larger price reductions, when they make active long distance choices by switching either to another carrier or to another pricing plan of their current carrier. Some long-term customers will use older plans with higher average prices because they have not recently been active "shoppers." In contrast, customers who switch carriers are, by definition, recent shoppers and typically will be reacting to a current pricing plan of the new carrier. As a result, the prices to which switching customers are reacting will be lower than the average prices paid by long-time customers and lower than the average price for all customers of that carrier.

76. There is another reason that average prices derived from the data used by Professor Hausman are unlikely to measure accurately the prices to which switching customers are responding. Carriers often offer special promotions to induce customers to switch carriers. Promotions, which may take such forms as "free minutes," temporary reductions in a monthly recurring charge, or a check, can substantially reduce the effective cost of using a particular carrier. Promotions play a very important role in inducing changes in customers' choices, and thus one would expect variations in the level of promotions offered by various carriers over time to play a substantial role in explaining customer switching among carriers.[62] Yet average revenue per minute calculated from the bills of customers of a carrier, even by time-of-day, will at best understate the effect of these promotions on the effective prices paid by new customers and at worst ignore some promotions altogether.

[62] Recall that "promotions" or special "inducements" to switch were the reasons for switching long distance providers cited with second-greatest frequency by respondents to the PNR and J.D. Power surveys cited above.

77. The PNR database used by Professor Hausman makes it difficult to construct measures of price that deal with these problems and, therefore, to measure accurately the prices faced by households considering a switch from one carrier to another. It is nearly impossible to observe the same household over time within the PNR dataset, which makes it impossible to identify and distinguish prices paid by newly switched households from the prices paid by long-time customers of a carrier. The data also do not capture fully all promotions that reduce the effective prices charged by a carrier. Promotions whose effects are not reflected on bills—such as checks for switching or free airline miles through a partner—are not captured by the PNR dataset, which is based on customers' bills. Furthermore, if Professor Hausman has not included recurring monthly charges in measuring prices, the impact of promotions that reduce or eliminate such charges will be completely excluded from the data used to estimate demand relationships.

78. Another potential problem involves unresolved questions about the sample that Professor Hausman has chosen for his estimation. Hausman reports that he uses "a dataset consisting of information on the monthly bills of approximately 20,000 individual consumers collected by PNR in their Bill Harvesting data set."[63] PNR has been collecting this Bill Harvesting data since 1995, and the total number of monthly bills in the dataset over the period from 1996 through the first half of 1999 exceeds 50,000. It seems clear that Professor Hausman has not included all household observations for the full timespan that PNR has been collecting such data. He does not, however, provide any further information on the construction of his dataset, so it is impossible to determine which time

[63] Hausman Appendix, p. 1.

period is covered by the data used for his estimation, or whether any other selection criteria have been employed to construct his dataset.

79. These choices almost certainly affect Professor Hausman's results. For example, use of data from an earlier rather than more recent period could lead to a substantial bias.[64] There has been substantial growth in the role of the emerging carriers in recent years. Failure to include recent data could understate their current importance as a competitive pricing constraint and could overstate the roles of AT&T, MCI WorldCom, and Sprint. In the context of Professor Hausman's model, the emerging carriers' substantial growth in share would have to reflect structural shifts in demand unless it could be fully explained by changes in the prices offered by emerging carriers relative to those of other carriers.[65] Estimates based on older data, therefore, could be estimating a demand structure that no longer reflects current conditions.

80. In addition, if the estimation is based on an earlier time period, Professor Hausman's simulation of merger effects might be relying on out-of-sample estimates. Since prices have been falling over time, current prices, which one would expect to be used to simulate the price effects of the merger, might lie outside the range of the sample data

[64] While Professor Hausman does not provide sufficient information to identify the time period of the data he used, a table at p. 4 of his Appendix reports "Pre-merger quantity shares." The quantity units (minutes or lines) are not identified, but it seems likely that these are shares of minutes. If these shares are comparable to those reported by the FCC (which are also based on PNR data), one might infer that Professor Hausman is not using particularly recent data. The FCC-reported minutes shares show that AT&T's share in 1996 (and subsequent years) was lower than the figure reported by Professor Hausman, and the share for "others" was higher than the figure reported by him. FCC, "Long Distance Market Shares, Fourth Quarter 1998," Table 4.3, p. 25.

[65] Given the relatively low responsiveness of quantity demanded to prices estimated by Professor Hausman, the shift in relative prices would have to be quite large to explain the movement of shares.

used for estimation. Again, the information provided by Professor Hausman is insufficient to determine whether or not these possibilities present significant problems.

## STATISTICAL PROBLEMS

81. Professor Hausman does not report parameter estimates and other statistics for either his carrier choice or usage models, nor does he report the standard errors for the elasticity estimates that are reported. He reports only what apparently are point estimates of own and cross price elasticities. Thus, it is impossible to judge if the elasticity estimates he reports are statistically meaningful. Although Professor Hausman stresses that the relative magnitudes of his estimated cross elasticities demonstrate that Sprint is the closest competitor to MCI WorldCom and that MCI WorldCom is the closest competitor to Sprint, without any reported standard errors it is impossible to determine whether the differences in estimated cross elasticities on which these conclusions are based would pass any standard tests of statistical significance. [66] Indeed, in the absence of information on standard errors or confidence intervals, it is impossible to confirm that *any* of his reported elasticities and cross elasticities pass standard statistical tests for significance, let alone whether differences between them are statistically significant. More generally, because Professor Hausman does not provide the parameter estimates and associated statistics for either the carrier choice or the usage models, it is impossible to determine if his results are economically and/or statistically meaningful.

[66] Hausman Appendix, p. 4.

## PROBLEMS WITH INTERPRETATIONS AND CONCLUSIONS

82. Professor Hausman's conclusion that "brand name has a large and statistically significant effect on consumer choice of carrier," based on the statistical significance of carrier-specific effects in the carrier choice model, is a *nonsequitur*.[67] If the price variables included in this model explain very little of the choice behavior, carrier-specific effects will have to do most of the "work" of explaining the observed relative market shares of the carriers. Given the differences in shares among vendors, the carrier-specific effects could be large in magnitude and highly significant statistically even if they are not economically meaningful. For example, such a result could be a consequence of failing to measure properly the prices to which consumers respond and, therefore, to capture adequately the true impact of price on choice.

83. The reported estimates of own-price elasticity themselves carry implications that are difficult to square with what is known about the industry. Professor Hausman uses his elasticity matrix and his (unreported) demand equations to compute merger price effects based on the Bertrand price competition model. This model implies a relationship between price-cost markups and elasticities, as is reported by Professor Hausman.[68] The implied relationships between price and marginal cost, especially together with the implied variations in these relationships across carriers, appear inconsistent with any reasonable view of the costs of carriers. Table 6 shows the own-price elasticity of each carrier, as estimated by Professor Hausman, and the marginal cost for each carrier (expressed as a percentage of price) that is implied by these elasticities. For example, Professor Hausman's low estimated own-price elasticity for AT&T implies that its marginal cost is

[67] Hausman Appendix, p. 2.

only about 11 percent of its price.[69] Given the level of AT&T's prices, the implied marginal cost probably would not even cover traffic-sensitive switched access charges, let alone other sources of marginal cost.[70]

**Table 6**
**Marginal Costs Based on**
**Professor Hausman's Elasticity Matrix**

| | Estimated Elasticity | MC as Percentage of Price | Price $ | Marginal Cost $ |
|---|---|---|---|---|
| AT&T | -1.12 | 10.7 % | 0.165 | 0.0176 |
| MCI WorldCom | -1.33 | 24.8 % | 0.145 | 0.0360 |
| Sprint | -1.81 | 44.8 % | 0.145 | 0.0650 |
| Other | -1.33 | 24.8 % | 0.145 | 0.0360 |

84. For purposes of illustration, Table 6 lists prices per minute for each carrier and the corresponding level of marginal cost per minute implied by Professor Hausman's estimates. These prices are roughly consistent with average revenue per minute for domestic direct dialed interLATA calls for these carriers in the first half of 1998, including an allocation of recurring monthly charges and taxes. The implied marginal cost for AT&T is less than 1.8 cents per minute. Traffic-sensitive switched access charges per conversation minute in the first half of 1998 were about 2.7 cents per conversation minute. They had been as high as a little over 4 cents per conversation minute as recently as the

[68] Hausman Appendix, p. 4.

[69] Hausman Appendix, p. 4.

[70] To be clear, we are not suggesting that we agree that traffic-sensitive switched access charges are the only marginal costs for carriers.

first half of 1997, and remained above 2 cents per conversation minute through the end of 1998.[71]

85. The variation in markup across carriers implied by Professor Hausman's results, and the corresponding variation in implied marginal costs, compounds the problem. To argue that the implied marginal cost for AT&T is consistent with industry facts, it appears that one would have to argue that AT&T's marginal costs of serving residential customers include only traffic-sensitive switched access charges, as even this amount likely exceeds the implied marginal cost. By this argument, presumably marginal costs for other carriers also would not include any costs other than traffic-sensitive switched access charges. Table 6, however, shows that Hausman's elasticities imply much higher marginal costs for other carriers—in Sprint's case marginal costs that exceed 6 cents per minute, over three and one-half times the implied marginal costs for AT&T. It is inconceivable that traffic-sensitive switched access charges for residential traffic could vary this much across carriers.

## CONCLUSIONS

86. In light of these problems—which include problems with the modeling of consumer choice, with the construction of measures of price, with the interpretation of results and the lack of evidence of statistical significance, and with reconciling the estimated elasticities with any consistent view of the nature of marginal costs and the level of access charges—Professor Hausman's results should not be accepted as reliable

[71] Calculated from "Trends in Telephone Service," FCC, Industry Analysis Division, Common Carrier Bureau, September 1999, Table 1.2. It is difficult to draw a more precise comparison between switched access charges and the marginal costs implied by Hausman's estimates without knowing what period is covered by the data on which his estimates are based.

estimates of demand relationships. Since his estimates of the post-merger price changes depend directly on his demand estimates, they also should not be accepted as reliable.

## IV. LARGER BUSINESS CUSTOMERS

### A. Business Wins by Emerging Carriers

87. Not only have the emerging carriers been successful in attracting a significant and growing share of mass market (i.e., residential and small business customers) in the past several years, they have been successful in attracting larger business customers as well. Moreover, this process appears to have accelerated in recent years. Although it is difficult to calculate with great precision the share of the larger business market that has been captured by emerging carriers, it is clear that they have been successful in winning a significant number of competitions in which larger businesses sought bids for all or a portion of their telecommunications needs. Moreover, even where the emerging carriers have been unsuccessful in winning these competitions, we understand that they have had a significant effect on the prices received by the older and better-established carriers. In this section, we report the results of an attempt to assess the competitive significance of the emerging carriers in serving larger business customers, based on announcements by the emerging carriers of their "wins" in competitions for larger business customers. These announcements make clear that the emerging carriers have enjoyed, and are continuing to enjoy, a significant and growing influence in the market for larger business customers.

## PUBLIC ANNOUNCEMENTS BY THE EMERGING CARRIERS

88. One valuable type of evidence concerning the success of the emerging carriers in attracting larger business customers is their own announcements of their "wins." We have examined the Web sites of a number of the major emerging carriers—Frontier, GTE, Intermedia, IXC, Level 3, Qwest, Teleglobe, and Williams—for announcements of such successes over the past two years. Although the various emerging carriers do not report their wins in the same way and at the same level of detail, and although these announcements clearly provide an incomplete picture of these successes, they nonetheless show that the emerging carriers have captured a large number of contracts covering a variety of types of service, that some of these contracts are quite large, and that many of these contracts have been won quite recently. We list below some of the major successes of the emerging carriers among larger business customers. An appendix to this Declaration provides a more complete summary of the results of this examination.

- Qwest's $50 million contract, announced January 2000, to support the DOE's Energy Sciences Network, based in part on Qwest's ability to incorporate leading-edge, emerging communications technology.[72]

- Qwest's multimillion-dollar contract with Musicland Stores Corporation, announced January 2000, for communications services, covering both a virtual private network connecting stores and e-commerce.[73]

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[72] http://www.qwest.com/press/story.asp?id=178, visited February 3, 2000.

[73] http://www.qwest.com/press/story.asp?id=179, visited February 3, 2000.

- Qwest's winning of 27 contracts worth $250 million (in conjunction with Bell South), including one with the State of Tennessee, announced December 1999, to provide broadband information networks that carry Internet, image, data, and voice communications services, including dedicated Internet access, ATM, frame relay, and private line services.[74]

- KPNQwest's contract to provide IP-VPN service to offices around the world of Baan, an enterprise solutions company, announced November 1999.[75]

- Qwest's contract with Walgreen Co., announced May 1999, to provide frame relay, virtual networking services, private line, toll free, calling card, and audio conferencing services.[76]

- Qwest's multimillion-dollar contract, announced March 1999, to provide ATM and frame relay connectivity among Delta Air Lines' U.S. airport locations.[77]

- Qwest's multimillion-dollar contract with Turner Broadcasting System, announced March 1999, to provide high-speed network capacity among CNN's broadcast facilities.[78]

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[74] http://www.qwest.com/press/story.asp?id=172, visited February 3, 2000.

[75] http://www.qwest.com/press/story.asp?id=162, visited February 3, 2000.

[76] http://www.qwest.com/press/story.asp?id=112, visited February 3, 2000.

[77] http://www.qwest.com/press/story.asp?id=98, visited February 3, 2000.

[78] http://www.qwest.com/press/story.asp?id=93, visited February 3, 2000.

- Qwest's contract with Ford Motor Company, announced January 1999, to provide domestic and international communications services, 800 dial-up services, frame relay, and secure point-to-point services.[79]

- Qwest's multimillion-dollar contract with Nortel, announced August 1998, to provide virtual network services, toll-free calling, calling card, and inbound/outbound long distance services.[80]

- Qwest's $100 million contract, announced April 1998, to provide Verio, a provider of comprehensive business Internet services, with access to capacity on Qwest's network.[81]

- Frontier's $24 million contract with BCE Nexxia, a provider of integrated telecommunications solutions, announced January 2000, to provide network, private line, and IP services.[82]

- Frontier's $18 million contract with OPEX Communications, a full-service telecommunications company, announced September 1999, to provide nationwide network services, including long distance, toll free, and calling card services.[83]

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[79] http://www.qwest.com/press/story.asp?id=74, visited February 10, 2000.

[80] http://www.qwest.com/press/081198.html, visited February 10, 2000.

[81] http://www.qwest.com/press/040198.html, visited February 3, 2000.

[82] http://www.frontiercorp.com/about/aboutfrontier/news/newsFiles/2000118-948210226.html, visited February 11, 2000.

[83] http://www.frontiercorp.com/about/aboutfrontier/news/newsFiles/1999920-937845861.html, visited February 11, 2000.

- Frontier's $20 million contract with Telstra Incorporated, a U.S. subsidiary of an Australian telecommunications company, announced September 1999, to provide network services and Web-based network management.[84]

- Frontier's multimillion-dollar contract with First Cash Financial Services, announced June 1999, to provide frame relay, Internet, calling card, and long distance services.[85]

- Frontier's multimillion-dollar contract with DCI Communications, announced June 1999, to provide switched and dedicated toll-free and outbound services.[86]

- Frontier's $4.5 million contract with Hollywood Entertainment, announced June 1998, to provide VPN, switched and dedicated long distance service, calling card service, teleconferencing, and software that provides call detail records for analyzing traffic.[87]

- Intermedia's contract with NTT America, the U.S. operating company of Nippon Telegraph and Telephone, announced May 1999, to provide domestic frame relay services.[88]

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[84] http://www.frontiercorp.com/about/aboutfrontier/news/newsFiles/1999915-937405530.html, visited February 11, 2000.

[85] http://www.frontiercorp.com/about/aboutfrontier/news/newsFiles/1999616-929541222.html, visited February 11, 2000.

[86] http://www.frontiercorp.com/about/aboutfrontier/news/newsFiles/199961-928250824.html, visited February 11, 2000.

[87] http://www.frontiercorp.com/about/aboutfrontier/news/newsFiles/199869-897415318.html, visited February 11, 2000.

[88] http://www.intermedia.com/company/press/release.cfm?releaseid=230, visited February 14, 2000.

- Intermedia's contract with Electric Lightwave, announced March 1998, to provide frame relay transport services.[89]

- Intermedia's contract with Cable & Wireless to "assume full operational responsibility" for C&W's network facilities in up to 10 Florida LATAs.[90]

- IXC's $3.3 million contract with Harman Management Corporation, operator of a 287-restaurant Kentucky Fried Chicken franchise, to provide frame relay services, announced February 1999.[91]

- IXC's $101 million contract with Electric Lightwave, announced April 1999, to provide dark fiber and certain OC-48 and OC-192 capacity.[92]

- IXC's $156 million contract with Excel Communications, announced June 1998, to provide private line and switched network services.[93]

- IXC's $240 million contract with PSINet, announced March 1998, to provide capacity on IXC's nationwide fiber optic network.[94]

- Level 3's $700 million contract with Internext, a telecommunications company owned by Nextlink Communications, Nextel Communications, and Eagle River

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[89] http://www.intermedia.com/company/press/release.cfm?releaseid=2, visited February 14, 2000.

[90] http://www.intermedia.com/company/press/release.cfm?releaseid=56, visited February 14, 2000.

[91] http://www.ixc-comm.com/corporate/investors/1999/02-17-99.htm, visited February 11, 2000.

[92] http://www.ixc-comm.com/corporate/investors/1999/04-12-99.htm, visited February 11, 2000.

[93] http://www.ixc-comm.com/corporate/investors/1998/06-16-98.htm, visited February 11, 2000; http://www.ixc-comm.com/corporate/investors/1998/04-17c-98.htm, visited February 11, 2000.

[94] http://www.ixc-comm.com/corporate/investors/1998/03-02-98.htm, visited February 11, 2000.

Investments, in which Internext acquires use of fibers and associated facilities along Level 3's intercity fiber optic network, announced July 1998.[95]

- Williams' $120 million contract, announced February 2000, with Compass Telecommunications, a CLEC, to provide voice services (one-plus, carrier termination, toll-free, calling card, and international) as well as broadband transit services (ATM, frame relay, private line, and IP).[96]

- Williams' $220 million contract with Axient Communications, an Internet content network, to provide and manage dedicated capacity on Williams' fiber optic network, as well as to provide optional frame relay, ATM, and other network services, announced January 2000.[97]

- Williams' $200 million contract, announced May 1999, to provide Intel with network transport for Web-hosting computer centers in the United States.[98]

- Williams' $100 million-plus contract, announced April 1999, to provide GTC Telecom, a provider of long distance and Internet services, with dedicated

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[95] http://www.level3.com/Content/1,1233,us|news|newsreleases|19980720internext,00.html, visited February 12, 2000.

[96] http://www.williamscommunications.com/newsroom/newsreleases/2000/020800.html, visited February 9, 2000.

[97] http://www.williamscommunications.com/newsroom/newsreleases/2000/012400.html, visited February 9, 2000.

[98] http://www.williamscommunications.com/newsroom/newsreleases/1999/052599a.html, visited February 9, 2000.

bandwidth capacity, network management services, and use of an ATM backbone.[99]

- Williams' contract with Fox, announced February 1999, to provide dedicated fiber and occasional fiber services for video transmission.[100]

- Williams' $640 million contract to provide WinStar Communications, a provider of broadband services to business customers, with nationwide dark fiber.[101]

89. Several things are apparent from even this partial listing. First, the emerging carriers have won a number of large contracts, some extending into the hundreds of millions of dollars, in competitions with the more established long distance carriers. A number of the reported contracts are with important buyers including Ford Motors, Intel, Delta Air Lines, Nortel, Fox, Turner Broadcasting, and Walgreen Co. Others are with telecommunications carriers that sell to larger businesses, including WinStar, Electric Lightwave, and Verio. Sophisticated buyers apparently find the emerging carriers to be reliable providers of telecommunications services, and other potential larger business purchasers can take comfort in this when they make their own choices among suppliers. In further confirmation of this development, Qwest reports that it has contracts with, and is providing service to, 40 of the top 50 Fortune 500 companies, and that contracts secured

[99] http://www.williamscommunications.com/newsroom/newsreleases/1999/042999.html, visited February 9, 2000.

[100] http://www.williamscommunications.com/newsroom/newsreleases/1999/022299.html, visited February 9, 2000.

[101] http://www.williamscommunications.com/newsroom/newsreleases/1998/121798.html, visited February 9, 2000.

with major national and multinational corporations increased in 1999 by more than 80 percent over 1998.[102]

90. Second, these contracts cover a myriad of offerings. Some are for Internet-related services, including Internet access, Web-hosting, and Web-based network management, but many cover more traditional services. There are contracts covering the traditional data services, frame relay and ATM, and broadband private line services. Other contracts cover traditional voice, virtual private networks, teleconferencing, toll-free, and calling card services. Clearly, the emerging carriers are able to satisfy a wide range of the needs of their larger business customers.

91. Finally, the fact that other providers are willing to partner with the emerging carriers, including, most notably, BellSouth's partnership with Qwest, suggests that the emerging carriers are likely to be able to acquire the complementary skills required to compete effectively. The wide availability of many complementary skills further enhances the ability of emerging carriers to serve larger business customers.

## B. Concentration in the Supply of Packet-Switched Data Services

92. Professor Richard Gilbert evaluates the effect of the proposed merger on the supply of public switched data services by defining a "relevant market" for "switched data services such as Frame Relay, X.25, ATM, and SMDS," and calculating pre- and post-merger HHIs based on estimates of shares and revenues for 1998.[103] The resulting

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[102] Qwest "Fourth Quarter and Year-end 1999 Report"; http://www.corporated-ir.net/ireye/ir_site.zhtml?ticker=Q&script=410&layout=6&item_id=72406, visited March 13, 2000.

[103] Declaration of Richard J. Gilbert on Behalf of SBC Communications Inc., February 18, 1999 (hereafter "Gilbert Declaration"), ¶7, filed as an Appendix to Opposition of SBC.

concentration measures are likely to be misleading indicators of post-merger competitive conditions for at least two reasons. First, Professor Gilbert appears to have excluded a set of switched data services that will be increasingly important substitutes for the traditional packet-switched data services he includes within his public switched data market. Second, his calculations that measure concentration are based on a somewhat dated snapshot of market conditions, without taking into account either changes that have taken place since 1998 or future changes that can be expected as a result of the growing significance of emerging carriers in serving business customers.

93. In defining his public switched data service market, Professor Gilbert, like SBC, appears to have excluded Internet Protocol (IP) services.[104] The Internet Protocol, however, also is a protocol for the transmission of packet-switched data, and it is used not only for the public Internet, but also for IP-based virtual private data networks known as IVPNs. Although not all applications and uses of the public Internet are alternatives to data networks built on the traditional protocols, IVPNs do provide businesses that seek to move data (and sometimes voice) across data networks with an alternative to networks that use only frame relay, ATM, or X.25 protocols. As the Yankee Group notes in a recent report, "IVPNs can replace existing ATM, frame relay public or private network services, and leased line corporate networks."[105] Furthermore, many analysts expect IVPNs to become a very important alternative for many businesses. Indeed, the Yankee Group

[104] Opposition of SBC, fn. 56, p. 30. Gilbert cites a paragraph from the Commission's MCI WorldCom Order in support of his definition of the market, claiming that the Commission "arrived at the same conclusion" (Gilbert Declaration, ¶8). In this paragraph, however, the FCC concludes only that there is an Internet backbone market separate from the market for ISP services, not that Internet protocol services do not compete with other data services.

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

concludes, "IVPNs will dominate the growth in data communications over the next five years. ... [T]he Yankee Group predicts that IVPNs will eventually be used by 70% of all companies for up to 90% of their data communications needs in place of private line or alternative services by the year 2003."[106] The Yankee Group points to three factors they expect to drive this growth in the use of IVPNs: the need to reduce communications costs; the desire to connect customers, suppliers, and partners to internal networks; and the global accessibility of the Internet. Finally, the Yankee Group notes that, "Service-level agreements are becoming more common as the IVPN providers attempt to create a service comparable to frame relay or ATM public data networks."[107]

94. Apart from the question of what services to include in defining the market, relying on shares estimated for 1998 to measure market concentration is likely to be highly misleading in what is a fast-changing marketplace. Throughout both this and the prior Besen and Brenner Declaration, we have stressed the importance of taking new developments and carriers into account in assessing the effect of the MCI WorldCom-Sprint merger. Emerging carriers, such as Qwest, Broadwing, Level 3, Frontier, and Williams, have been developing networks based on using fast packet switching for all traffic—not just because they wish to serve the rapidly growing demand for moving data, but also because they expect to use this technology to carry voice as well. Since the networks of these emerging carriers are based on the newest packet-switching technology, it is particularly important to take their developing capabilities into account when evaluating competitive conditions in the supply of packet-switched service.

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[106] The Yankee Group, p. 19.

[107] The Yankee Group, p. 7.

95. It is hardly surprising that the emerging carriers' success in winning contracts with larger business customers has increased recently, given that many of the network facilities of these carriers have been constructed in the last few years. The business successes by emerging carriers summarized above, and presented in more detail in the appendix, indicate how recent has been much of this success. The trade press also has commented on the potential for rapid growth in the competitive significance of emerging carriers as suppliers of packet-switched data services. An article published in July 1999 commented: "Frontier's ATM offering is only a few months old, but the company is quickly building tremendous capacity... . With potential mergers and acquisitions by Global Crossing or Qwest..., Frontier could be a real monster in the ATM business very soon."[108] We understand that over the past year or two, Sprint has observed a substantial increase in the frequency with which it has encountered Qwest and other emerging carriers as competitors for large business contracts.

96. It is important to take this trend into account in assessing the competitive effects of the MCI WorldCom-Sprint merger. In an industry that is changing as rapidly as this one, even shares estimated for as recently as 1998 are likely to understate the competitive significance of emerging carriers. Indeed, with emerging carriers winning more business contracts over time, even their current shares of service provided will understate their current competitive significance, let alone their competitive significance in the near future. Many business services are sold under multi-year contracts, so that the current supplier of service to a business often will reflect past competitive conditions when the contract was awarded. With multi-year contracts, current shares of service supplied by emerging

[108] "The Interexchange Carriers," *Network Computing*, July 26, 1999.

carriers will be smaller than the share of new business they are winning if they are having increasing success over time.

## C. Sales Efforts of the Emerging Carriers

97. Not only are the emerging carriers constructing large nationwide networks and demonstrating the technical capabilities to deliver a wide range of services to business customers, they are also developing large sales organizations to market these services. Thus, despite the claims of some commenters in this proceeding, the emerging carriers are not hampered by the lack of adequate sales organizations as they compete for business customers. [109]

98. For example, Qwest reports that it has more than 80 sales offices worldwide. It identifies sales staff that handle large accounts, mid-size accounts, multi-location accounts, and Fortune 500 accounts; furthermore, "A dedicated account team approach is used with large and complex customers. Data sales specialists...and account managers perform design and installation assurance as well as project management."[110] Qwest's Form 10-K notes that the firm "increased sales and marketing efforts;... increased payroll-related costs from the recruiting and hiring of additional sales and administrative personnel; increased commissions expense related to the growth in Communications Services revenue;... [T]he

[109] This claim is made in the Opposition of SBC, p. 35.

[110] Faulkner Information Services, "TELEscope Competitor Profile: Qwest Communications," January 2000, pp. 10-11.

number of employees increased, due to acquisitions and the expansion of the sales and customer support infrastructure [from 1,600 in 1997 to 8,700 in 1998]."[111]

99. Frost & Sullivan notes that "Qwest has developed a dedicated team to address the needs of its business and wholesale customers. A strong customer relationship has helped the company to maintain a stable demand for long distance services continually. Moreover, the implementation of a relationship strategy allows Qwest to be more flexible in addressing individual needs. This is especially true for business customers as they are more demanding and skeptical."[112]

100. Faulkner Information Services indicates that "...Frontier has recruited or acquired an impressive repository of data and Internet sales expertise. ... [N]et income and earning per share have risen substantially, indicating an increase in high-margin sales."[113] Faulkner also reports that "...large business customers are showered with attention [by GTE]. GTE has extensive experience in dealing with large customers and can competitively fulfill service requirements for large-scale telecommunications deployments."[114]

101. Frost & Sullivan notes that "Cable & Wireless implements a focused strategy to address the needs of its business customers. In order to better serve corporate users, the company has developed a dedicated sales team. Salespeople are well-trained with service

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[111] Qwest Communications International Inc., SEC Form 10-K405, filed March 23, 1999, at "Management's Discussion and Analysis of Financial Conditions and Results of Operations," p. 20.

[112] Frost & Sullivan, *The North American Long Distance Services and Reseller Market,* 1999 (Report No. 2737-63), p. 12-25.

[113] Faulkner Information Services, "TELEscope Competitor Profile: Frontier Communications," January 2000, p. 5.

knowledge and functionality. This is critical for high-end business users as they are overwhelmed with a wide array of long distance service options."[115]

102. IXC reports in its 1998 Form 10-K that "Most of our direct sales efforts are focused on providing customer support services to existing customers and on adding new customers. A single sales force sells both private line and wholesale long distance services. That sales force consists of 43 account managers based at our headquarters in Austin and at direct sales offices in or near Washington, D.C., New Haven, San Francisco, Kansas City, Chicago, St. Louis, Houston and Sunrise Beach, Missouri."[116]

103. Moreover, the emerging carriers are not limited to their own sales forces in attempting to reach large business customers. As referred to above, "...Qwest formed a unique strategic marketing initiative with...BellSouth Corporation.... The partnership will accelerate both companies' efforts to provide a full set of integrated communications services to their customers. ... The coordinated marketing efforts of Qwest and BellSouth are already resulting in increased business for both companies."[117]

104. Similarly, Williams has entered into a sales alliance with SBC, which, it notes, creates "a powerful, national sales channel as SBC and Williams, through its Communications Solutions unit, market each other's services. Williams Communications

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[114] Faulkner Information Services, "TELEscope Competitor Profile: GTE," January 2000, p. 7.

[115] Frost & Sullivan, *The North American Long Distance Services and Reseller Market*, 1999, (Report No. 2737-63) p. 12-12.

[116] IXC Communications Inc., SEC Form 10-K, filed March 31, 1999, at "Private Line Services – Customers and Marketing," p. 11.

[117] "Corporate Profile" of Qwest Communications Inc., appearing in *Research*, October 1999, p. 4.

Solutions eventually will be able to sell SBC-branded data and Internet product offerings and long-distance products nationwide."[118]

## V. CONCLUSIONS

105. In the past few years, the emerging telecommunications carriers have constructed extensive nationwide networks, developed service capabilities, and assembled significant sales forces to market those services. At the same time, both mass market and larger business customers have displayed a willingness to switch to these carriers in substantial, and increasing, numbers. Not only have the emerging carriers enjoyed significant success in winning the business of residential and business customers, but they are also competing for the much larger numbers that might switch carriers if they have the incentive to do so. The demonstrated willingness of a substantial number of customers to switch to the emerging carriers, combined with the considerable ability of these carriers to serve the customers that switch to them, will constrain any ability of a merged MCI WorldCom-Sprint to raise prices after their merger.

[118] "Williams Communications Forms Unique Alliance with SBC to Transport Long Distance Voice, Data Traffic," *PR Newswire*, February 8, 1999, Financial News section.

# APPENDIX
## Contracts Won by Emerging Carriers:
## Qwest

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Qwest Communications International Inc. | 01/25/00 | $10,000,000 | 3 years | Call Sciences, Inc. | Global provider of enhanced telecommunications services | Carrier services, including domestic origination and termination, international termination, frame relay and Internet service | 1 |
| Qwest Communications International Inc. | 01/18/00 | $14,000,000 | 3 years | Allied Riser Communications Corporation (ARC) | Facilities-based provider of broadband Internet, data, video and voice communications services targeting small- and medium-sized businesses | High-speed dedicated Internet access, private line services, and collocation, as well as the ability of ARC to provide its customers with long distance, Web and application hosting and other complementary services through Qwest's Application Service Provider (ASP) | 2 |
| Qwest Communications International Inc. | 01/13/00 | $36,000,000 | 3 years | First Communications LLC | Facilities-based telecommunications firm | Suite of wholesale communications solutions, including high-speed private line and domestic and international long distance services | 3 |
| Qwest Communications International Inc. | 01/05/00 | Multi-million | Multi-year | Musicland Stores Corporation | Leading specialty retailer of home-entertainment software products | High-speed, high capacity integrated transmission of voice, data, audio, video and multimedia; virtual private network between stores | 4 |
| Qwest Communications International Inc. | 01/04/00 | $50,000,000 | N/A | The U.S. Department of Energy's (DOE) Energy Sciences Network (ESnet) | Provides advanced networking and communications support to scientific research programs | Extending fiber optic network to four of ESnet's research sites and providing performance levels up to a terabit by 2005; ATM network offering connection speeds to OC-48 (2.5 gigabits per second); possibility to transition to Qwest's OC-192 all optical Internet | 5 |
| Qwest Communications International Inc. and BellSouth Corporation | 12/15/99 | $250,000,000 (for both Qwest and BellSouth) | Various | Various | 27 separate contracts with customers in the public and private sector in the Southeast, including the State of Tennessee | Broadband information networks that will carry Internet, image, data, and voice communications services, including dedicated Internet access, ATM, frame relay, and private line services. [Contracts won through an alliance by Qwest and BellSouth (announced April 19, 1999). Over 250 proposals are still pending throughout the Southeast.] | 6 |
| Qwest Communications International Inc. | 12/07/99 | Multi-million | Multi-year | Bertelsmann mediaSystems | Operates all computer centers and the network infrastructure of the Bertelsmann group, the world's third largest media company | Qwest will become one of the primary telecommunications providers for Bertelsmann's internal IT infrastructure in the U.S. and will establish a platform for Bertelsmann's future multimedia applications. Private line, frame relay, and voice service will initially connect Bertelsmann's computer centers and corporate backbone to the Qwest network. | 7 |
| Qwest Communications International Inc. | 12/01/99 | $25,000,000 | N/A | MicroAge Technology Services | Leading provider of technology infrastructure services worldwide. One of the largest systems integrators in the U.S. | Dedicated Internet access, Web and application hosting, Microsoft Windows 2000-based VPN's, electronic commerce packages, advanced business video communications, video on demand services, and real time media distribution | 8 |
| Qwest Communications International Inc. | 11/29/99 | Multi-million | 5 years | Passport New Media | Addresses the performance and safety issues that children and their parents face when using the Internet | Enhanced Web hosting and other broadband services | 9 |
| KPNQwest | 11/23/99 | N/A | N/A | Baan | Enterprise solutions company | Internet Protocol-based VPN (IP-VPN) solutions, including an IP transit connection of 4 Mbit/s together with two VPN tunnels of 1 Mbit/s between Baan's two headquarters; supplied additional capacity during the Baan convention | 10 |
| Qwest Communications International Inc. | 10/18/99 | $72,000,000 | 4 years | Northwestern Digital Corporation | Provider of telecommunications products and services to businesses | Suite of wholesale communications solutions, including high-speed private line and domestic and international long distance services | 11 |
| Qwest Communications International Inc. | 09/30/99 | $54,000,000 | N/A | CAIS Internet | Leading broadband provider, delivering the latest in end-to-end high speed Internet access solutions in new and emerging markets | High speed Internet capacity on Qwest's fiber network (to support the delivery of CAIS network service to 35 POP's) and broadband Internet communications services, including application hosting, e-commerce, and web hosting | 12 |

## Contracts Won by Emerging Carriers:
## Qwest

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Qwest Communications International Inc. | 09/15/99 | $16,000,000 | 5 years | Bridge Information Systems | Largest provider of financial news and information in North America | High-speed, broadband private line services | 13 |
| Qwest Communications International Inc. | 08/19/99 | $25,000,000 | 3 years | LMCI | Internet and local exchange service provider | Advanced network services including collocation, dedicated Internet access, ATM, frame relay, and private line; will use Qwest IP backbone to expand reach to 500+ cities | 14 |
| Qwest Communications International Inc. | 08/02/99 | $36,000,000 | Multi-year | Power Net Global Communications (PNG Telecommunications) | Provider of telecommunications products and services | Suite of communications solutions, including frame relay, high-speed private line and domestic and international long distance services | 15 |
| Qwest Communications International Inc. | 05/05/99 | $9,000,000 | N/A | Walgreen Co. | Nation's largest drugstore chain | Frame relay, private line, virtual networking services (VNS), toll free, calling card, and audio conferencing services | 16 |
| Qwest Communications International Inc. | 05/03/99 | N/A | N/A | CITGO Petroleum Corporation | Refiner, transporter, and marketer of transportation fuels, lubricants, petrochemicals, refined waxes, asphalt, and other industrial products | Prepaid calling cards for more than 15,000 CITGO locations | 17 |
| Qwest Communications International Inc. | 04/28/99 | $18,000,000 | 5 years | 4CNet (California State University and California Community Colleges systems) | The 4CNet educational data network was developed by the California State University and California Community Colleges systems. | Collocation within seven facilities and high-speed backbone capacity to over 150 locations throughout the 4CNet system | 18 |
| Qwest Communications International Inc. | 04/26/99 | $63,000,000 | 7 years | Advanced TelCom Group (ATG) | Facilities-based local exchange carrier | Suite of high-speed broadband and data services, including dedicated Internet access, frame relay, private line, dark fiber, and long distance | 19 |
| Qwest Communications International Inc. | 03/31/99 | $15,000,000 | N/A | STAR Telecommunications | Leading provider of global telecommunications services to consumers, long distance carriers, multinational corporations and Internet service providers worldwide | High-speed broadband capacity. [Builds on original 20-year, $70 million contract] | 20 |
| Qwest Communications International Inc. | 03/25/1999 | Multi-million | 3 years | Delta Air Lines | Airline | ATM and frame relay connectivity among Delta's U.S. airport locations | 21 |
| Qwest Communications International Inc. | 03/22/99 | $20,000,000 | 3 years | RE/MAX International | A global system of 3,200 independently owned and operated offices that make up one of the world's largest real estate companies | A package of communications services that includes domestic and international long distance and toll-free services, calling card, and directory and operator assistance. Qwest will become the preferred provider of business communications services to RE/MAX affiliates and offices in the U.S. | 22 |
| Qwest Communications International Inc. | 03/10/99 | $10,000,000 | 3 years | Road Runner | Joint venture between MediaOne, Time Warner, Microsoft, Compaq, and Advance/Newhouse is the largest high-speed online service in the U.S. and provides high-speed data services over cable modem technology | Access to Qwest nationwide fiber optic backbone for use of bandwidth at speeds of up to OC-48 | 23 |
| Qwest Communications International Inc. and Triumph Communications | 03/01/99 | Multi-million | N/A | Turner Broadcasting System Inc. | Subsidiary of Time Warner Inc. is a major producer of news and entertainment and provider of programming for basic cable industry | Dedicated network for world's first all digital MPEG-2 fiber video service; high-speed network capacity between CNN's broadcast facilities | 24 |
| Qwest Communications International Inc. | 02/16/99 | $10,000,000 | Multi-year | Rollins, Inc. | Consumer service company; owns and operates Orkin Exterminating Company, Inc. and Rollins Truck Leasing, Inc. | Frame relay and voice services to be deployed in Rollin's headquarters and to more than 450 locations throughout the U.S. | 25 |