted by industry analysts and CLECs alike, Bell companies are currently limited in their ability to compete in the provision of ATM and Frame Relay to large business customers offerings due to restrictions on the provision of interLATA services.¹²⁷ Analysts also note that,

¹²⁰ *WorldCom/MCI Order* ¶ 26 (“larger business users often demand advanced long distance features (advanced features), such as frame relay, virtual private networks (VPN), and enhanced 800 services (E800 services), that differ from the services generally demanded by mass market consumers.”).

¹²¹ R. Kaplan, IDC, *U.S. Packet/Cell-Based Services Market Forecast and Analysis, 2000-2005* at 1 (Mar. 2001) (ATM and Frame Relay accounted for over 96 percent of revenues in the packet/cell-based services market in 2000).

¹²² *See IDC June 2002 ATM Services Report* at Figure 4 (AT&T, WorldCom, and Sprint together accounted for 64.1 percent of revenues for ATM in 2001); *IDC April 2002 Frame Relay Report* at Figure 4 (AT&T, WorldCom, and Sprint together accounted for 77.0 percent of revenues for frame relay in 2001); Stratecast Partners, *ATM and Frame Relay Market Assessment, Data/Internet Services Growth Strategies*, Vol. II, No. 10, at 10 (Sept. 2001) (“Tier 1 service providers continue to dominate the U.S. market, controlling over 70% of the market.”) (“*Stratecast ATM/Frame Relay Report*”); *id.* at 17 (“In 2000, AT&T held the largest share of ATM service revenues, with a 36% share of [the] market; WorldCom and Sprint held the second and third leading position in the market with shares of 26% and 22%, respectively. As in the frame relay market, the RBOCs collectively represent a small share of the ATM services market.”).

¹²³ *Stratecast ATM/Frame Relay Report* at 12.

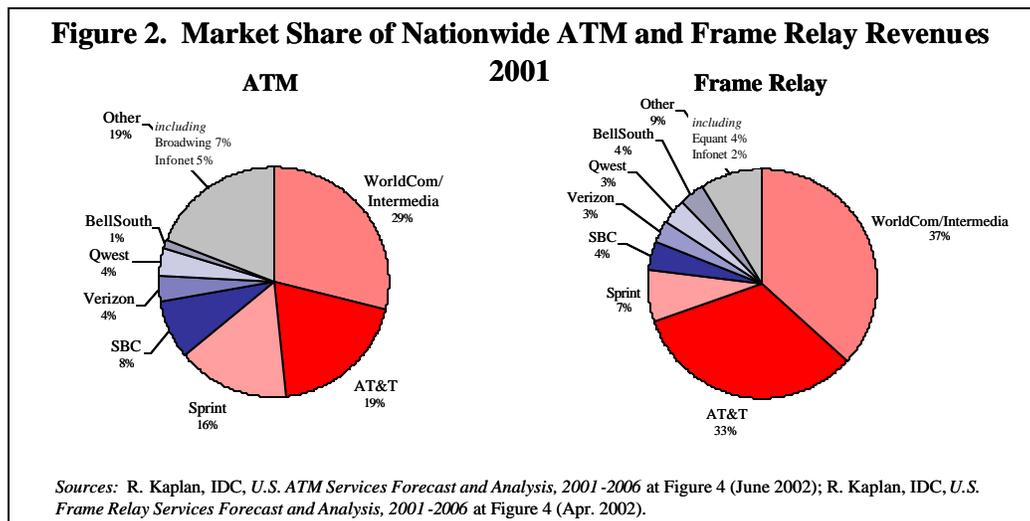
¹²⁴ AT&T Corp., *AT&T Frame Relay and ATM Services Brochure*, <http://www.business.att.com/content/productbrochures/MS-8151-02.pdf>; AT&T News Release, *AT&T Reports Precedent-Setting “Five Nines” Performance On Its Market-Leading Frame Relay Network* (July 24, 2000).

¹²⁵ *Q2 2002 AT&T Earnings Conference Call*, Financial Disclosure Wire, Transcript 072302au.729 (July 23, 2002).

¹²⁶ *See IDC June 2002 ATM Services Report* at Figures 1 & 4 (Total BOC share of the nationwide ATM market is 14 percent); *IDC April 2002 Frame Relay Report* at Figure 4 (Total BOC share of the frame relay market is 16.5 percent). The Bell companies’ total share of the combined ATM/frame relay market is 14.4 percent. *See id.*; *IDC June 2002 ATM Services Report* at Figures 1 & 4.

¹²⁷ *See, e.g., Stratecast ATM/Frame Relay Report* at 12 (“Thus far, the RBOCs have held a very small share of the frame relay market, primarily because they have only been allowed to offer intra-LATA services.”); *Frost & Sullivan - New Demands for Capacity Increase Competition Among Packet Data Providers*, PR Newswire (Oct. 4, 1999) (“Because users can be exposed to a wide array of data access technologies, the ability to offer seamless, end-to-end service is becoming critical to winning new customers.”) (quoting Isabelle Gallo, Frost and Sullivan Telecommunications Industry Analyst). *See also* WorldCom, *Metro Frame Relay Service*,

even when they are permitted to compete on a level playing field, they will face an uphill battle competing with the big three incumbents.¹²⁸



Local Services for Large Business Customers. As explained above, CLECs are now obtaining special access from ILECs in order to connect large business customers to the CLEC’s own local networks. Competition has been thriving in this segment of the local market. In the Bell companies’ territory, CLECs now serve between 13 and 20 million switched access lines using their own last-mile facilities, or those of other suppliers (including ILECs).¹²⁹ This represents between 20 and 28 percent of all business lines within the BOCs’ territories.¹³⁰ In the last three years alone, CLECs’ share of the switched access lines provided to business customers has more than doubled.¹³¹ ALTS has recently stated that “CLECs are collectively on course to generate positive EBITDA in 2002, probably for the first time in their history.”¹³² According to

<http://www.worldcom.com/us/products/datanetworking/framerelay/metro> (WorldCom’s Metro Frame Relay service “offers an aggressive price position compared to that offered by LECs. LECs can offer local (intraLATA) service, but they aren’t able to cross LATA boundaries or move into other Regional Bell Operating Company (RBOC) territories.”).

¹²⁸ See, e.g., J. Halpern, et al., Bernstein Research Call, *AT&T: Gauging the Benefits to AT&T When the Wheels Fly Off at WorldCom* at 2 (Sept. 17, 2002) (“Our expected-value scenario analysis leads us to believe that AT&T stands to gain 100-400bp of share of the large corporate data market over the next three years as the RBOCs struggle to define their Fortune 1000 strategy and learn the basics of provisioning super-regional, national, and international data networks.”).

¹²⁹ See *UNE Fact Report 2002* at IV-1 – IV-2.

¹³⁰ See *UNE Fact Report 2002* at IV-3.

¹³¹ See *UNE Fact Report 2002* at Table I-5; *FCC July 2002 Local Competition Report* at 5, Table 2 (showing an increase in CLEC share of the switched access lines provided to business customers from 10 percent at year-end 1999 to 21 percent at year-end 2001).

¹³² ALTS, *Progress Report on the CLEC Industry* at i, 5 (Oct. 17, 2002).

ALTS, “now we see solid, well-financed companies [ready] to compete head-to-head with Bell companies.”¹³³

¹³³ *CLEC Industry Will Revive in 2003, Report Says*, *Communications Daily* at 4 (Oct. 18, 2002).

APPENDIX A. ADDITIONAL SOURCES

Table 1. Special Access Competition (as of YE 2001)

CLEC Fiber Route Miles (local and longhaul). New Paradigm Resources Group, Inc., *CLEC Report 2002*, Ch. 4 at Table 13 (15th ed. 2002) (This is a highly conservative estimate. It does not include 117,000 route-miles of fiber that NPRG lists for competitive Independent Operating Companies, utility CLECs, data providers, or Gig-E providers. Moreover, the total miles for 2001 have been adjusted downward to address the concerns that CLECs raised in the Special Access proceeding in April 2001 (CC Docket No. 96-98)). **CLEC Networks in the Top 150 MSAs.** New Paradigm Resources Group, Inc., *CLEC Report 2002*, Ch. 6 (15th ed. 2002). **CLEC Buildings Served OnNet.** See Joint Comments of Allegiance Telecom, Inc. and Focal Communications Corporation at 25, *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket No. 96-98 (FCC filed June 11, 2001); Comments of WorldCom, Inc. at 7, CC Docket No. 96-98 (FCC filed June 11, 2001). **CLEC Buildings Served OffNet.** New Paradigm Resources Group, Inc., *CLEC Report 2002*, Ch. 4 at Table 19 (15th ed. 2002). This is a highly conservative estimate. It excludes not only the buildings served by literally dozens of CLECs, but also does not include the 27,000 additional buildings NPRG reports for competitive Independent Operating Companies, utility CLECs, data providers, Gig-E providers, fiber layers, and other providers, as well as the 30,000 on-net buildings reported by CLECs themselves, as noted above. See *id.* Moreover, the total buildings have been adjusted downward to address the concerns that CLECs raised in the Special Access proceeding in April 2001 (CC Docket No. 96-98). **CLEC Voice-Grade-Equivalent Special Access Lines.** See Table 10. **CLEC Voice-Grade Equivalent Lines Reported to Investors.** **CLEC Special Access Revenues.** New Paradigm Resources Group, Inc., *CLEC Report 2002*, Ch. 3 at Table 12 (16th ed. 2002).

Table 2. FCC Findings

1990. *Represcribing the Authorized Rate of Return for Interstate Services of Local Exchange Carriers*, Order, 5 FCC Rcd 7507, ¶ 210 (1990). **1991.** *Expanded Interconnection with Local Telephone Company Facilities*, Notice of Proposed Rulemaking and Notice of Inquiry, 6 FCC Rcd 3259, ¶ 2 (1991). **1991.** Richard M. Firestone, Chief, Common Carrier Bureau, FCC, "Telecommunications Policy and Regulation," remarks before the Ninth Annual FCBA/PLI Conference (Dec. 2, 1991). **1992.** *Expanded Interconnection with Local Telephone Company Facilities, Amendment of Part 36 of the Commission's Rules and Establishment of a Joint Board*, Second Notice of Proposed Rulemaking, 7 FCC Rcd 7740, ¶ 7 (1992). **1992.** *Transport Rate Structure and Pricing Petition for Waiver of the Transport Rules filed by GTE Service Corporation*, Report and Order and Further Notice of Proposed Rulemaking, 7 FCC Rcd 7006, ¶ 2 (1992). **1992.** *Expanded Interconnection with Local Telephone Company Facilities, Amendment of the Part 69 Allocation of General Support Facility Costs*, Report and Order and Notice of Proposed Rulemaking, 7 FCC Rcd 7369, ¶ 4 (1992). **1995.** *Price Cap Performance Review for Local Exchange Carriers*, First Report and Order, 10 FCC Rcd 8961, ¶ 25 (1995). **1995.** FCC News Release, *Common Carrier Competition*, 1995 FCC LEXIS 3544 (rel. May 31, 1995). **1996.** *Access Charge Reform*, Notice of Proposed Rulemaking, Third Report and Order, and Notice of Inquiry, 11 FCC Rcd 21,354, ¶ 278 (1996). **1998.** *Applications of Teleport Communications Group Inc., Transferor, and AT&T Corp., Transferee, for Consent to Transfer Control of Corporations Holding Point-to-Point Microwave Licenses and Authorizations to Provide International Facilities-Based and Resold Communications Services*, Memorandum Opinion and Order, 13 FCC Rcd 15236, ¶ 27 & n.90 (1998). **1998.** Ind. Anal. Div., FCC, *Local Competition* at 1 (Dec. 1998). **2000.** *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, Supplemental Order Clarification, 15 FCC Rcd 9587, ¶ 18 (2000). **2000.** *Promotion of Competitive Networks in Local Telecommunications Markets*, First Report and Order and Further Notice of Proposed Rulemaking in WT Docket No. 99-217, Fifth Report and Order and Memorandum Opinion and Order in CC Docket No. 96-98, and Fourth Report and Order and Memorandum Opinion and Order in CC Docket No. 88-57, 15 FCC Rcd 22983, ¶ 18 (2000).

Table 3. IXC Use of Competitive Access Networks

Kessler Marketing Intelligence, *Alternative Local Carriers with Fiberoptic Metropolitan Area Networks* at 24 (Aug. 1989). AT&T News Release, *AT&T, Five Companies Sign Alternative Access Agreements* (Apr. 11, 1996). AT&T News Release, *Brooks Fiber Expanded Agreement with AT&T Covers Additional Cities* (Feb. 20, 1997). F.J. Governali, et al., Credit Suisse First Boston Corporation, Investext Rpt. No. 2563177, Teleport Communications Group, Inc. – Company Report at *6 (July 7, 1997). D.P. Reingold, Merrill Lynch Capital Markets, Investext Report No. 2728065, AT&T – Company Report at *8 (Jan. 12, 1999). E. Strumingher, PaineWebber, Inc., Investext Report No. 2908948, MCI WorldCom – Company Report at *3 (July 30, 1999). Comments of Sprint Corporation, Attachment E: Declaration of Roberk Runke ¶ 8, *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, CC Docket No. 96-98 (FCC filed May 26, 1999). Comments of Sprint Corporation at 34, CC Docket No. 96-98 (FCC filed May 26, 1999). Comments of MCI WorldCom, Inc. at 64, CC Docket Nos. 96-98, 95-185 (FCC filed May 26, 1999). E. Strumingher, PaineWebber, Inc., Investext Report No. 2930537, *Telecom Services: Industry Update – Industry Report* at *5 (Aug. 19, 1999). *Hi-Cap Competition* at 6, attached to Ex Parte Letter from Ruth Milkman, Counsel, WorldCom, to Marlene Dortch, Secretary, FCC, CC Docket Nos. 01-338, 96-98, and 98-147 (Oct. 7, 2002). *UNE Review Issues* at 1, attached to Ex Parte Letter from John Benedict, Senior Attorney, Sprint, to Marlene Dortch, Secretary, FCC, CC Docket Nos. 01-338, 96-98, and 98-147 (Oct. 16, 2002). Comments of Sprint Corporation at n.28, *Review of Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers, et al.*, CC Docket Nos. 01-338, 96-98, and 98-147 (FCC filed Apr. 5, 2002). Fea/Giovannucci Declaration, ¶ 49, n. 23, attached to Reply Comments of AT&T Corp., CC Docket Nos. 01-338, 96-98, and 98-147 (FCC filed July 17, 2002). Fea/Giovannucci Declaration, ¶ 50, attached to Reply Comments of AT&T Corp., CC Docket Nos. 01-338, 96-98, and 98-147 (FCC filed July 17, 2002). Declaration of C. Michael Pfau, ¶ 44, attached to Reply Comments of AT&T Corp., CC Docket No. 96-98 (FCC filed Apr. 30, 2001). D. Goldsmith, Buckingham Research Group, Inc., Investext Rpt. No. 2430215, *Time Warner Telecom Inc.: Initiating Coverage – Company Report* at *3 (Jan. 10, 2001).

Table 4. Major Competitive Providers of Special Access

AT&T. New Paradigm Resources Group, Inc., *CLEC Report 2002*, Ch. 6 – AT&T Corp. at 1, 10 (16th ed. 2002). **WorldCom.** *CLEC Report 2002*, Ch. 6 – WorldCom, Inc. at 1, 6 (16th ed. 2002). **Qwest.** *CLEC Report 2002*, Ch. 6 – Qwest at 1, 5 (16th ed. 2002). **Time Warner Telecom.** *CLEC Report 2002*, Ch. 6 – Time Warner Telecom, Inc. at 1, 10 (16th ed. 2002). **XO Communications.** *CLEC Report 2002*, Ch. 6 – XO Communications at 1, 8 (16th ed. 2002). **IDT/WinStar.** *CLEC Report 2002*, Ch. 6 – Winstar Communications at 1, 6 (16th ed. 2002). **ICG Communications.** *CLEC Report 2002*, Ch. 6 – ICG Communications at 1, 6 (16th ed. 2002). **ITC^DeltaCom.** *CLEC Report 2002*, Ch. 6 – ITC^DeltaCom, Inc. at 1, 6 (16th ed. 2002). **McLeodUSA.** *CLEC Report 2002*, Ch. 6 – McLeodUSA, Inc. at 1, 6 (16th ed. 2002). **KMC Telecom.** *CLEC Report 2002*, Ch. 6 – KMC Telecom, Inc. at 1, 4 (16th ed. 2002). **General Communications, Inc.** *CLEC Report 2002*, Ch. 6 – General Communications, Inc. at 1, 6 (16th ed. 2002). **Adelphia Business Solutions.** *CLEC Report 2002*, Ch. 6 – Adelphia Business Solutions

at 1, 5 (16th ed. 2002). **BTI Telecom.** *CLEC Report 2002*, Ch. 6 – BTI Telecom Corp. at 1, 5 (16th ed. 2002). **NTS Communications.** *CLEC Report 2002*, Ch. 6 – NTS Communications at 1, 5 (16th ed. 2002). **Cablevision Lightpath.** *CLEC Report 2002*, Ch. 6 – Qwest at 1, 5 (16th ed. 2002). **Cablevision Lightpath.** *CLEC Report 2002*, Ch. 6 – Cablevision Lightpath, Inc. at 1, 6 (16th ed. 2002). **Cox Communications.** *CLEC Report 2002*, Ch. 6 – Cox Communications at 1, 6 (16th ed. 2002).

Table 5. Average Number of CLEC Networks by MSA
New Paradigm Resources Group, Inc., *CLEC Report 2002*, Ch. 5 (15th ed. 2002).

Table 6. Wholesale Local Fiber Suppliers

American Fiber Systems. E. Gubbins, *Dave Rusin, CEO, American Fiber Systems*, Telephony (May 13, 2002); American Fiber Systems Press Release, *American Fiber Systems Poised to Eliminate Bandwidth Bottleneck in 131 American Cities* (Aug. 9, 2000); *American Fiber Systems Solves the Bandwidth Shortage in Mid-sized U.S. Cities*, Business Wire (Dec. 11, 2000). **Fibertech Networks.** Fibertech Networks, *Our Networks, Current Markets*, http://www.fibertech.com/net_current.cfm (as of Nov. 21, 2002); Fibertech Networks, *Our Networks, Future Markets*, http://www.fibertech.com/net_future.cfm (as of Nov. 21, 2002); Fibertech Networks Press Release, *Choice One Activates Fiber Ring in Pittsburgh, Pennsylvania* (Feb. 18, 2002); Fibertech Networks Press Release, *Fibertech Networks Significantly Expands Network Footprint* (March 20, 2002). **Yipes.** Yipes Enterprise Services Press Release, *Yipes Enterprise Services Emerges as Newly Funded Company Poised for Growth* (July 9, 2002); Yipes Enterprise Services, *Technology*, <http://www.yipes.com/technology/> (as of Nov. 21, 2002); Yipes Press Release, *Norwest Venture Partners (NVP) Leads Series A Round of Funding in Yipes Enterprise Services* (July 9, 2002). **OnFiber.** OnFiber, *Our Network/Locations*, <http://www.onfiber.com/interior.asp?section=network&page=locations> (as of Nov. 22, 2002); OnFiber, *About/Overview*, <http://www.onfiber.com/interior.asp?section=about> (as of Nov. 22, 2002); OnFiber News Release, *OnFiber Acquires Telseon Assets* (Aug. 6, 2002); OnFiber News Release, *OnFiber Reports Strong Growth in First Half 2002* (July 15, 2002). **Looking Glass.** Looking Glass Networks, *Our Network*, <http://www.lglass.net/network/index.jsp> (as of Nov. 21, 2002); Looking Glass Networks Press Release, *Looking Glass Networks Awarded Over \$60 Million Dollars in Lit Services, Dark Fiber and Collocation Contracts* (Aug. 20, 2002). **Metromedia Fiber Networks.** Metromedia Fiber Networks, *Network: MFN Metropolitan Fiber Maps*, <http://www.mfn.com/network/usmaps.shtm> (as of Nov. 22, 2002); Metromedia Fiber Networks, *Network: One Network*, <http://www.mfn.com/network/index.shtm> (as of Nov. 22, 2002); A. Drury, *Metromedia Fiber Network Rose Fast, Fell Hard*, Journal News (Aug. 22, 2002). **Northeast Optic Network.** NEON Communications, *Frequently Asked Questions*, <http://www.neoninc.com> (as of Nov. 22, 2002); NEON Communications Press Release, *NEON Communications to Complete Financial Restructuring and Reduce Debt by Approximately \$250 Million Through a Negotiated Chapter 11 Filing* (June 26, 2002); *Fastest-Growing Companies: Stock Market Catches Up to Once High-flying Companies*, Boston Bus. J. (Sept. 13, 2002). **Progress Telecom.** Progress Telecom, *Our Network: Network Coverage Area*, http://www.progresstelecom.com/our_network/network_cov_area.html (as of Nov. 22, 2002); Progress Telecom, *Our Network: Network Statistics*, http://www.progresstelecom.com/our_network/network_statistics.html (as of Nov. 22, 2002); S. Masud, *Making Headway: Progress Telecom Says Metro/LH Strategy Paying Off*, [Telecomflash.com](http://www.telecomflash.com) (Sept. 26, 2002), <http://telecomflash.com/default.asp?journalid=5&func=articles&page=090303&year=2002&month=9&rsno=3>. **NEESCom.** NEESCom, *Metro Rings*, http://www.neescom.com/prod_servc/metro/index.htm (as of Nov. 22, 2002); NEESCom, *Company*, <http://www.neescom.com/company/index.htm>; *National Grid Group – Financial Results*, The Regulatory News Service (May 30, 2002).

Table 7. Utilities Providing Local Fiber

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Table 8. Local Fiber Networks of IXC's That Supply Dark Fiber

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