

expertise by employing consultants to advise them. Larger business customer transactions typically result from face-to-face negotiations between the buyer and a number of bidders, giving the customer full opportunity to take advantage of its knowledge of available alternatives. Larger buyers can and do consider not only proposals to sell them packages of services, but also alternative ways of splitting their demands among multiple suppliers. Business customers often use multiple vendors, choosing different carriers to supply different types of services, or to provide service to different areas or groups of offices. We understand that business customers regularly demonstrate, through their behavior, that they are willing to use multiple vendors not only for redundancy, but also as a competitive alternative to purchasing multiple services from a single vendor.

74. These market conditions are important for evaluating the effects of the proposed merger on the supply of telecommunications services to larger business customers. Economic theory, as well as experience, indicates that, in these circumstances, only a relatively small number of competitors is needed to keep prices at competitive levels. Simple bidding or auction models developed by economists tend to indicate that, once the number of bidders reaches a small number, further increases in the number of bidders have only very small effects on price.⁸⁰ In fact, more than a small number of carriers compete to supply larger businesses, and these customers can further expand the range of alternatives by combining services offered by carriers with the services of system integrators or with the services of their own, internal staffs.

75. As with service to other customer groups, the merged firm would compete not only with AT&T, but also with other carriers that are emerging, and continue to emerge, as

⁸⁰ See, for example, L. Froeb, S. Tschantz, and P. Cooke, "Mergers Among Asymmetric Bidders: A Logit Second-Price Auction Model," Vanderbilt University, February 27, 1998; and Serdar Dalkir, John W. Logan, and Robert T. Masson, "Mergers in symmetric and asymmetric noncooperative auction markets: the effects on prices and efficiency," *International Journal of Industrial Organization* (forthcoming).

important suppliers to larger businesses. WorldCom itself had become an important supplier of service to larger business customers in advance of its merger with MCI.⁸¹ Other carriers are repeating this experience and are becoming important features of the competitive landscape.

76. Larger businesses, like other customers, demand simple domestic and international switched voice service. A very large number of carriers can and do compete to provide these services. As is the case when they supply residential and smaller business customers, these carriers may be facilities-based suppliers, pure resellers, or some hybrid of the two.

77. Larger business customers also demand simple private line services. Carriers that control new network capacity have the ability to offer private line services to larger customers and, unsurprisingly, they do so. Prominent among the carriers offering these services are Qwest, Frontier, IXC, Level 3, and Cable & Wireless.⁸² Level 3 reports analyst projections that global private line sales will grow from \$23 billion in 1998 to more than \$42 billion by 2001.⁸³

78. Larger business customers also have rapidly growing demands for data services, such as frame relay, ATM, and IP services. Serving this demand has been a primary business focus for many of the emerging carriers, and they have been rapidly developing their capabilities to do so. Frost & Sullivan, in a report on business data services, lists 31 carriers that offer interLATA frame relay service and 22 carriers that offer interLATA

⁸¹ See, for example, FCC WorldCom/MCI Order, para. 34.

⁸² <http://www.qwest.com/business/privateline.html>;
<http://www.frontiercorp.com/yourbiz/products/data/transport/private.html>; http://www.ixc-comm.com/products/products_private.html;
<http://www.level3.com/Content/1,1233.us|services|privateline,00.html>; http://www.cw-usa.net/data_private.htm; all visited November 9, 1999.

⁸³ Level 3 Communications, Annual Report, 1998, p. 10.

ATM service.⁸⁴ Not all of these carriers have equal capabilities, but the list does indicate that many carriers either have developed or are developing some capability to offer these business data services.

79. The list also documents that the emerging carriers identified above as controlling new national network capacity are developing the capability to offer these data services. Qwest, Frontier, IXC, and Williams are all listed as supplying both frame relay and ATM service. Company profiles prepared by Frost & Sullivan report that Frontier provides “a wide matrix of data services to businesses of all sizes” and that Cable & Wireless has a “commitment to offer a wide array of high speed data services.”⁸⁵

80. Business data services also are seen as a major focus of Qwest’s business.⁸⁶ Qwest offers frame relay service from 507 points of presence in the U.S. and more than 90 countries, and ATM service at speeds ranging up to OC-3.⁸⁷ In 1998 Qwest acquired Icon as part of its strategy to strengthen its ability to sell service to high-end business.⁸⁸ More recently Qwest forged a relationship with Microsoft, thereby guaranteeing that Qwest’s specialized business data service will run on Windows NT server software.⁸⁹ Qwest also markets a range of “business voice solutions,” including voice virtual network service with a variety of call routing, forced on-net, and billing features, and toll-free service with “a

⁸⁴ Frost & Sullivan, *U.S. ATM, Frame Relay, SMDS, and X.25 Public Data Services Market*, 1999, pp. 6–18–19; 8–18.

⁸⁵ *Ibid.*, pp. 14–18, 14–21.

⁸⁶ “Icon Acquisition Gives Qwest an Edge: The Power Duo Aims to Compete for Business Customers,” *ISP Business News*, Vol. 4, No. 37, September 21, 1998.

⁸⁷ <http://www.qwest.com/business/framerelay.html>; and <http://www.qwest.com/business/ATM.html>; both visited November 11, 1999.

⁸⁸ “Icon Acquisition Gives Qwest and Edge: The Power Duo Aims to Compete for Business Customers,” *ISP Business News*, Vol. 4, No. 37, September 21, 1998.

⁸⁹ “Media: Internet on line for new revolution,” *The Observer Business Page*, January 10, 1999, p. 8.

host of enhanced toll-free features that provide routing capabilities for customized business solutions.”⁹⁰

81. Frontier markets a range of both data and voice business products. These include both transport services—private line, frame relay, and ATM services—and managed WAN service.⁹¹ Voice services include toll-free service with a variety of call routing and blocking services and VPN service.⁹² IXC also offers ATM and frame relay data services over its nationwide network, which it claims is seamlessly controlled by its enhanced Network Management Services.⁹³ In late 1998, IXC announced that it was teaming with Bell Atlantic by connecting the latter’s ATM cell relay service with IXC’s network in order to enable Bell Atlantic to offer its business customers an end-to-end seamless national ATM service over IXC’s advanced network.⁹⁴

82. Another builder of a new national network, Williams, concentrates on selling wholesale services, but its services include many that are demanded by larger business customers. Williams announced in December of 1998 that it was re-entering the market as a supplier of frame relay—a service it had offered before selling assets to WorldCom and signing a three-year non-compete agreement. Williams announced that its frame relay services would be available in 160 cities. By 2000 Williams will offer an enhanced frame relay platform in 95 cities with such capabilities as frame relay to ATM inter-networking, the ability to set committed information rates by time of day and week, and management

⁹⁰ <http://qwest.com/business/VNS.html>, <http://www.qwest.com/business/tollfree.html>; also <http://www.qwest.com/business/audioconf.html>; all visited November 9, 1999.

⁹¹ <http://frontiercorp.com/yourbiz/products/data/index.html> and linked pages, visited November 9, 1999.

⁹² <http://frontiercorp.com/yourbiz/products/callroute/index.html>; and <http://frontiercorp.com/yourbiz/products/long/vpn.html>, visited November 9, 1999.

⁹³ http://www.ixc-comm.com/products/products_advdata.htm, visited November 9, 1999.

⁹⁴ <http://www.ixc-comm.com/corporate/investors/1998/11%2D09%2D98.htm>, visited November 9, 1999.

software.⁹⁵ On its website, Williams describes a variety of frame relay offerings that can reach “almost all the major markets your customers will ever want.”⁹⁶ Williams also offers toll-free services with both basic and enhanced call routing features.⁹⁷

83. Larger business customers also have alternatives for international data services. In its recent Order in connection with the international joint venture of AT&T and British Telecom, the FCC identifies a number of significant providers of global seamless services, including Cable & Wireless and Equant.⁹⁸ Equant reports that its own revenue for global data services grew at a rate of 80 percent in 1998, while estimating that overall sales of global data services grew at an annual rate of 30 to 34 percent.⁹⁹ In 1999 one analyst noted that Equant was extending its ATM offerings and “hopes to beat MCI WorldCom and other carriers to the global ATM punch” with its new service over a unified network of Nortel switches.¹⁰⁰

84. The FCC also identifies other firms that are emerging as significant providers of global services. Some of these carriers are in the process of building international capacity, much as carriers have built new national networks within the U.S. Indeed, in many cases the same carriers are building international as well as domestic U.S. networks. Qwest and KPN are building fiber rings in Europe to provide service to large corporate customers. Global Crossing, which has acquired Frontier, is building a global IP network

⁹⁵ “Williams Comes Full Circle.” *Fiber Optic News*, Vol. 18, No. 49, December 14, 1998.

⁹⁶ http://willtales.com/network/non_flash/products/frameindex.html, visited November 9, 1999.

⁹⁷ http://willtales.com/network/non_flash/products/voice.html, visited November 9, 1999.

⁹⁸ *In the Matter of AT&T Corp., British Telecommunications, plc. et al.*, FCC, CC Docket No. 98-212, adopted October 22, 1999, paras. 29-38.

⁹⁹ Equant, 1999 Annual Report, p. 26.

¹⁰⁰ Kitty Weldon (Yankee Group), “MCI WorldCom, Equant Extend ATM Offerings.” *Network World*, May 1999.

as are GTS and Level 3. Viatel is another carrier that is building and acquiring international capacity, as is Teleglobe.¹⁰¹

85. Teleglobe claims to offer international voice, data, and Internet services through one of the world's largest intercontinental telecommunications networks. Teleglobe's business unit, TCC, reports an 85 percent increase in global revenues, including a 232 percent increase in data service revenues, in 1997.¹⁰² Finally, the FCC identifies IDT, Primus Star, Pacific Gateway, and COLT as firms that may become significant providers of global service, although they currently offer somewhat limited international reach and service capabilities.

86. Technological developments also are helping to expand the range of alternatives available to larger business customers. These developments are both eroding the distinction between circuit-switched voice and packet-switched data services and expanding the options for data communications. Businesses increasingly use packet-switched data networks to transmit voice communications. For example, Frost & Sullivan project that voice over frame relay will be the most rapidly growing application of frame relay during the period 1999 to 2005.¹⁰³ This makes packet-switched data services an alternative to circuit-switched service for more voice communications and, in doing so, brings other kinds of information technology firms into competition with long distance providers for services to larger businesses.

¹⁰¹ *In the Matter of AT&T Corp., British Telecommunications, plc, et al.*, FCC, CC Docket No. 98-212, adopted October 22, 1999, paras. 29-38.

¹⁰² Teleglobe, 1998 Annual Report, p. 26.

¹⁰³ As measured by percent of revenues by application type in the U.S. See Frost & Sullivan, *U.S. ATM, Frame Relay, SMDS, and X.25 Public Data Services Market*, 1999, p. 6-13.

87. Beyond that, however, routers and associated software have been, and are being, developed to provide routing, call tracking, and reporting capabilities via data VPN networks that more traditionally have been provided as voice VPN service over circuit-based networks. These data-protocol VPNs may use either frame relay or ATM transport protocols, but the greatest growth is expected to be for VPNs employing Internet protocols, also known as IVPNs.¹⁰⁴ These IVPNS will be alternatives for data networks relying on frame relay or ATM-based service. In addition, such VPNs allow consolidation of data, voice, and video services onto a single network, reducing operational and capital expenses. Services can be expanded to include applications that run across the IP-based network such as packet telephony, videoconferencing, and e-commerce.¹⁰⁵

88. Analysts project rapid growth for IVPNs and believe that corporations increasingly will use IVPNs instead of VPNs based on frame relay and ATM protocols. One estimate is that IVPNs generated \$170 million in revenue globally for their providers in 1998, but that this will grow to \$2.6 billion by 2002 and that ATM and frame relay service revenue will begin to decline absolutely by 2002.¹⁰⁶ The growth of IVPN services will further expand the range of firms that can participate in supplying telecommunications service to larger businesses. The current and emerging suppliers of IVPN services include firms that have not been prominent as suppliers of public data services such as frame relay and ATM—

¹⁰⁴ IVPNs may either utilize the public Internet or run over service provider IP networks. Use of service provider IP networks allows for higher quality of service and for latency and availability guarantees, which can reduce some of the quality limitations that plague voice communications over the public Internet. See The Yankee Group, "Internet Protocol Virtual Private Networks: Not Your Grandparent's Voice VPN," *Data Communications Report*, Vol. 14, No. 4, April 1999, esp. p. 4.

¹⁰⁵ Cisco Systems, Inc., "The New World of Virtual Private Networking," 1999.

¹⁰⁶ The Yankee Group, "Internet Protocol Virtual Private Networks: Not Your Grandparent's Voice VPN," *Data Communications Report*, Vol. 14, No. 4, April 1999, pp. 1, 9.

carriers such as GTE Internetworking and PSINet.¹⁰⁷ One analyst estimates that GTE Internetworking is the second-largest supplier of IVPN service globally.¹⁰⁸

89. The development of voice over data capabilities opens up two new alternatives to traditional circuit-switched VPN service for business customers that want the functionality of voice VPN. First, business customers can get voice VPN functionality over their own managed data networks using router manufacturers and software vendors for the inputs needed for VPN functionality while purchasing circuit capacity or basic data services from telecommunications carriers. Second, emerging carriers can develop the capability to offer VPN functionality to customers by using router-based technology and related software, without duplicating the circuit-based VPN platforms that carriers traditionally have used for voice VPN service.

90. These dynamic and ongoing developments in the industry illustrate why it would be a mistake to perceive the alternatives available to business customers to satisfy their telecommunications demands as being limited to the services and capabilities currently supplied by telecommunications carriers. Supplying the telecommunications services consumed by larger business customers involves the use and assembly of a wide range of inputs and capabilities. One model of production is for a telecommunications carrier to assemble the necessary inputs and deliver the complete product to the customer. However, this model is at one end of a whole spectrum of possibilities, ranging from assembly of all inputs by carriers to assembly by the customers themselves.

91. A similar model is for a telecommunications carrier to partner with suppliers of other inputs to supply a customer's demands. Under this model, a carrier together with a

¹⁰⁷ *Ibid.*, pp. 13-18.

¹⁰⁸ *Ibid.*, pp. 13-15.

partner can qualify as a supplier of services that the carrier alone could not supply, and thereby can offer an alternative to a carrier that by itself already commands the necessary inputs and capabilities. For example, Cisco Systems Inc., Nortel Networks, 3Com Corp. and L.M. Ericsson AB are among the hardware manufacturers now announcing scalable VPN-capable products. Their target customers are carriers that want to offer more extensive and more secure managed IP-based VPN services.¹⁰⁹ We also understand that carriers can turn to software developers to meet customer requirements for enhanced services, and/or call routing, or to other suppliers to provide billing capabilities that a customer may demand.

92. Still another model is for the suppliers of other inputs to take the lead in assembling and integrating a package of telecommunications services for a customer, while purchasing the necessary transport capacity in the wholesale market. Firms that have been identified as currently offering such integration services include computer hardware suppliers like IBM Global Services, Hewlett Packard, Unisys and DEC, and network equipment suppliers like Cisco Systems, Lucent Technologies, Nortel, and 3Com Corp. In addition, business customers can turn to firms that specialize in systems integration such as EDS, ISSC, Computer Science Corporation, and Perot Systems to help acquire, manage, and integrate relatively basic telecommunications services from carriers.¹¹⁰ An integrator can manage portions of a firm's telecommunications needs and, in some cases, can substitute its own integration, management, and addition of functionality for what otherwise might be provided by a carrier as part of its service.

¹⁰⁹ David Molony, "Managed IP Networks Scale Up." *Communications Week International*, June 21, 1999.

¹¹⁰ The Yankee Group, "Internet Protocol Virtual Private Networks: Not Your Grandparent's Voice VPN," pp. 7, 9.

93. Finally, corporate customers can self-provision some assembling, managing, and operating of telecommunications services. As the FCC has noted, for many corporations this remains an important alternative to relying completely on telecommunications carriers.¹¹¹

94. In sum, larger business customers, like residential and small business customers, have a growing number of alternatives because of the emergence of new carriers and the new network capacity on which they can rely, and because of changes in technology. These alternatives will increasingly serve to constrain the ability of the merged MCI WorldCom-Sprint to raise prices to larger customers.

C. RBOC InterLATA Entry

95. To this point, we have discussed changes in the telecommunications marketplace that are already expanding the range of long distance alternatives for both mass market and larger business customers, but have not yet considered prospects for the provision of interLATA service by the Regional Bell Operating Companies (the "RBOCs"). Emerging carriers have built new national networks and are developing new services, which are giving them increasingly competitive significance. These changes are transforming the telecommunications marketplace and they will continue regardless of how soon the RBOCs are allowed to provide interLATA service. That RBOCs are likely soon to be allowed to offer in-region interLATA service promises still another competitive force in the telecommunications marketplace.

¹¹¹ *In the Matter of AT&T Corp., British Telecommunications, plc, et al.*, FCC, CC Docket No. 98-212, adopted October 22, 1999, para. 39.

96. For more than a decade after the break-up of the Bell system, the RBOCs were barred from providing in-region interLATA long distance service.¹¹² The Telecommunications Act of 1996 superseded this line-of-business restraint and provided a framework under which the RBOCs could be permitted to offer interLATA service to customers in areas in which they are the ILEC. Under this framework, an RBOC will be permitted to enter if it meets certain conditions generally intended to ensure that other carriers are and will be able to compete effectively as suppliers of local service. Most industry commentators expect that RBOC entry will begin soon and that an entering RBOC will immediately become an important competitive force in the provision of long distance service.¹¹³

97. Since the passage of the Telecommunications Act, the RBOCs have sought approval under Section 271 to provide interLATA services, arguing that their local markets were sufficiently open to satisfy the criteria specified in that section. Although the RBOCs have not yet won approval, they have made slow, steady progress toward doing so. Following unsuccessful Section 271 applications by several RBOCs in the first two years after the passage of the Act, the FCC found that BellSouth had satisfied in full six of the fourteen elements of the "competitive checklist" in its 1997 application in Louisiana.¹¹⁴

¹¹² These line-of-business restrictions were imposed as part of an antitrust settlement in 1982 through a Modification of Final Judgment (the "MFJ") of the 1956 consent decree [*United States v. American Tel. & Tel. Co.*, 552 F. Supp. 131 (D.D.C. 1982)]. Under the terms of the MFJ, twenty-two Bell operating companies were divested from the parent AT&T (as of January 1984) and organized within seven regional holding companies to provide local service. Local exchange and transport areas (LATAs) were created to mark the boundaries beyond which a Bell Operating Company could not carry end-user traffic.

¹¹³ See, e.g., *Dataquest Public Telephony Services North America, 1999: Market Trends*, June 28, 1999.

¹¹⁴ In considering whether to approve a RBOC's application for Section 271 authority in a particular state, the FCC must consult with the DOJ and give "substantial weight" to the latter's assessment of competitive conditions in a market.

Although the application was denied, BellSouth's partial success provided a concrete indication of those RBOC actions that would satisfy the Section 271 provisions.¹¹⁵

98. Bell Atlantic has recently applied for Section 271 authorization in New York and its application was endorsed by the New York Public Service Commission. In its review of Bell Atlantic's currently pending application, the Department of Justice, Antitrust Division, suggested that the FCC could: "either deny the application in a manner which clearly identifies the remaining steps Bell Atlantic must take to secure approval, or grant Bell Atlantic's application on the condition that ... it takes specified steps and demonstrates ... its performance." In announcing this recommendation, the Assistant Attorney General for Antitrust stated: "I am confident that Bell Atlantic can solve the few remaining problems in New York, and I am pleased that they have already started to do so."¹¹⁶ Industry commentators expect Bell Atlantic will soon be allowed to provide long distance service in New York.¹¹⁷

99. In sum, although the process of opening local markets may have been slower than the drafters of the 1996 Act envisioned, the process appears to be moving steadily toward authorization of RBOC entry. The grant of authority in New York appears to be imminent

¹¹⁵ See FCC Press Release, "FCC Finds That BellSouth's Application to Provide Long Distance Service in Louisiana Satisfies More Than 6 Items on the 14-Point Checklist: Commission Denies Application and Provides Detailed Blueprint on Long Distance Entry," Common Carrier Action Report CC 98-34, October 13, 1998.

¹¹⁶ See DOJ Press Release, "Justice Department Tells FCC That Bell Atlantic Resolved Most, But Not All, Obstacles To Local Competition In New York," November 1, 1999.

¹¹⁷ See Heather Fleming Phillips, "Bell Atlantic Fails With New York LD Bid," *Bloomberg News*, November 2, 1999. The article states: "Analysts had widely expected the antitrust agency to endorse Bell Atlantic's application. Even with today's filing, they expect the FCC to ultimately approve the application. 'The (FCC) has enough leeway to approve the application,' said George Reed-Dellinger, an analyst with Washington Analysis, a research firm" (at p. 2). Similarly, Texas PUC Chairman Pat Wood has been saying that SBC would win endorsement of its long distance application this fall: see PaineWebber Inc., "Prefer RBOCs over LD Stocks in the Near Term," August 19, 1999, p. 2.

and will provide other RBOCs with a clearer indication of the conditions they must meet, thus facilitating successful applications in other states.

100. The competitive impact of RBOC entry into interLATA markets has been hotly contested. Those opposed to RBOC entry have argued that the RBOCs would have the ability and incentive to act anticompetitively, while proponents argue that RBOC entry would lead to increased competition and the capture of efficiencies. However, commentators on both sides are agreed on one basic fact—the RBOCs have formidable advantages as competitors and they are likely to achieve a substantial competitive presence.

101. Most fundamentally, even though the RBOCs are currently prohibited from providing interLATA service, they are very large telecommunications providers. As is sometimes overlooked, the RBOCs are also large providers of intraLATA *toll* services. In many respects, intraLATA toll services are indistinguishable from interLATA toll services. RBOCs historically have provided the great bulk of in-region intraLATA toll services, which, in aggregate, account for about 10 percent of all toll revenues.

102. RBOCs have strong reputations that will afford them a high degree of customer acceptance once they receive Section 271 authority. For example, a recent report found that, “Among those who would consider a single provider for bundled telecommunications services, 42 percent indicated they would choose their local telephone company, while 34 percent would choose their long-distance carrier.”¹¹⁸ Each RBOC has a long-standing customer relationship with virtually every household and business within its region as a supplier of local, and in many cases local toll services. A RBOC’s share of local service

¹¹⁸ T.K. Horan, et al., “Telecom Services Update,” CIBC World Markets Corp, September 20, 1999, p. 2.

will make it easier for it to sell interLATA service to the extent that customers prefer to purchase packages of local and long distance service from a single provider.

103. Because the RBOCs have all been providing intraLATA toll service for a long period of time, they already possess valuable technical expertise and experience. The RBOCs have been able to provide enhanced services (e.g., voice mail, electronic mail, electronic store-and-forward, fax store-and-forward, data processing, and gateways to online databases) within LATAs on an integrated basis, and thus already possess the platforms and technical expertise to offer these services.¹¹⁹ Because they have been offering intraLATA toll service, they also possess billing and other backoffice systems to support toll service, and they are already performing these functions on behalf of many interexchange carriers.¹²⁰

104. The RBOCs also have in place formidable in-region intraLATA network facilities that provide the RBOCs with an effective base upon which they can build an interLATA network once Section 271 authority is granted. In addition, it appears that many, if not all, RBOCs have *interLATA* in-region networks they have been using for official traffic and which can be used to supply interLATA service.¹²¹

¹¹⁹ See, for example, *In the Matter of Computer III Further Demand Proceedings: Bell Operating Company Provision of Enhanced Services, 1998 Biennial Regulatory Review—Review of Computer III and ONA Safeguards and Requirements*, FCC, CC Docket No. 98-10, adopted January 29, 1998, paras. 1-2.

¹²⁰ In support of the BellSouth application, Richard Gilbert states: "BellSouth's billing and collections operation is composed of customer account records, usage records, billing systems, accounts receivable, and collections. BellSouth's entry into interLATA service will require adding long distance calling to its record keeping functions for its own customers. This will not require significant new capital investment because BellSouth already handles billing and collections functions for its intraLATA toll traffic. Also, BellSouth's current system already provides billing and collection services for AT&T, MCI Sprint, and other providers of telecommunications services." See *Application by BellSouth for Provision of In-Region, InterLATA Services in Louisiana: Affidavit of Richard J. Gilbert*, FCC, CC Docket No. 97-231, adopted February 3, 1998, pp. 17-18.

¹²¹ There is little public information on the extent or capacity of these networks, but a recent FCC filing by Qwest and US West indirectly acknowledged that many of the RBOCs have such interLATA facilities. See

105. The Connecticut experience provides one observation on the share of long distance service that can be captured quickly by an ILEC. In April 1994, SNET America began to resell Sprint long-distance service. By October 1996 it had captured about 20 percent of the interstate/interLATA calls that originated in Connecticut.¹²²

106. The potential impact of RBOC entry into interLATA markets has been considered in numerous studies. The estimates in these studies vary considerably, but they all predict that the RBOCs will be able to build significant market shares quickly. The following are some of the available estimates:

- ◆ Yankee Group (1995): 27%¹²³
- ◆ Gilbert (1997) citing SNET experience: 20%¹²⁴
- ◆ MacAvoy (1999) citing customer surveys: 26%¹²⁵
- ◆ Public Telephony Services, 1999: 15% plus¹²⁶

Response to Comments on Applications For Transfer of Control of Qwest Communications International Inc. and US West, Inc., FCC, CC Docket No. 99-272, October 18, 1999, p. 14, fn. 25; and p. 21, fn. 43.

¹²² See the declaration of Richard J. Gilbert in support of BellSouth's 271 application in Louisiana. The experience of SNET in Connecticut, and that of other non-RBOC local exchange carriers that have provided interLATA service in particular circumstances, also is discussed in *Historical Patterns of Entry Into Long Distance By Local Exchange Carriers*, Industry Analysis Division, Common Carrier Bureau, FCC, September 10, 1998.

¹²³ See Declaration of Paul W. MacAvoy *In Support of Bell Atlantic's Petition to Provide In-region, Inter-LATA Telecommunications Services*, p. 10, citing Yankee Group, "RBOCs versus IXC's: The Battle of the Century," December 1995, surveying consumers on whether, if the options were available, they would choose exclusive service with an IXC or an RBOC, or remain with one long distance provider and one local carrier. According to MacAvoy, the survey found approximately 27 percent of customers would choose exclusive service from an RBOC.

¹²⁴ Affidavit of Richard Gilbert, *In Support of BellSouth's Section 271 Application in Louisiana*. This estimate is based on the percentage of interstate calls that SNET America captured after it began providing interLATA service.

¹²⁵ See Declaration of Paul W. MacAvoy *In Support of Bell Atlantic's Petition to Provide In-region, Inter-LATA Telecommunications Services*, Table 2, at p. 28. In this estimate, shares are calculated as the difference between pre- and post-entry shares. Pre-entry shares are based on total originating and terminating minutes of use for all Bell Atlantic switched services, as reported by Bell Atlantic. Post-entry

107. The conclusion that RBOCs will acquire significant long distance market share quickly is also supported by international experience. In most other jurisdictions, local exchange carriers have not been prevented from providing long distance services, and the market shares of incumbent local service providers in these countries are well in excess of 60 percent. The example of Finland is particularly noteworthy. As in the U.S., Finnish local exchange companies were not permitted to provide long distance services for many years, but recently these restrictions were relaxed. The result was that the local exchange companies quickly gained a more than 60 percent market share.¹²⁷

108. It should not be presumed that an RBOC authorized to offer interLATA service will concentrate only on serving residential and small business customers. SBC and Amertitech, in their application to the FCC for authorization to proceed with their merger, stated that their plan to enter out-of-region markets was "critical" in order to serve the needs of large and mid-size business and that their plan for entry would "target the uniquely demanding requirements of large and mid-size business customers."¹²⁸ BellSouth has acquired a 10 percent equity stake in Qwest, and a story on the formation of this

shares are based on a survey conducted by Itamar Simonson [Itamar Simonson, "User Preferences for One-Stop Telephone Service Providers: Survey Results in Chicago, Detroit and Grand Rapids LATAs." 1995].

¹²⁶ See. Dataquest, *Public Telephony Services North America, 1999: Market Trends*, June 28, 1999. The report states: "The RBOCs will capitalize on long histories with customers, strong brands and great financial and operational resources.... ILECs as a class will more than double their end-user long distance revenue -- now primarily intraLATA toll -- during the first three to five years following initial RBOC long distance market entrance. The RBOCs should gain more than 15 percent of intraLATA (sic -- should read "interLATA") revenue...." (at p. 40).

¹²⁷ See Organization for Economic Cooperation and Development, *The OECD Report on Regulatory Reform: Volume 1 - Sectoral Studies* at pp. 42-43 (OECD: Paris, 1997). Specifically, Table 3.1 shows that the share of the long distance market held by local operating companies increased from 0 to 60 percent in one year once they were allowed to provide long distance services.

¹²⁸ *Application for Declaration of Common Ownership and Authorization for Common Officers and Director*, FCC, CC Docket No. 98-141, July 24, 1998, pp. 13-14.

“strategic alliance” reported that the companies intend to offer broadband services “primarily to big businesses” when BellSouth receives Section 271 approvals.¹²⁹

D. Conclusion

109. The merged firm will face not only AT&T as a competitor, but also new entrants with access to substantial amounts of transmission capacity, capacity that can be used either by vertically integrated carriers to serve retail customers, or by resellers of that capacity, broadly defined. Moreover, these entrants have already demonstrated their ability to capture significant numbers of customers and there is no sign that this trend is abating. In addition, large business customers increasingly are served by integrators or by other non-traditional suppliers, placing additional competitive constraints on the ability of the merged firm to raise prices. Finally, as if this were not enough, the RBOCs are likely to soon begin entering the marketplace and to quickly occupy a significant competitive position. These developments, both current and prospective, dramatically reduce any competitive concerns that might otherwise be raised by the proposed merger of MCI WorldCom and Sprint.

IV. EFFICIENCIES FROM THE MERGER

110. Many telecommunications firms have been restructuring in an attempt to find the most efficient scope and scale of services to offer. Some are integrating to seek to take advantage of what they believe are particular economies of scope or efficiencies from vertical integration in production, or to deliver packages of services they believe consumers demand because of economies of scope in consumption. Others are

¹²⁹ “BellSouth Lays Out Long-Term Business Plan In \$3.5 Billion ‘Strategic Alliance’ with Qwest,” *Telecommunications Reports*, April 26, 1999.

concentrating on particular functions. It is difficult to say with certainty what will be the most efficient structure—and indeed it is entirely possible that multiple business structures and strategies will coexist. What can be said with more certainty is that market tests of different structures and strategies are important in determining the most efficient ways for telecommunications firms to operate their businesses and that consumers will benefit from having production patterns adapt efficiently to changing conditions. As the previous discussion makes clear, carriers are adopting a wide range of strategies and business models in terms of geographic coverage, product offerings, packaging, and the like. These carriers obviously expect to obtain competitive advantages from many different sources.

111. In assessing the likely effects of the MCI WorldCom-Sprint merger, it is important to examine its effects on the ability of the merged firm to compete to offer services that are demanded by telecommunications users. MCI WorldCom and Sprint believe that, given their strategies for supplying service, the merger will allow them to take advantage of economies of scope or scale in production and will permit the combined entity to offer either new services or existing services at lower cost than either MCI WorldCom or Sprint individually could offer. In addition, MCI WorldCom and Sprint believe that some purchasers may prefer to purchase combinations of services—perhaps because their costs are reduced by doing so—and that the merger will permit the combined firm to offer some service packages that neither of the merging parties could have provided on its own. If the firms are correct that the combined entity will be able to offer more appealing service at lower prices than previously possible, this outcome promises real benefits for consumers. In the absence of significant competitive concerns, there are benefits to allowing a market test of whether the merged firm will be a more efficient supplier of local and long distance telecommunications services.

112. This section describes some of the sources of the merger efficiencies that have been identified by the merging companies. Some, but certainly not all, of these have been quantified by the companies. Most of the near-term cost savings that have been quantified involve traditional long distance services, the area in which both companies already have substantial operations. Quantified efficiencies in the provision of innovative CLEC and integrated broadband services are smaller.¹³⁰ However, the companies have not attempted to quantify all efficiencies they expect from the merger in the provision of these innovative services. Many of these involve the merged company's ability to supply facilities-based competing local services and, especially, its ability to supply facilities-based broadband service, and these efficiencies and benefits may well be more important in the long run than the efficiencies that have been quantified.

A. Improved Ability to Offer Local and Integrated Broadband Service

113. A combined MCI WorldCom and Sprint is likely to be better positioned than either firm alone to supply local service that competes effectively with ILEC service and to supply enhanced integrated broadband services that compete effectively with DSL services offered over ILEC facilities or with service over high-speed modems and cable television plant. In addition to the well-documented difficulties of obtaining access to RBOC facilities on reasonable terms, two factors have thus far limited the ability of each of the merging parties alone to capture a larger number of customers for its facilities-based local services, and especially to offer successful integrated broadband service on a national scale to residential and small business customers. First, within individual geographic service areas, each company has been too small to exploit fully local economies of scale and scope. Second, the number of customers served by each of the companies nationwide has

¹³⁰ Additional detail on these quantified savings is provided in the Joint Affidavit of Wayne Rehberger and

been too small to permit either of them to exploit fully efficiencies that derive from a larger scale of operation or a "national footprint." The merger will permit the combined company to obtain economies of scale and scope denied to each firm separately, thus permitting the merged entity to pursue more effectively a strategy of becoming a nationwide, facilities-based provider of local exchange services.

114. MCI WorldCom and Sprint each control important local assets. Both companies hold significant numbers of Multichannel Multipoint Distribution Service (MMDS) licenses that permit them to offer fixed wireless telecommunications services. MCI WorldCom has entered a number of markets as a Competitive Local Exchange Carrier (CLEC). Finally, Sprint is the ILEC in a number of markets. Despite these substantial assets, each of the merging entities has faced substantial difficulties in expanding its local operations. Combining the local assets of the two companies will likely permit the achievement of certain economies and thus enhance the ability of the two companies to compete in providing local service.

115. Combining the operations of the two companies in a given service area will permit MCI WorldCom and Sprint to share facilities for the services each is developing. Since these services are differentiated, it is very likely that the merged single firm will attract more customers than either company could have attracted separately for its own offerings. The services of the merged firm can, moreover, share use of some local facilities, and thus achieve lower costs than if each separately owned and operated its own facilities. Indeed, the companies believe that the merged firm will be able to justify the costs of construction and operation of some local facilities that neither company alone could justify; thus, the merged firm will be less dependent on ILEC facilities than either would be separately.

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116. For example, after the merger, DSL equipment for what would have been Sprint ION services can be placed in collocation space that MCI WorldCom has obtained for its voice service facilities. By using these facilities for both types of services and the customers both attract, the combined company will be able to justify the costs of jointly collocating equipment in a larger number of telephone company central offices than if each were offering services separately. The companies also expect the merged firm to have lower costs of supplying local and integrated broadband services than the separate firms because, in many locations, MCI WorldCom fiber rings rather than ILEC-supplied service can be used for backhaul links for ION service or from MMDS transmitter sites.

117. There is a second source of efficiencies that should increase the ability of the merged company to provide facilities-based competitive local service. The combined firm's assets will permit it to reach and serve a nationwide potential local customer base substantially larger than the base that can be reached by either company alone. For example, the combined MMDS assets of the two companies reach more than half of the households in the United States, and the addition of the local and integrated broadband services of the two companies further extends this reach.

118. Each of the merging parties has acquired a number of geographically dispersed MMDS operations in recent years, but the MMDS footprint of the combined company would be substantially larger than that of either company separately. Thus, the merged firm could have MMDS operations, and the potential of providing broadband service to customers otherwise difficult to serve, in more parts of the country than either firm by itself. Even in areas where Sprint has ILEC operations or MCI WorldCom has CLEC operations, the combination with MMDS assets may increase the number of customers who can obtain new broadband services. As a result, the combined company may be able

to attract more customers, and therefore undertake certain activities more efficiently than could either of the merger partners alone.

119. The costs of developing two-way MMDS services in time to compete with rapidly expanding cable and DSL services are high, as are the development costs of Sprint's ION service. These development costs are driven primarily by the capabilities and features required by the proposed service and are largely independent of the number of customers obtained. By deploying its service in multiple locations across a larger national footprint, the merged firm can spread the development costs over more customers than could either firm individually. As a result, the merged firm can be expected to find profitable more investments in developing service capabilities and features than would either of the merging firms. That, in turn, should allow the merged firm to develop services that can compete more effectively with currently deployed alternatives.

120. Similarly, the ability of the merged firm to provide service to more customers than either could alone may make it easier for the firm to partner with suppliers of complementary inputs that must be specialized for their service. Examples of such complementary inputs could include suppliers of network and consumer premises equipment specialized to an MMDS service and applications specialized to run on an MMDS or ION platform. The ability of the merged firm to create a larger potential customer base for standardized equipment could reduce average unit costs by spreading development costs over more units. Similarly, applications that add value to the MMDS and ION platforms have not yet been developed. Sprint and MCI WorldCom do not expect to produce all of these applications themselves, but will rely on partners with the necessary skills in application development. Partners will be unwilling to undertake the necessary investments unless projected demand is sufficiently high that they can expect to

recover their costs. A larger national footprint offers greater assurance that the cost of application development can be spread over a sufficiently large customer base, permitting the combined firm to attract partners more easily than could either firm independently.

121. Finally, the value of some services, such as Sprint ION, may depend on the number of other customers that use the same service. Expanding the customer base served by the combined company can enhance the value of the combined company's offerings to each of its customers by increasing the proportion of its traffic that remains "on-net."

122. The ability of the merged entity to obtain economies of scale and scope enhances its ability to offer local exchange service, but it also enhances its ability to provide services such as Sprint ION, which offers the functionality of local and long distance service, or other packages of services. Some customers may prefer service packages, either because of the greater convenience or lower cost of obtaining service in that way, so that a supplier that cannot offer such packages may be handicapped in serving those customers. In particular, both MCI WorldCom and Sprint believe that they will be disadvantaged in competing with the RBOCs for long distance customers if they cannot also offer competitive local exchange and integrated broadband services.¹³¹ Because the merger will improve the respective merger partners' positions as providers of these services, it may

¹³¹ Note that we are not contending that all customers will prefer to purchase bundled telecommunications services. Indeed, we believe that many customers will prefer to deal with providers with specialized offerings, or at least will not be willing to pay any substantial price premium to purchase a bundle of services. Moreover, we are not even claiming that MCI WorldCom and Sprint are correct in asserting that some customers will prefer bundled offerings. Our point is that the merging entities believe they will be handicapped unless they can become effective local competitors, and that firms generally should be allowed to pursue the business strategies they prefer. Indeed, discovery of the most effective way to serve customers through experimentation is one of the most important benefits that markets provide. Moreover, we also recognize that offering a package of services does not necessarily require all of the components of the package to be produced by a single firm. Nevertheless, difficulties in coordination or other efficiencies of vertical integration may make joint production the most efficient alternative.

also reduce their costs of acquiring and retaining long distance customers; this would reduce the marketing costs associated with supplying long distance service.¹³²

B. Reduced Costs of Supplying Long Distance Service

123. Sprint and MCI WorldCom believe that their merger will also create opportunities for reducing their costs of providing traditional long distance telecommunications services. Each company purchases originating and terminating switched access from local exchange carriers to transport long distance calls between their customers and their points of presence (POPs). Entrance facilities provide the connection from POP to the LEC's serving wire center. Traffic between the serving wire center and the subscriber can be transported over a direct trunk connecting the serving wire center to the end office, or it can be routed through a tandem office. For sufficiently high volumes of traffic, the cost per minute of direct trunk transport is lower than the corresponding cost for tandem switched traffic.

124. The companies have calculated that their combination will permit the merged firm to increase their use of the less costly direct trunk transport as a result of aggregating their traffic on lower-volume routes. The greatest savings are likely to be obtained on routes where neither company separately has sufficient traffic to justify individual direct trunks, but where their combined traffic does justify the use of direct trunk transport. Savings will also be obtained on routes where one company currently uses direct trunks while the other uses common transport. On routes where both companies already use direct trunks, some savings may be obtained by trunking efficiencies—for a given blocking probability, the capacity required to carry both companies' traffic may be less than the sum of the

¹³² There may also be benefits in the opposite direction if having a larger number of long distance customers enhances the combined companies' ability to attract local customers.

capacities that each company would require on its own. In addition, tariffs for trunks typically incorporate volume discounts, so that one high capacity direct trunk is typically less costly than two low capacity trunks with the same total capacity.

125. For business customers that originate and terminate substantial volumes of long distance traffic, special access is less costly than switched access at current tariffed rates. The economic logic for using special access is the same as that underlying the use of direct trunks, extended to the link between the end office and the customer's premises. In a typical special access arrangement, Sprint leases entrance facilities from its POP to the serving wire center and direct trunks from the serving wire center to the customer's premises. Most often, the ILEC supplies the entrance facilities and the trunks at tariffed rates. Post-merger, the combined entity proposes to replace these ILEC-supplied entrance facilities for what were Sprint services with transport on already constructed MCI WorldCom metropolitan fiber rings for POPs located on the rings.¹³³

126. Sprint currently terminates its international data traffic on facilities provided by foreign PTTs. After the merger, the traffic can be shifted to MCI WorldCom facilities in countries where such facilities are owned. Cost savings will result from shifting the Sprint traffic to MCI WorldCom facilities because the incremental cost to MCI WorldCom of carrying Sprint's traffic is lower than the prices charged by foreign PTTs.

127. Currently Sprint relies on a combination of purchases and self-provision to provide its long distance customers access to Operator Services, Directory Assistance, and Telecommunications Relay Service (TRS). MCI WorldCom primarily uses its own

¹³³ This shift in traffic is similar to the shift of Sprint's ION, PCS, and MMDS traffic to MCI WorldCom's fiber ring.

facilities to provide these services. The companies expect that savings can be realized by moving Sprint's services to MCI WorldCom's facilities after the merger.

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1992–present *Vice President*, Charles River Associates, Washington, DC.
1980–1992 *Senior Economist*, The RAND Corporation, Washington, DC.
1990–1991 *Visiting Professor of Law and Economics*, Georgetown University Law Center.

1988–1989 *Visiting Henley Professor of Law and Business*, Columbia University.
1985–1988 *Co-editor*, *RAND Journal of Economics*.
1978–1980 *Co-director*, Network Inquiry Special Staff, Federal Communications Commission.

1971–1972 *Brookings Economic Policy Fellow*, Office of Telecommunications Policy, Executive Office of the President.

1965–1980 *Assistant Professor, Associate Professor, Professor of Economics, Allyn R. and Gladys M. Cline Professor of Economics and Finance*, Rice University.

1963–1965 *Economist*, Institute for Defense Analyses.
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CONSULTANCIES

1972–1978 The RAND Corporation
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Member, Board of Editors, *Information Economics and Policy*, 1993–present.

Member, Editorial Board, *Economics of Innovation and New Technology*, 1989–present.

Member, US National Committee on Data for Science and Technology (CODATA), National Research Council, 1993-1996.

Member, Office of Technology Assessment Advisory Panel on Communications Systems for an Information Age, 1986–1988.

Member, Regional Telecommunications Planning Advisory Committee, City of Cincinnati, 1985.

Member, Office of Technology Assessment Advisory Panel on Intellectual Property Rights in an Age of Electronics and Information, 1984–1985.

Expert, World Intellectual Property Organization/UNESCO Meeting on Unauthorized Private Copying of Recordings, Broadcasts, and Printed Matter, 1984.

Listed in *Who's Who in America*, 1982–1983, 1984–1985, 1986–1987, 1988–1989, 1990–1991, 1992–1993, 1994, 1995, 1996.

Member, Editorial Board, *Southern Economic Journal*, 1979–1981.

Member, Task Force on National Telecommunications Policy Making, Aspen Institute Program on Communications and Society, 1977.

Brookings Economic Policy Fellow, 1971–1972.

Member, Technical Advisory Committee on Business Development, Model City Program, City of Houston, 1969–1971.

Wilson University Fellow, 1959–1961.

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Beta Gamma Sigma, 1958.

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OECD, Division on Competition and Consumer Policy

Consultant. August 1990–September 1992. Dr. Brenner served as a Consultant to the OECD in Paris while on leave from Charles River Associates. He was principal author of a report on competition policy issues in the broadcast industry drafted for the OECD Committee on Competition Law and Policy, and co-author of a report of the OECD Secretariat analyzing the treatment by competition policy in OECD countries of vertical restrictions in franchise agreements.

Cornell, Pelcovits & Brenner Economists Inc.

Vice President. February 1982–September 1988. As a microeconomic consultant primarily in the fields of telecommunications, broadcasting, intellectual property rights, and antitrust economics, Dr. Brenner performed the following work:

- Developed and presented expert testimony before state public utility commissions on a variety of telecommunications policy and empirical issues.
- Prepared antitrust damage studies and analyzed antitrust liability issues.
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Senior Economist, September 1981–February 1982. As a microeconomic consultant in telecommunications, broadcasting, and antitrust economics, Dr. Brenner worked on various projects, including one analyzing the economic impact of broadcasting regulations on the video industry and on its use of new technologies.

Office of Plans and Policy, Federal Communications Commission:

Senior Economist, July 1979–September 1981. As the economist on the UHF Comparability Task Force, Dr. Brenner analyzed the economics of UHF broadcasting, wrote parts of Task Force reports and separate reports, designed two large surveys, and carried out econometric analysis of data. Other responsibilities included evaluating broadcast and technical standards policy proposals, analyzing radio frequency interference policy, and making oral presentations to the Commission at formal agenda meetings on UHF comparability and on technical standards for stereophonic AM radio.

Grinnell College

Assistant Professor of Economics, August 1973–July 1979. Dr. Brenner taught courses in industrial organization, statistics, microeconomic analysis, the economics of regulation, international economics, and US economic history.

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Visiting Instructor of Economics, January 1977–May 1977. Taught graduate and undergraduate courses in US economic history.

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Lecturer in Economics, January 1972–May 1972. Taught a course in microeconomic theory.

California State College at Hayward

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 - In the matter of the Application of GTE Sprint Communications Corporation for a Certificate of Public Convenience and Necessity to Offer Intercity Telecommunications Services to the Public in the State of Alabama, Docket No. 18985, 3/1/84.
- Arizona Corporation Commission

In the Matter of the Application of Satellite Business Systems for Authority to Provide Intrastate Telecommunications Services in Arizona, Docket No. U-2457-85-062, 6/14/85.
- Public Utilities Commission of California
 - In the matter of the Joint Application of GTE Corporation and Bell Atlantic Corporation to Transfer Control of GTE’s California Utility Subsidiaries to Bell Atlantic, Which Will Occur Indirectly as a Result of GTE’s Merger with Bell Atlantic, Application 98-12-005, 7/22/99.
 - In the matter of the Joint Application of Pacific Telesis Group and SBC Communications Inc. for SBC to Control Pacific Bell (U1001C), Which Will Occur Indirectly as a Result of Telesis’ Merger With a Wholly Owned Subsidiary of SBC, SBC Communications (NV) Inc., Application No. 96-04-038, 11/22,25/96.
- Public Utilities Commission of the State of Colorado
 - Application No. 36337, Application No. 36360, Application No. 36456, Case No. 6386, 11/09/84.
- Florida Public Service Commission
 - In Re: Application of AT&T Communications of the Southern States, Inc. for a Certificate of Public Convenience and Necessity/Motion for Waiver of Tariff Filing Requirements, Docket No. 830489-TI, 9/4/86.



- In Re: Intrastate Telephone Access Charges for Toll Use of Local Exchange Services, Docket No. 820537-TP. (Phase II) 10/1/84.
- In Re: Intrastate Telephone Access Charges for Toll Use of Local Exchange Services, Docket No. 820537-TP, 6/6/84.
- Georgia Public Service Commission
 - In Re: Petition by MCI for Arbitration of Certain Terms and Conditions of Proposed Agreement with BellSouth Telecommunications, Inc. Concerning Interconnection and Resale Under the Telecommunications Act of 1996, Docket No. 6865-U, 11/6/96.
- Illinois Commerce Commission
 - Illinois Commerce Commission on its Own Motion, Investigation Concerning the Appropriate Methodology for the Calculation of Intrastate Access Charges for All Illinois Telephone Utilities, Docket No. 83-0142, 11/29/84.
- Public Service Commission of Indiana
 - In the Matter of the Petition of AT&T Communications of Indiana, Inc. for Commission Declination to Exercise Jurisdiction over Telephone Companies Providing Intrastate InterLATA Facilities-Based Telecommunications Services, Cause No. 37911; In the Matter of the Petition of GTE Sprint Communications Corporation for an Investigation and Determination of the Form of Regulation Applicable to Telephone Companies Providing Competitive Intrastate, Intercity Telecommunications Services, but not Local Exchange Services, within Indiana, Cause No. 37557; Petition of MCI Telecommunications Corporation for an Investigation by the Public Service Commission of the State of Indiana into the Type and Scope of Regulation Which Should Be Applied to Nondominant Carriers Providing Intrastate Interexchange Telecommunications Services, Cause No. 37559, 5/5/86.
- State of Iowa Department of Commerce — Utilities Division
 - In Re: Northwestern Bell Telephone Company, Docket No. RPU-88-9, 1/10/89-1/11/89.



- Public Utilities Commission, State of Kansas
 - In the Matter of a General Investigation into the Rates Tariffs, Policies and Practices of Public Telephone Utilities Relating to Customer Premises Equipment (Regulation of Interexchange Carriers and IntraLATA Competition), Docket No. 127,140-U (Phase IV), 10/16/84.
- Public Service Commission of Kentucky
 - In Re: Joint Application of Bell Atlantic Corporation and GTE Corporation for Order Authorizing Transfer of Utility, Case No. 98519, 3/3/99.
- Louisiana Public Service Commission
 - Docket No. U-15955 in conjunction with Docket No. U-15995, Docket No. U-15457, Docket No. U-16012, 6/19/85.
- Department of Public Utilities, Commonwealth of Massachusetts
 - DPU 1655/1633, 1/6/84.
 - DPU 89-78 New England Telephone and Telegraph Company — Toll Calling Plans, testimony filed June 1988.
- Michigan Public Service Commission
 - In the Matter of the Application of AT&T Communications of Michigan, Inc., for Authority to Amend its Rate Schedules and Tariffs and Miscellaneous Rules and Regulations Governing its Telephone Communications Service, Case No. U-8039, 3/25/85.
- Minnesota Public Service Commission
 - In Re: A Summary Investigation into Intrastate Switched Access Charges Proposed by Northwestern Bell Telephone Company for its Minnesota Customers, Docket No. P-421/CI-85-352.
- Mississippi Public Service Commission



- In Re: Petition of MCI Telecommunications Corporation for a Certificate of Public Convenience and Necessity to Render Intrastate Telecommunication Service within Mississippi and for Approval of Proposed Tariff, Docket No. U4633, 3/21/85.
- State of New York Public Service Commission
 - Proceeding on the Motion of the Commission as to the Rates, Charges, Rules and Regulations of New York Telephone Company, NYNEX Corporation and Bell Atlantic Corporation For a Declaratory Ruling That the Commission Lacks Jurisdiction to Investigate and Approve a Proposed Merger Between NYNEX and a Subsidiary of Bell Atlantic or, in the Alternative, For Approval of the Merger, Case 96-C-0603; and Petition of the Commission as to the Rates, Charges, Rules and Regulations of the New York Citizens Utility Board, the Consumer Federation of America, the American Association of Retired Persons, Consumers Union, Mr. Mark Green, Ms. Catherine Abate, the Long Island Consumer Energy Project and the International Brotherhood of Electrical Workers T-6 Council (collectively the "Consumer Coalition") For An Investigation of the Proposed Merger of NYNEX Corporation and Bell Atlantic Corporation, Case 96-C-0599, 12/16/96.
- Nevada Public Service Commission
 - In the Matter of the Petition of AT&T Communications of Nevada, Inc., for Adoption of Rules and Regulations Governing Competitive Telecommunications Services in the State of Nevada, Docket No. 84-758, 12/20/84.
 - In Docket No. 84-443 on behalf of MCI Telecommunications Corporation, and in Docket No. 84-605 on behalf of GTE Sprint Communications Corporation; testimony filed 8/1/84.
- Oklahoma Corporation Commission
 - In the Matter of the Application of GTE Sprint Communications Corporation for a Certificate of Public Convenience and Necessity to Offer Intercity Telecommunications Services to the Public in the State of Oklahoma, Cause No. 28780, 5/15/84.
- Pennsylvania Public Utility Commission



- In Re: Joint Application of Bell Atlantic Corporation and GTE Corporation for Approval of Agreement and Plan of Merger, PUC Docket Nos. A-310200F0002, A-310222F0002, A-310291F003, A-311350F0002, 6/4/99.
- Tennessee Public Service Commission
 - In Re: Application for Certificate of Public Convenience and Necessity of GTE Sprint Communications Corporation, Docket No. U-84-7326, 1/17/85.
 - In the Matter of: Tariff Filing by AT&T Communications to Establish Rates and Charges for MEGACOM and MEGACOM 800 Services; Tariff Filing by US Sprint to Establish Rates and Charges for ULTRAWATS; Tariff Filing by MCI Telecommunications for PRISM I and PRISM II; Tariff Filing by US Sprint to Establish Rates and Charges for DIRECT 800 and ULTRA 800 Services; Docket Nos. U-87-7492, U-87-7512, U-87-7513, U-87-7514, U-87-7515, 9/3/87.
- Tennessee Regulatory Authority
 - Docket No. 96-01152, 10/21-22/96.
- Public Utility Commission of Texas
 - Hearing on the Stipulation, Docket 8585, 5/24/90.
 - Application of AT&T Communications of the Southwest, Inc. to Remove the Tariff Restriction on its "Reach Out Texas" Offering, Docket No. 6761, 1/19/87.
 - Petition of the General Counsel for Initiation of an Evidentiary Proceeding to Establish Telecommunications Submarkets, Docket No. 6264, 9/27/86 and 9/30/86.
 - Petition of Southwestern Bell Company for Approval of Tariff to Allow Customers to Install and Maintain Inside Wire, Docket No. 5141, 10/24/83.
- Public Service Commission of Utah
 - In the Matter of the Investigation of Access Charges for Intrastate IntraLATA and InterLATA Telephone Services, Case No. 83-999-11, 11/20/84.



- State of Vermont Public Service Board
 - In Re: Investigation of Telephone Toll Settlements and Investigation into Telephone Intrastate Tariffs for Access to the Local Exchange Network and Petition of Burlington Telephone Company Requesting the Board to Find that the Restriction of Resale of Wide Area Telephone Service (WATS) in New England Telephone Company Tariff PSB VT. - 20 Section 10.2.1.A Is Invalid, Case Nos. 5092, 5114, 4946, 4/2/87.
- Public Service Commission of Wisconsin
 - Investigation of the Proposed InterLATA Access Charge Tariff of Wisconsin Bell, Inc., The Intrastate Capacity Plan and Other Related InterLATA Compensation Matters. Case No. 6720-TR-100, 2/26/87.

TESTIMONY — COURT CASES

- Federal Trade Commission vs. McKesson Corporation and AmeriSource Corporation, in United States District Court for the District of Columbia, Civil Action No. 98-596, 5/4/98, 5/5/98, 5/8/98, and 7/13/98.
- Hayes Microcomputer Products, Inc., a/k/a Practical Peripherals, Inc., in United States Bankruptcy Court for the Northern District of Georgia, Atlanta Division, Case No. 94-75900, Affidavit Filed and Appearance, 11/9/95.
- City of Chicago vs. Western Union ATS, Inc., in US District Court for the Northern District of Illinois, Case No. 91C156, Deposition Testimony, 3/17/93.
- Williams Telecommunications Company vs. Larry C. Gragg and Phyllis J. Gragg, St. Lawrence Catholic Center et al. vs. Williams Pipe Line Company et al., in the District Court of Shawnee County, Kansas, Division Six, Case Nos. 86-CV-1130, 86-CV-1205 (Consolidated), 12/17/86.

TESTIMONY — CONGRESSIONAL

- Before the House Judiciary Committee, Subcommittee on Courts, Civil Liberties, and the Administration of Justice (Repeal of the First Sale Doctrine), 10/6/83.

