

sections, we examine the threat to consumers and advertisers in the broadband Internet content, software, and e-commerce markets.

A. The MediaOne Acquisition Will Expand AT&T's Control Over Broadband Content

1. AT&T Will Be Able to Direct Broadband Content Away from Competing Providers and Thereby Significantly Influence How Internet Content Is Presented to Customers

49. The portals market provides the first screen to the Internet for subscribers of broadband transport. Current participants in the national portals market include AOL, Yahoo!, and Lycos. Portals create value by aggregating content and gathering customer-specific information for use in targeted advertising.⁸⁷ Compared with narrowband portals, broadband portals should be able to offer consumers a completely different Internet experience, including new services such as real-time video transmission, video-email, interactive advertising, and video conferencing.⁸⁸ To expand its control of broadband Internet content, @Home acquired Excite.com, one of the most popular portals on the Internet, in June 1999.⁸⁹

50. AT&T will be able to direct broadband content over its network in several ways. First, AT&T will be positioned to prevent customers from accessing web sites outside of Excite@Home and thereby control how broadband content is presented to customers.⁹⁰ The Director of Business Development for Broadband Data Services for GTE Media Ventures describes AT&T's closed systems as follows:

87. See, e.g., M. Beer, *Portals Web Sites Help Break Shoppers' Impulse Barrier*, STAR TRIB., Jan. 31, 1999, at 6D.

88. See A. Davis, *Cable Modems: A High-Bandwidth Solution to Internet Access*, NETWORKED MULTIMEDIA FOR BUS., Jan./Feb. 1998.

89. Saul Hansel, *Excite@Home Is Often at Odds With Its Cable Parents*, N.Y. TIMES, June 9, 1999, at 1.

90. See Declaration of Albert Parisian on behalf of GTE Corp., at ¶¶ 3-10, Applications for Consent to the Transfer of Control of Licenses MediaOne Group, Inc., CS Dkt. No. 99-251 (filed Aug. 23, 1999) [hereinafter *Parisian Declaration*].

In closed systems, the cable modem customers do not need to access the public Internet to reach content supplied directly by their cable provider's affiliated ISP. Content from outside ISPs (like AOL), portals (like Yahoo!) and content providers (like Broadcast.com), on the other hand, can only be reached by sending and receiving data through the affiliated ISP's backbone and over the public Internet connection maintained by that ISP. Because the system is closed, when cable customers turn on their modem service, they have no choice but to enable a hard-wired connection to their cable provider's ISP.⁹¹

Thus it is possible for AT&T to "hard-wire" its system to quickly consolidate a position in vertically-related broadband industries.

51. Second, AT&T will have an incentive to establish proprietary network management and software protocols that could significantly reduce the usefulness of competing software and content. Once these proprietary protocols are established, software and content providers would have a strong incentive to write for AT&T's system first.

52. Third, AT&T could use the bargaining power generated by its large captive customer base to negotiate exclusive arrangements with leading software and content providers. For example, in January 1999, AT&T entered into an agreement with RealNetworks that precludes AT&T from using other streaming video software.⁹² It is estimated that 85 percent of streaming media broadcasts use RealNetwork's software.⁹³ If AT&T were to enter into a two-way exclusive arrangement with RealNetworks for the *next* version of its software, AT&T could preclude rival broadband providers from developing content to play on the upgrade.

53. Finally, by establishing a position of dominance early in the competition for broadband customers, AT&T could capture critical first-mover advantages. First-mover advantages appear to be highly durable in Internet industries. For example, Yahoo! established itself as

91. *Id.* at ¶¶ 9-10.

92. *@Home, RealNetworks Team Up on Broadband Streaming Media Delivery Platform*, EDP WEEKLY'S MONITOR, Jan. 18, 1999, at 1.

the first-mover in the narrowband portal market and today maintains a "powerful first-comer brand" that keeps it the market leader.⁹⁴ According to its chief executive officer, @Home's goal is to lock up all potential broadband customers before the exclusive contracts with AT&T expire: "By this point, Excite's service will be so popular that the cable system will want to offer it."⁹⁵

54. The cumulative effect of those anti-competitive acts would be to limit future broadband competitors' ability to challenge ATT-MediaOne's hegemony in the broadband markets. Moreover, AT&T will have raised the switching costs so high that consumers will not be able to substitute away from cable to another technology once it has become an effective competitor.

2. AT&T Could Extract Larger Economic Rents from Companies Wishing to Advertise on Its Own Portal

55. Once it captured a sufficiently large share of broadband content and customers, AT&T could extract larger economic rents from companies wishing to advertise on the Excite@Home portal. The opportunity to advertise on narrowband portals would not constrain AT&T's ability to raise advertising prices, because advertisers do not view narrowband advertisement as a close substitute. In the future, broadband and narrowband services are likely to be as dissimilar as radio and television are today. For example, advertising over broadband connections "allow[s] for so-called rich media ads capable of various interactive features and, coupled with specific targeted demographics, allow[s] high-speed service providers to charge higher

93. Randall Rothenberg, *Rob Glaser, Moving Target*, WIRED, Aug. 1999, at 129, 131.

94. Jim Hu, *AT&T Moves Good for Excite, Exec Says*, CNET NEWS, May 12, 1999 (downloaded from web site at www.cnetnews.com on Aug. 1, 1999).

95. Saul Hansell, *A Hitch to Marital Bliss: Excite@Home Is Often at Odds with its Cable Partners*, N.Y. TIMES, June 9, 1999, at 1 (quoting Thomas A. Jermoluk).

rates.”⁹⁶ One study finds that the quality levels made possible by broadband advertising generate 18 times the recall rate of dial-up advertising.⁹⁷ Moreover, as we explained earlier in this affidavit, the profile of the typical broadband customer is sufficiently different from that of a narrowband user. Hence access to *broadband* customers alone ensures that narrowband advertising cannot constrain AT&T’s pricing of broadband advertising.

56. There is evidence that AT&T is currently exercising market power in the broadband advertising market. According to an industry report, Excite@Home already charges “significantly more for ads than its competitors.”⁹⁸ Those higher rates will likely be passed onto broadband customers in the form of higher e-commerce prices. In the next section, we estimate the extent of consumer welfare loss resulting from higher e-commerce prices.

B. The MediaOne Acquisition Will Expand AT&T’s Control Over E-Commerce

57. E-commerce is expected to generate \$29 billion in transactions by 2002.⁹⁹ According to William Myers, chief executive of the United States Internet Council, the combination of AT&T and MediaOne would be “a crippling blow to the growth of online commerce.”¹⁰⁰ By channeling all broadband customers and content through its own portal, AT&T will be able to raise prices charged to broadband advertisers. It is helpful to view the advertising price increase by AT&T as a tax on sellers of e-commerce, which may or may not be passed onto consumers of e-commerce.

96. Corey Grice, *Road Runner Beefs Up Advertising Push*, CNET NEWS.COM, Aug. 4, 1999.

97. Fred Dawson, *Excite@Home Gets Rolling On Broadband-Enhanced Ads*, MULTICHANNEL NEWS ONLINE, June 14, 1999 (“Researchers are finding that advertising offered at quality levels made possible by access speeds four times or better above dial-up generate 18 times the recall levels of GIF [graphic interface format] banners,” according to Macromedia Inc. spokeswoman Andrea Coffey).

98. Grice, *supra* note 96, at *1.

99. John Borland, *Living Up to the Broadband Future*, CNET NEWS, July 28, 1999 (downloaded from www.cnetnews.com on Aug. 1, 1999).

100. Clint Sweet, *Fortunes Are at Stake as Cable, Internet Access Merge*, SACRAMENTO BEE, June 24, 1999.

58. To determine the magnitude of the consumer welfare impact of a price increase of e-commerce goods, one needs an estimate of the demand elasticity for e-commerce. Professor Austan Goolsbee of the University of Chicago uses new data on the purchase decisions of approximately 25,000 online users to examine the effects that local sales taxes have on Internet commerce.¹⁰¹ He finds that a 5 percent increase in Internet taxes would decrease the number of e-commerce customers by roughly 18 percent (equal to the product of a -3.6 percent elasticity and a 5 percent tax).¹⁰²

59. To determine the associated welfare loss, one would need estimates of the number of customers subscribing to AT&T's broadband service and the average amount of annual e-commerce spending per AT&T broadband customer. The loss in consumer welfare resulting from a five-percent increase in e-commerce prices could then be decomposed into two parts. First, for customers who continue to purchase online after the price increase, the welfare loss would be the product of the difference in e-commerce prices and the number of remaining customers. Second, the price increase will drive away some broadband customers that would have purchased online in the alternative. That loss in welfare would be computed as the area beneath the demand curve bounded by the old and new prices. Based on the expected high growth in e-commerce, the high elasticity of demand for e-commerce, and the potentially large propensity for broadband customers to purchase goods on-line, we expect the combined effect of the two sources to be millions of dollars per year.

at *1.

101. Austan Goolsbee, *In a World Without Borders: The Impact of Taxes on Internet Commerce*, Conference Paper at American Enterprise Institute, Mar. 19, 1999.

102. *Id.* at 16.

C. AT&T Would Have a Greater Incentive, Relative to That of an Independent Streaming Video Provider, to Slow Innovation in Streaming Video in an Effort to Avoid Cannibalizing AT&T's Existing, Traditional Cable Video Programming

60. For some customers of broadband content, streaming video and cable television may be substitutes.¹⁰³ According to Microsoft's chief technology officer, with high bandwidth and fast chips, "PC video will also be higher quality than anything on TV."¹⁰⁴ When streaming video and cable television begin to compete for the same customers, AT&T will likely view its streaming video services as cannibalizing its cable video offerings. To avoid losing cable customers and their associated large margins, AT&T will then have an incentive to slow innovations in streaming video.

61. There is already some evidence that AT&T recognizes the threat of cannibalization. For example, AT&T's contract with @Home stipulates that @Home is required to restrict individual streaming sessions of "broadcast-quality video" to ten minutes.¹⁰⁵ Indeed, AT&T could find it advantageous to exert its market power in the streaming video market through incompatible designs and exclusive contracts.

103. See, e.g., Neil Gross & Steven V. Brull, *The Net's Next Battle Royal—Video: The technology isn't there, but the competition is*, BUS. WK., June 28, 1999, at 108.

104. *Id.* (quoting Nathan P. Myhrvold).

105. See Fred Dawson, *RealNetworks: @Home Team Up on Streaming*, MULTICHANNEL NEWS ONLINE, Jan. 18, 1999, at *1.

IV. THE GAINS FROM IMPOSING OPEN ACCESS ON AT&T'S CABLE SYSTEM OUTWEIGH THE LOSSES FROM ALLOWING AT&T TO EXERCISE MARKET POWER IN BROADBAND INTERNET ACCESS AND VERTICALLY RELATED MARKETS

A. The Commission's Decision to Mandate Open Access Can Be Cast in a Standard Decision-Theoretic Framework

62. In our opinion, the Commission should, as a condition of approving the merger, impose open access of AT&T's cable system if the potential harm to consumers and advertisers in broadband Internet access and vertically related markets without open access outweighs the sum of the incremental cost of implementing an open-access regime and the expected cost to consumers of a diminished level of broadband investment by AT&T and its competitors with open access.¹⁰⁶

B. The Expected Social Costs Associated With Not Imposing Open Access Are Substantial

63. We have explained why the acquisition of MediaOne by AT&T will increase AT&T's incentive and ability to exercise market power in the broadband Internet access market and other vertically related markets. We expect the likelihood of harm to be high during the relevant time horizon of two years, because neither DSL nor satellite-based providers will have sufficient ability to discipline AT&T's exercise of market power. Indeed, in some local markets, DSL providers may *never* have the ability to compete effectively.

64. The associated consumer welfare loss in the event of an exercise of market power will be substantial. According to the Strategis Group, there will be roughly 9.1 million house-

¹⁰⁶ This principle is simply a variant on the argument, familiar in antitrust policy, that a liability rule should minimize the combined costs of false positives (Type I errors), false negatives (Type II errors), and administrative costs. See Paul L. Joskow & Alvin K. Klevorick, *A Framework for Analyzing Predatory Pricing Policy*, 89 YALE L.J. 213, 223 (1979); Frank H. Easterbrook, *Predatory Strategies and Counterstrategies*, 48 U. CHI. L. REV. 263, 318-19 (1981); Richard C. Schmalensee, *On the Use of Economic Models in Antitrust: The ReaLemon Case*, 127 U. PA. L. REV. 994, 1018-19 n.98 (1979); J. Gregory Sidak, *Debunking Predatory Innovation*, 83 COLUM. L. REV. 1121, 1144-45 (1983); Daniel L. Rubinfeld & David E. M. Sappington, *Efficient Awards and Standards of Proof in*

holds subscribing to broadband Internet by 2003.¹⁰⁷ If broadband Internet service prices after the MediaOne acquisition were five percent above what would otherwise exist, existing subscribers would lose several million dollars per month. Customers who no longer find it economical to chose broadband service as a result of higher prices would also be harmed. In addition, consumers and advertisers in vertically related markets such as streaming video and portals would incur substantial welfare losses.

C. The Expected Social Costs Associated With Open Access Are Insubstantial

65. Because we are focusing solely on the issue of whether to open AT&T's networks, we do not need to consider, for example, the operational efficiencies or increased competition in local voice services claimed by AT&T and MediaOne as a beneficial event associated with imposing open access.¹⁰⁸ Other benefits of the merger claimed by AT&T may be affected by enforcing an open-access regime. For example, AT&T claims that an open-access regime may alter its incentives to invest in cable-based facilities at the margin and hence potentially lower consumers' access to broadband in some areas. In response to the U.S. District Court's decision in June 1999 to allow open access as a condition of municipal approval of the transfer of TCI's franchise in Portland, Oregon, an AT&T vice president said that "the real losers are likely to be the citizens of Portland and Multnomah County. This decision can only have the potential to delay and reduce the new services that companies like AT&T will be able to offer them."¹⁰⁹

Judicial Proceedings, 18 RAND J. ECON. 308 (1987).

107. STRATEGIS GROUP, *supra* note 8, at 11.

108. In the Matter of Applications for Consent to the Transfer of Control of Licenses, MediaOne Group, Inc., Transferor, to AT&T Corp., Transferee, Applications and Public Interest Statement, Federal Communications Commission, CS Dkt. No. 99-251, at 20-30 (filed July 7, 1999) [hereinafter *AT&T Public Interest Statement*]. For example, AT&T claims that the merger will produce benefits in the provision of telephone, Internet, and cable services.

109. *AT&T reaction to U.S. District Court decision*, AT&T Corp. Press Release, June 4, 1999 (remarks of Mark Rosenblum). Available at <http://www.att.com/press/item/0,1193,502,00.html>.

Moreover, AT&T claims that a decrease in its own investment may undermine the intensity of broadband competition.¹¹⁰ For example, in its recent public interest statement submitted to the Commission, AT&T argued that recent Internet upgrades for its cable systems will "spur investment by competitors."¹¹¹ Below we examine several reasons why AT&T's threat of decreased broadband investment is incorrect.

1. AT&T's Annual Income-to-Investment Ratio for Cable Internet and Voice Service Vastly Exceeds Its Weighted-Average Costs of Capital

66. To examine the extent to which an open-access regime would blunt AT&T's incentives to invest in cable-system Internet upgrades, we estimated the expected cash flows that AT&T can earn on each cable customer and the firm's weighted-average cost of capital. A basic decision rule in investment theory is that a firm will invest in a project if and only if the "project's return," defined as the ratio of expected annual income to investment, exceeds the firm's weighted-average costs of capital.¹¹² The decision rule is stated algebraically below:

$$\frac{\text{Annual Income}}{\text{Investment}} \text{ must exceed } r_D(1 - T_c) \frac{D}{V} + r_E \frac{E}{V},$$

where r_D is the firm's current borrowing rate, T_c is the marginal corporate income tax rate, D is the market value of the current debt, E is the market value of the current equity, r_E is the expected rate of return on the firm's stock, and V is the total market value of the firm.

67. Detailed calculations of weighted-average cost of capital and AT&T's expected annual returns per cable customer are provided in the Appendices 3 and 4, respectively. If a par-

110. AT&T similarly argued before San Francisco's Board of Supervisors that open access would undermine the company's incentive to invest. See, e.g., John Schwartz, *Open Access Fight Escalates*, WASH. POST, July 28, 1999, at E01.

111. *AT&T Public Interest Statement*, *supra* note 108, at 29.

112. RICHARD A. BREALEY & STEWART C. MYERS, *PRINCIPLES OF CORPORATE FINANCE* 466 (McGraw-Hill

ticular open-access regime pushed the project's return below AT&T's weighted-average cost of capital, then one might expect AT&T to decrease its investment, on the margin. Table 4 shows a breakdown on the margin currently enjoyed by AT&T.

TABLE 4: AT&T'S EXPECTED RETURNS ON CABLE HOUSEHOLDS

Upgrades Per Cable Customer ¹		Expected Annual Revenues Per Cable Customer ²	
Internet-ready Upgrades	\$150	Expected Internet Customer*	\$92
Voice-ready Upgrades	\$500	Expected Local Voice Customer*	\$26
INVESTMENT	\$650	AVERAGE ANNUAL INCOME**	\$118

Notes: * For any point in the future, expected revenues are calculated as the product of Internet (voice) revenues at that time and the percentage of cable customers who subscribe to Internet (voice) service at that time. Average annual income is the average of the expected income over a 20-year horizon. After the year 2007, we assume five-percent growth in the adoption rate of both cable and Internet service. ** The estimated revenues per cable customer do not include Internet advertising or e-commerce revenues.

Sources: (1) Testimony of Tod A. Jacobs, Sanford C. Bernstein & Company, Presentation to the Committee on the Judiciary, Re: H.R. 1685 & H.R. 1686, submitted June 20, 1999. (2) Lehman Brothers, Inc. Investext Analyst Report, *Telecom Services: ADSL Versus Cable Modems* (June, 2, 1999).

AT&T's current ratio of annual income to investment under a closed architecture regime is \$118 divided by \$650, or 18.1 percent.¹¹³ An analysis of AT&T's income statements reveals that its weighted-average cost of capital for 1999 is 12.0 percent.¹¹⁴ Therefore, AT&T currently has a *strong* incentive to undertake the necessary upgrades to provide voice and Internet service to its cable customers, because its project return vastly exceeds its weighted-average costs of capital. If, for example, an open-access regime were to lower prices by 10 percent on broadband Internet access, AT&T's average annual project margin would only fall to 16 percent—still in excess of its weighted-average costs of capital. Even under an extreme assumption that broadband prices were to fall by 20 percent, the new project margin of 12.1 percent would encourage AT&T to continue upgrading its cable system. It is important to note that our estimate of expected revenue per cable customer is conservative because it does not include Internet advertising or e-

4th ed. 1991).

113. The numerator of that ratio does not include expected revenues from Internet advertising or e-commerce.

commerce revenues, which currently represents as much as 60 percent of Excite@Home's stream of revenues.¹¹⁵ It is therefore unlikely that AT&T would discontinue its cable Internet strategy should the Commission impose an open-access regime.¹¹⁶

2. AT&T's Position on Investment Depends on Whose Network Is the Subject of Open Access

68. AT&T argues that open access would result in immediate losses owing to the fact that it overpaid for its cable customers.¹¹⁷ But that argument rests on the assumption that AT&T never incorporated the possibility of an open-access regime into its cable-valuation models. To the contrary, AT&T purchased cable subscribers knowing that it was already subject to several forms of open-access regulation. One such form of regulation is leased access, which the Commission—at the urging of AT&T's joint venturer, Time Warner—determined in March 1996 should be priced according to the efficient component-pricing rule (ECPR).¹¹⁸ A second form of open-access regulation is “must carry,” the constitutionality of which was sustained in the Supreme Court's two decisions in *Turner Broadcasting System, Inc. v. FCC*.¹¹⁹ In fact, any firm

114. AT&T CORP., SEC FORM 10-K/A, Results of Operations (filed July 12, 1999).

115. Dick Satran, *Excite@Home Denies Merger, But Sees Deals*, REUTERS, Aug. 3, 1999.

116. The same conclusion is reached under a slightly different investment rule known as positive net present value. The initial outlays for upgrades to ISP and voice are still \$650 per customer. The present value of cash flows discounted at AT&T's weighted-average costs of capital are \$827, which far exceeds the upgrade costs. A 10 percent reduction in the price of ISP service resulting from open access reduces AT&T's present discounted value of cash flows to \$761, which still exceeds AT&T's initial outlays.

117. See, e.g., Declaration of Janusz A. Ordovery & Robert D. Willig on behalf of AT&T Corp. at 21) (emphasis in original), attached to Joint Applications of AT&T Corp. and Tele-Communications, Inc. for Transfer of Control to AT&T of Licenses and Authorization Held by TCI and Its Affiliates or Subsidiaries, CS Dkt. No. 98-178 (filed Nov. 13, 1998) [hereinafter *Ordovery-Willig Declaration*].

118. Implementation of Sections of the Cable Television Consumer Protection and Competition Act of 1992: Rate Regulation Leased Commercial Access. Order on Reconsideration of the First Report and Order and Further Notice of Proposed Rulemaking, Federal Communications Commission, MM Dkt. No. 92-266, CS Dkt. No. 96-60, 11 F.C.C. Rcd. 16,933, 16,958-59 ¶ 61 (1996) (quoting Time Warner comments).

119. *Turner Broadcasting System, Inc. v. FCC*, 512 U.S. 622 (1994) (*Turner I*); *Turner Broadcasting System, Inc. v. FCC*, 117 S. Ct. 1174 (1997) (*Turner II*); see also Abbott B. Lipsky, Jr. & J. Gregory Sidak, *Essential Facilities*, 51 STAN. L. REV. 1187, 1240-47 (1999).

subject to the jurisdiction of the FCC knows that investment in the cable television industry has been subject to a cycle of regulation, deregulation, reregulation, rederegulation, and so on.¹²⁰

69. To determine whether AT&T contemplated the possibility of open access of its *own* cable systems at the time that it initiated the TCI and MediaOne acquisitions, it is illuminating to examine what AT&T was saying about open access of its *competitors'* systems. For example, near the time that it announced its intention to purchase MediaOne, AT&T was advocating open access of the ILECs' narrowband networks.¹²¹ Three years earlier, AT&T was on notice of, and did not challenge, the Commission's decision to mandate efficient component pricing for LEC provision of broadband capacity over open video systems (OVS).¹²² pursuant to newly added section 653 of the Communications Act.¹²³ Moreover, in a June 1999 affidavit submitted to the Commission during the *Local Competition Second Further Notice of Proposed Rulemaking*, AT&T's experts scoffed at the view that open access would undermine an ILEC's incentive to invest in its network:

The incumbent LECs' economists invoke much argument and rhetoric in an attempt to convince the Commission that TELRIC based pricing will "destroy" the incentive for incumbent LECs to innovate. More precisely, the economists assert that incumbent LECs will not undertake costly research and development to bring to the market new services and products if they are required to give competitors access to the underlying facilities at cost-based rates. . . . These arguments amount to nothing more in the present context than misplaced drama.¹²⁴

120. See THOMAS W. HAZLETT & MATTHEW L. SPITZER, PUBLIC POLICY TOWARD CABLE TELEVISION: THE ECONOMICS OF RATE CONTROLS (MIT Press & AEI Press 1997); ROBERT W. CRANDALL & HAROLD FURCHGOTT-ROTH, CABLE TV: REGULATION OR COMPETITION? (Brookings Institution 1996).

121. Affidavit of R. Glenn Hubbard, William H. Lehr, Janusz A. Ordovery & Robert D. Willig on behalf of AT&T Corp., at 7, Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, Federal Communications Commission, CC Dkt. No. 96-98 (filed June 10, 1999) [hereinafter *Hubbard-Lehr-Ordovery-Willig Affidavit*].

122. Implementation of Section 302 of the Telecommunications Act of 1996: Open Video Systems, Second Report and Order, CS Dkt. No. 96-46, 11 F.C.C. Rcd. 18,223 (1996).

123. *Id.* at 18,226 ¶ 1.

124. *Hubbard-Lehr-Ordovery-Willig Affidavit*, *supra* note 121, at 31.

If an ILEC's incentives were not dampened by mandatory unbundling at TELRIC-based prices. AT&T's experts argued, then the Commission could focus narrowly on the gains to consumers resulting from increased competition in local voice services.

70. But, when the focus of open access shifted to AT&T's own cable networks. AT&T and its experts reversed their opinion. In a November 1998 filing in support of AT&T's transfer application to acquire TCI, AT&T's experts argued that open access would blunt AT&T's incentives to upgrade its cable systems for Internet usage:

Forced unbundling with its attendant regulatory uncertainty would likely slow down the investment in the development of broadband last mile data transport. Investing under the shadow of uncertain regulatory rules in an *innovative* service only exacerbates the already substantial risks associated with that investment. When an investor can be subjected to unanticipated regulatory constraints on its pricing or be required to sell its services at rates that do not reflect proper economic costs, the incentives to invest are potentially undermined. TCI and other cable companies did not sink hundreds of millions of dollars into upgrading their networks on the assumption that they will be forced to "unbundle" transport *if it is not in their private economic interest to do so*.¹²⁵

That opposite view on the impact of open access on investment was later confirmed by AT&T's management. After the July 1999 hearings on open access of AT&T's systems before the San Francisco city supervisors, AT&T's general counsel argued that competitors such as AOL should not be allowed to "sit on the sidelines and let someone else spend hundreds of billions of dollars and then reap the gains with no investment cost. . . . Our response is if AOL wants a cable network, it can go invest in one itself."¹²⁶

71. We believe that incentives for investment must be treated consistently. AT&T has not explained why incentives can be ignored with respect to a competitor's investment but are

125. *Ordovery-Willig Declaration*, *supra* note 117, at 21.

126. Michael Warren, *AT&T-AOL battle over cable access could shape Internet's future*, ASSOCIATED PRESS NEWSWIRE, July 25, 1999, at *1 (quoting James Cicconi, General Counsel, AT&T).

crucial when it comes to AT&T's own investment. If incentives *do not* matter, as AT&T argues when the focus is a competitor's network, then the Commission can narrowly focus on the consumer welfare benefits resulting from increased competition in broadband Internet access and vertically related markets. If incentives *do* matter, as AT&T argues when the focus is AT&T's own network, then AT&T necessarily would have incorporated the possibility of open access into its willingness to pay when it purchased cable subscribers from TCI and MediaOne. AT&T surely understood the regulatory risk of aggregating so much market share and thus discounted its offer to MediaOne to reflect the best—not the most optimistic—estimate of the value per subscriber in an environment that might include some version of open access.

72. Moreover, AT&T's own actions disprove its assertion that it faces a disincentive to "invest." In less than one year, AT&T has spent or committed to spend upwards of \$100 billion to acquire the majority of the nation's existing cable infrastructure. When mapping a strategy for the delivery of residential broadband services, AT&T faced a make-or-buy decision. It chose to buy. Economic reasoning does not support AT&T's claim to have been deterred from "investing" in broadband infrastructure simply because it willingly decided to buy existing plant rather than devote equivalent billions of dollars to build a competing broadband network from the ground up.

73. The associated costs of imposing open access appear small as well. Even if AT&T were to discontinue investment in response to the Commission's decision to order open access, many consumers could choose DSL or satellite-based broadband connections (albeit at higher prices). AT&T argues that its cable investment has "spurred investment by competitors," and takes credit for ILECs that "have lowered prices and expanded coverage areas only in response

to the entry of substantial competitors.”¹²⁷ The claim that DSL deployment is somehow *dependent* on cable deployment, however, has no theoretical or empirical basis. Evidence of AT&T and ILEC investment at the same time is not proof that one investment “caused” another. Moreover, even if it were established that AT&T’s investment spurred the ILECs into action, the proposition that an ILEC would reverse deployment in response to an AT&T slowdown is an entirely separate matter.¹²⁸

D. Because the Expected Social Costs Associated With Not Imposing Open Access Exceed the Expected Social Costs Associated With Open Access by More than the Incremental Costs of Implementing an Open-Access Regime, the Commission Should Impose Open Access

74. We believe that the Commission should impose open access on AT&T’s cable systems as a condition of approving the MediaOne acquisition. An access regime that required AT&T to offer the same interconnection terms to affiliated and unaffiliated ISPs should not impose substantial administrative costs. Although we have not personally considered the incremental technical and administrative costs of establishing an open-access regime, we understand from reviewing the accompanying declaration of Albert Parisian that the technical costs of such requirements are small.¹²⁹ Assuming that the incremental administrative costs of implementing an open-access regime are manageable, we believe the high social costs associated with AT&T’s monopolization of the broadband Internet access and vertically related markets justify an open-access policy.

127. *AT&T Public Interest Statement*, *supra* note 108, at 29.

128. The basic decision rule in economics to shut down operations in the short run—that is, shut down if total revenue is less than total short run variable costs—is different from the decision to begin operations. *See, e.g.*, WILLIAM J. BAUMOL & ALAN S. BLINDER, *MICROECONOMICS: PRINCIPLES AND POLICIES* 216 (Dryden Press 7th ed. 1997).

CONCLUSION

75. AT&T's acquisition of MediaOne threatens to monopolize the market for broadband Internet access for residential customers. For purposes of competitive analysis, the broadband Internet access market should be distinguished from the narrowband market for several reasons. First, the pricing of broadband significantly differs from the pricing of narrowband. Second, broadband and narrowband products target different user groups. Third, many of the services supported by broadband connections are not (and cannot be) available through narrowband connections. Fourth, recent empirical evidence supports the conclusion that broadband Internet access represents a separate product market.

76. With respect to participants in any local broadband market, we identify only the cable provider as an effective competitor. Other mediums of broadband Internet access, such as digital subscriber lines and satellite connections, cannot be relied upon to impose price discipline in the broadband Internet access market over the two-year time horizon relevant under the *Merger Guidelines* and FCC merger policy.

77. AT&T's concentrated control of the broadband Internet access market following the merger will enable the combined entity to extend its economic influence into vertically related markets such as portals, streaming video, streaming video software, and e-commerce. The academic literature on tying, when viewed in conjunction with AT&T's recent attempts to influence those downstream markets, suggests that the MediaOne acquisition will substantially reduce consumer welfare. For example, we believe that in the e-commerce market consumers could lose

129. *Parisian Declaration*, *supra* note 90, at ¶30.

millions of dollars per year as the result of a price squeeze by AT&T of unaffiliated Internet service providers.

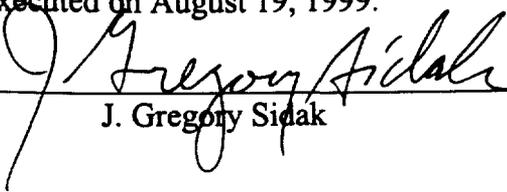
78. A standard decision-theoretic framework counsels the Commission to reject AT&T's acquisition of MediaOne unless AT&T consents to offer open-access to its monopoly control over the sole effective pipeline for residential broadband connections. The expected harm to consumers if AT&T were allowed to monopolize broadband Internet access markets outweighs the transaction costs associated with the implementation of open access and its putative reduction in investment by AT&T. However, because AT&T's acquisition of MediaOne raises anticompetitive concerns beyond those addressed in this affidavit, the imposition of open access would, by itself, be a necessary, but not sufficient, condition for the Commission to find that this merger would be in the public interest.

I declare under penalty of perjury that the foregoing is true and correct. Executed on
August 23, 1999.



Daniel L. Rubinfeld

I declare under penalty of perjury that the foregoing is true and correct.
Executed on August 19, 1999.



J. Gregory Sidak

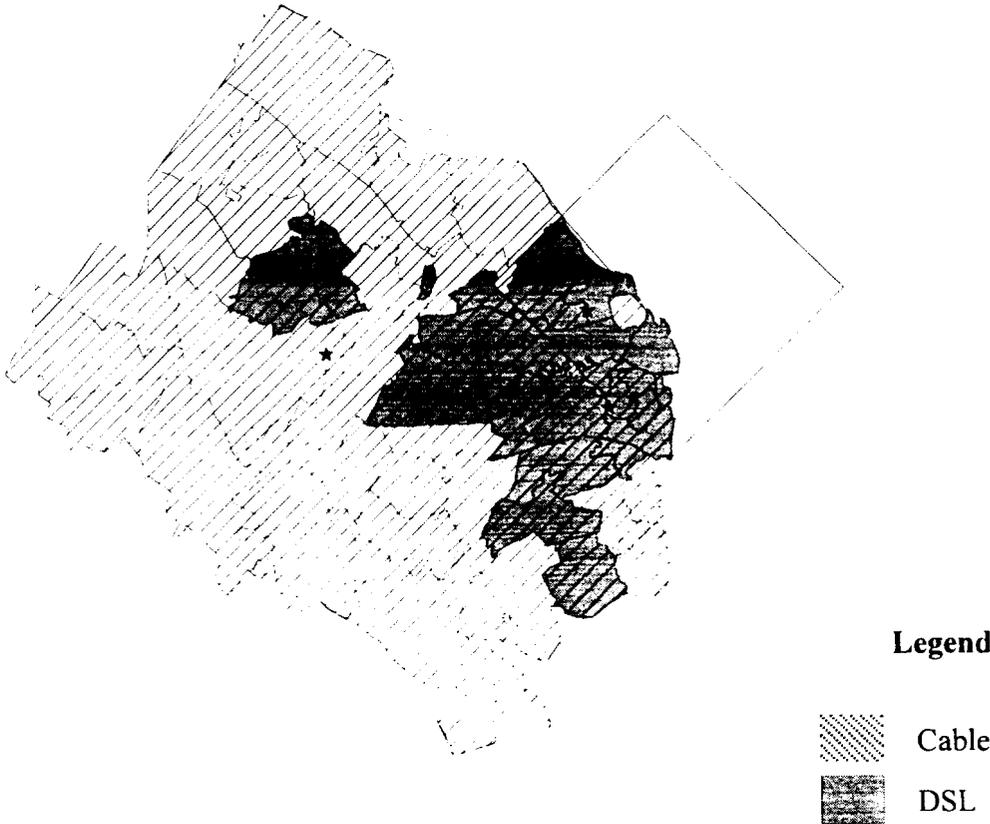
**Appendix 1: Roll-out of DSL and Cable Internet Access in Virginia Suburbs
Of Washington, D.C., July 1999**

State	City	Population ¹	Population Served by DSL Internet Access ²	Population Served by Cable Internet Access ³
	Virginia Metro Area			
	Alexandria	280,310	231,029	280,310
	Annandale	53,246	53,246	53,246
	Arlington	174,742	172,374	79,798
	Burke	45,135	0	45,135
	Centreville	40,587	0	40,587
	Chantilly	15,672	0	15,672
	Clifton	11,367	0	11,367
	Dunn Loring	1,340	1,340	1,340
	Fairfax	118,578	0	118,578
	Fairfax Station	21,280	0	21,280
	Falls Church	106,986	83,356	106,986
	Fort Belvoir	10,431	0	10,431
	Ft Myer	2,178	0	2,178
	Great Falls	13,934	0	13,934
	Greenway	148	0	0
	Herndon	65,008	0	65,008
	Lorton	20,072	0	20,072
	Mc Lean	47,384	0	47,384
	Newington	1,288	0	0
	Oakton	15,494	15,494	15,494
	Reston	51,937	0	51,937
	Springfield	97,130	0	97,130
	Vienna	57,578	14,274	57,578
	<u>Washington</u>	<u>215</u>	0	0
	Virginia Metro Area	1,252,040	571,113	1,155,445
	Percent Served		45.6%	92.3%

Sources: (1) <http://www.home.com/cgi-bin/ziplookup.cgi>, (2) <http://www.rr.com/rdrun/availability/index2.html>, (3) http://www.bellatlantic.com/smallbiz/idsl_avail.htm.

Note: Cable deployment was gathered by entering zip codes into the cable web sites. DSL deployment was gathered based by entering telephone area codes and three-digit exchanges into the DSL web sites.

Appendix 2: Cable vs. DSL Deployment in DC Suburbs of Virginia



Appendix 3: AT&T Weighted Average Costs of Capital Derivation

Step 1: Derivation of Expected Return on AT&T Equity

Rate of return on a risk-free asset R_f ¹	5.051667
Beta of AT&T stock ²	0.788333
Adjusted beta of AT&T stock B_s ³	0.858889
Expected risk premium $E\{R_m - R_f\}$ ⁴	8.5
Expected return on AT&T stock $E\{R_s\}$ ^a	12.35222

Sources: (1) Average of the 1-Year Monthly Treasury Constant Maturity Rate from <http://www.frbchi.org/econinfo/>
 (2) Average of monthly betas from Bloomberg. (3) Weighted average beta computed by weighing the raw beta by 2/3 and the number 1 by 1/3. (4) Estimate for U.S. stocks over the 1926-1991 period. Ibbotson, R.G. and Sinquefeld, R.A., *Stock, Bonds, Bills, and Inflation: 1992 Yearbook*.

Notes: (a) $E(R_s) = R_f + B_s * E\{R_m - R_f\}$

Step 2: Derivation of AT&T's Cost of Debt

Debt #	Low Rate	High Rate	Average Rate	Amount
Debt 1	4.38	5.63	5.01	\$900
Debt 2	6.00	7.75	6.88	\$2,759
Debt 3	8.00	8.85	8.43	\$2,754
Debt 4	9.60	11.13	10.37	\$52

Debt with "Variable" rate

(not included in Cost of Debt calculation) \$98

Weighted Average Cost of Debt $E(R_d)$ 7.30302

Note: Dollar amounts are in millions of dollars.

Source: AT&T Corp.'s Form 10-K/A filed on July 12, 1999.

Step 3: Derivation of Market Value of Debt and Stock

Closing price of AT&T stock on December 31, 1998	\$75.75
Outstanding shares of common stock as of December 31, 1998	1,754
Market value of common stock as of December 31, 1998	\$132,835
Long-term debt	\$5,556

Notes: Units (except price) are in millions.

Sources: AT&T Corp.'s Form 10-K/A (Results of Operations) filed on July 12, 1999; Yahoo Finance Historical Quotes (<http://quote.yahoo.com/>).

Step 4: Calculation of AT&T's Weighted Average Costs of Capital

Ratio of long-term debt to sum of long-term debt and market value of common stock $D / (S + D)$	4%
Weighted average cost of debt $E\{R_d\}$	7.30
Expected return on AT&T stock $E\{R_s\}$	12.35
Before-Tax WACC ¹	12.15
Tax Rate t	40%
After-Tax WACC ²	12.03

Note: (1) Before tax weighted average cost of capital is equal to $[S / (S + D)] * E\{R_s\} + [D / (S + D)] * E\{R_d\}$. (2) After-tax weighted average cost of capital is equal to $[S / (S + D)] * E\{R_s\} + [D / (S + D)] * E\{R_d\} * (1-t)$.

Appendix 4: AT&T's Expected Cash Flow Per Cable Customer

Step 1: Expected Cash Flow for Internet Services Only

Year	Average Internet Revenue Per Customer Per Month ¹	Internet Adoption Rate ¹	Expected Revenue Per Internet Customer Per Month*
1998	50.57	1%	0.38
1999	49.99	3%	1.50
2000	40.00	5%	1.90
2001	40.20	7%	2.82
2002	40.32	9%	3.70
2003	40.48	11%	4.61
2004	40.60	14%	5.58
2005	40.98	16%	6.54
2006	41.25	18%	7.53
2007	41.80	20%	8.39
2008	41.80	21%	8.7
2009	41.80	22%	9.21
2010	41.80	23%	9.67
2011	41.80	24%	10.16
2012	41.80	26%	10.66
2013	41.80	27%	11.20
2014	41.80	28%	11.76
2015	41.80	30%	12.35
2016	41.80	31%	12.96
2017	41.80	33%	13.61
Average			\$7.67

Sources: (1) Donaldson, Lufkin & Jenrette Securities Investext Analyst Report Page, Cable Industry (June 25, 1998). *Notes:* * Equal to the product of revenue per month and the adoption rate. For the years 2008 to 2017, we assume average revenue per customers is constant over time, while the adoption rate grows at five percent per year.

Step 2: Expected Cash Flow for Voice Services Only

Year	Voice Telephony Revenue Per Customer per Month ¹	Adoption Rate ¹	Expected Revenue Per Voice Customer Per Month*
1998	26.19	0.01%	0.00
1999	31.79	0.06%	0.02
2000	31.81	1.00%	0.22
2001	31.83	2.00%	0.56
2002	31.84	3.00%	1.11
2003	31.86	6.00%	2.00
2004	31.86	6.30%	2.00
2005	31.86	6.62%	2.10
2006	31.86	6.95%	2.21
2007	31.86	7.29%	2.32
2008	31.86	7.66%	2.43
2009	31.86	8.04%	2.56
2010	31.86	8.44%	2.68
2011	31.86	8.86%	2.82
2012	31.86	9.31%	2.96
2013	31.86	9.77%	3.11
2014	31.86	10.26%	3.26
2015	31.86	10.78%	3.43
2016	31.86	11.31%	3.60
2017	31.86	11.88%	3.78
Average			\$2.16

Sources: (1) Donaldson, Lufkin & Jenrette Securities Investext Analyst Report Page, Cable Industry (June 25, 1998). Notes: * Equal to the product of revenue per month and the adoption rate. For the years 2004 to 2017, we assume average revenue per customers is constant over time and the adoption rate grows at five percent per year.

**Before the
Federal Communications Commission
Washington, DC 20554**

In the Matter of)	
)	
Applications for Consent to the)	
Transfer of Control of Licenses)	
)	
MediaOne Group, Inc.,)	CS Docket No. 99-251
Transferor,)	
)	
To)	
)	
AT&T Corp.,)	
Transferee.)	

**DECLARATION OF DALE E. VEENEMAN
AND EVERTT H. WILLIAMS**

1. My name is Dale E. Veeneman. I am the Principal Investigator for the Digital Subscriber Line (xDSL) Network Infrastructure Project conducted by the Wireline Access Technologies Department of GTE Laboratories Incorporated. My responsibilities include planning project direction, both supervising and performing research on xDSL technology, analyzing xDSL network architectures and protocols, and assessing xDSL limitations. I have worked at GTE Laboratories Incorporated for the past 15 years, focusing most of that time on the development of xDSL technology (primarily Asymmetric Digital Subscriber Line (ADSL)). In my role as the Principal Investigator for the xDSL Project, I made substantive contributions to the ANSI accredited Telecommunications Standards Committee T1E1.4 that led to the development of T1.413, the American National Standard that specifies ADSL system manufacture and testing. These contributions, both in the form of written studies and meeting