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December 14, 1999

Magalie Roman Salas
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

ORIGINAL

Re: *Application for Consent to the Transfer of Control of Licenses, MediaOne Group, Inc. to AT&T Corp.*, CS Docket No. 99-251

Dear Ms. Salas:

Enclosed for filing in the above proceeding, please find Written Ex Parte Comments of Assistant Professor James B. Speta. Please call me if there are any questions.

Thank you for your assistance.

Very truly yours,

/s/

James B. Speta

cc: To-Quyen Truong
Sunil Daluvoy
Royce Dickens

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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of:)
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Application for Consent to the)
Transfer of Control of Licenses)
MediaOne Group, Inc. to AT&T Corp.)
_____)

CS Docket No. 99-251

WRITTEN EX PARTE OF ASSISTANT PROFESSOR JAMES B. SPETA
INTRODUCTION

1. I submit this written ex parte to address the issue of “open access” for Internet service providers (and potentially other content providers) to cable companies’ systems. My comments are principally designed to respond to those submitted by Professors Mark A. Lemley and Lawrence Lessig earlier in this proceeding.

2. Professors Lemley and Lessig argue for the FCC’s imposing a rule of “open access” for ISPs in the context of AT&T’s acquiring MediaOne. They defend the rule as necessary to protect innovation and competition in the ISP and Internet content markets. This is certainly an important goal. In these comments, however, I argue that Lemley and Lessig have failed to establish either of what should be two necessary requirements for imposing open access rules on AT&T: (1) that AT&T will have persistent monopoly power over the delivery of broadband services to homes and small businesses, and (2) that, even if AT&T does have monopoly power over transmission, AT&T would have any *incentive* to seek to “leverage” that

monopoly into related, but separate markets for ISP and content services. As to the first, Lemley and Lessig simply offer no reason to disregard the Commission's conclusion (echoed by others) that cable systems are subject to some competition now and will be increasingly subject to competition in the near future. As to the second, Lemley and Lessig offer no specific argument to support their leverage theory, and economics today is generally skeptical of such arguments. Instead, Lemley and Lessig erroneously equate a monopolist's incentive to protect itself in the market in which it has a monopoly with an incentive to seek to extend that monopoly to other markets.

3. To put it somewhat more in the terms Lemley and Lessig use, I do not believe that they have proved that AT&T will have the *ability* to alter the architecture of the Internet. Because of the costs of government regulation, this is something that must be proved, not assumed. Second, Lemley and Lessig have not shown that, even if AT&T were to acquire the ability to alter the Internet's architecture, AT&T would have any *incentive* to do so.

4. In these comments, I also offer an economic model that suggests that cable television companies, even if they are monopolists over the delivery of broadband content, will not have any incentive to impede innovation and competition in ISP and content services and will, in fact, have strong incentives to provide "open access." I believe that demand for broadband Internet access will respond most strongly to the variety of content that is available and customized for a broadband customer. AT&T will actually have incentives to *encourage* innovation and competition in Internet services. In other words, I offer an economic model of demand for broadband access that is in accord with the Cable Services Bureau's recent conclusion that the market would discipline any attempts to "close" the system. AT&T has recently

committed to negotiating open access agreements,¹ and the model I offer suggests that AT&T will have every incentive to follow through on that commitment.

5. These comments therefore proceed as follows. In Part I, I set forth my background. In Part II, I explain that Lemley and Lessig have not proved that government regulation is necessary in this market. In this regard, Lemley and Lessig have failed to meet the threshold issue: that AT&T will have monopoly power in any recognized market. Lessig and Lemley have also failed to confront the general economic learning that a monopolist will not have the incentive to behave as Lemley and Lessig posit. That is, a monopolist will generally have no incentive to limit the development and competitive provision of goods and services that are complementary with the monopolist's product. In Part III, I explain that the predivestiture Bell System's anticompetitive actions, on which Lemley and Lessig rely to suggest that AT&T's ownership of cable systems will be anticompetitive, can be explained to a significant extent by the particular forms of regulation under which the Bell System operated. These forms of regulation altered the monopolist's incentives, and gave it the incentives to seek to retard certain kinds of innovation and to limit competition in related markets.

6. In Part IV, I argue that, in the absence of these kinds of regulation (to which AT&T is not currently subject), Lemley and Lessig have offered no reason to believe that AT&T would have the incentive to impede innovation in the Internet. Lemley and Lessig's error in this regard, I believe, is to equate a monopolist's incentive to protect its monopoly with an incentive to attempt to "leverage" that monopoly to other markets. Although AT&T would have the incentive to protect its (hypothetical) monopoly over transmission, ISP services pose no threat to

¹See Wall Street Journal, Dec. 7, 1999, at B6.

that monopoly. For this reason, the analogy to the government's case against Microsoft is misplaced; Microsoft was trying to protect its Windows monopoly by impeding innovation in the browser market. By contrast, the Internet in general, and innovation in it, does not threaten AT&T's (presumed) monopoly in broadband transmission. In Part V, I argue that demand for broadband Internet access will be extremely dependent on the number and variety of content services available for distribution. As such, the owner of the distribution technology -- even if a monopolist, as seems unlikely -- will have the incentive to grant open access to other content providers and to encourage innovation in the development of those services. In other words, even if AT&T's ownership of cable systems would give it the *ability* to impede competition, AT&T would still have strong incentives to encourage innovation and competition in the Internet. Finally, in Part VI, I suggest that open access rules, and the price regulation that Lemley and Lessig seem to suggest, will threaten AT&T's incentives to upgrade its cable systems and to innovate in the very transmission technologies that Lemley and Lessig concede are necessary to the next generation of broadband services.

I. Background

7. I am an assistant professor at Northwestern University School of Law, where I teach telecommunications regulation among other courses. My writing focuses on telecommunications law and the related economics of regulation. I am a 1991 graduate of the University of Michigan Law School. Following graduation, I clerked for Judge Harry T. Edwards on the United States Court of Appeals for the District of Columbia Circuit.

8. These comments are based upon an article that is forthcoming in the *Yale Journal on Regulation* in January 2000. I have previously been invited by the staff of the Senate

Commerce Committee to submit comments on this question in conjunction with hearings held by the committee on April 13, 1999. Those comments, which are similar in thrust, are published at <http://www.senate.gov/~commerce/hearings/0414spe.pdf>.

9. I have not been retained by any party in this matter, and I currently do not do any consulting for any telecommunications or other communications company. From 1993 until August 1998, I worked for the law firm of Sidley & Austin and represented AT&T in various matters, but not in connection with any cable television or Internet matters. I have no continuing relationship with AT&T (except as a customer of its services).

II. AT&T Has Not Been Shown To Be a Potential Monopolist With an Incentive To Seek To Extend Its Monopoly Into New Markets

10. Regulation imposes costs. The open access rules and with price regulation that Lemley and Lessig propose threaten significant costs. Lemley and Lessig justify these costs based principally on their own uncertainty about the future. They believe that “[w]e know very little about how this market functions.”²

11. I believe to the contrary that public utility regulation of the sort that Lemley and Lessig propose can only be justified where there is a concrete theory of market failure that the regulation is designed to meet. Here, Lemley and Lessig argue that the merger threatens innovation and competition in the development of ISP and Internet content services. The minimum showings necessary to support such an argument would therefore seem to be (1) that AT&T will have market power in some relevant market and (2) that AT&T will have the ability

²Lemley & Lessig Ex Parte ¶ 104; *see also* ¶ 4 (“W]e do not yet know enough about the relationship between these architectural principles and the innovation of the Internet.”); ¶ 43 (“these strategic actors *might* behave in a procompetitive manner”); ¶ 54 (“[w]e simply do not know enough”).

and incentive to use that market power to impede competition in the ISP and Internet content markets. (I also believe that we can confidently predict “how this market functions,” on which more in Part V.)

A. AT&T Has Not Been Shown To Be a Monopolist

12. It is beyond the scope of my comments to debate the issue of AT&T’s market power in the asserted market for delivery of broadband content.³ Nevertheless, Lemley and Lessig’s argument hinges crucially on that proposition, and they have provided nothing to support it.

13. Lemley and Lessig’s argument depends on AT&T being subject to no competition in the delivery of ISP and Internet services. It is only then that they can claim that AT&T’s purchase of MediaOne will permit it to become a “strategic actor” (Lemley & Lessig ¶ 43), and it is only then that Lemley and Lessig can argue that AT&T will not respond to consumer demand (¶ 87).

14. But Lemley and Lessig provide no reason to disregard the FCC’s current findings that AT&T is subject to some competition and will be subject to increasing competition in the future. In this regard, the FCC has previously refused to endorse Lemley and Lessig’s assumption that “broadband” constitutes a separate market from narrowband (i.e., dial-up) service.⁴ Similarly, the FCC has found that numerous other services, including DSL, terrestrial wireless, and satellite-based services will all provide some competition for, and therefore discipline to, cable

³See, for example, the ex parte comments of Professors Ordoover and Willig on the one hand and Professors Hausman and Sidak on the other.

⁴Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations from Tele-Communications, Inc., to AT&T Corp., 14 FCC Rcd. 3160, ¶ 93 (1999).

system based Internet access.⁵ Recent technological surveys in Scientific American and in the IEEE Communications magazines similarly echo the conclusion that multiple platforms will be feasible in the relatively near future.⁶

15. Moreover, Lemley and Lessig's argument depends not only on the assumption that AT&T does not face any competition now but also on the assumption that it will not face any in any time frame. Even if cable systems are not subject to effective competition today, the prospect that such competition will develop will give AT&T the incentive to maximize the number of subscribers *today*, before other systems come to market.⁷

16. It is a commonplace today in antitrust law that the government and the courts should not employ antitrust remedies unless there is a threshold showing of market power. As Frank Easterbrook wrote in 1984, the costs of regulation are "incommensurat[e]." If a beneficial practice is condemned, "the benefits may be lost for good." But, if "a court [or agency] errs by permitting a deleterious practice, ... the welfare loss decreases over time. Monopoly is self-

⁵*Id.* at ¶ 95; Inquiry Concerning the Deployment of Advanced Telecommunications Capability To All Americans, 14 FCC Rcd. 2398, 2405 (1998) ("FCC Section 706 Report"); *see also* Deborah A. Lathen, FCC Office of Policy and Plans, *Broadband Today* 42 (1999).

⁶See articles in the November 1998 and May 1999 issues of IEEE Communications, and the April 1998 and October 1999 issues of Scientific American.

⁷It should be recognized that current deployment is not always necessary, for even the potential for deployment should provide a disciplining effect on AT&T's behavior. For example, LMDS and other terrestrial wireless systems can be deployed quickly and with little sunk costs. The technology is scalable, and it can be moved from market to market to respond to market opportunities. *See* FCC Section 706 Report, 14 FCC Rcd. at 2424-25 & n.110 (¶ 49 & n.110). The mere prospect of entry by LMDS or other wireless providers could therefore constrain AT&T's ability to exploit any potential market power. *Compare* W. BAUMOL, ET AL., *CONTESTABLE MARKETS AND THE THEORY OF INDUSTRY STRUCTURE* 290-293 (rev. ed. 1988).

destructive.”⁸ The threshold issue therefore is whether the plaintiff seeking an antitrust remedy has “offer[ed] a logical demonstration that the firm or firms employing the arrangement possess market power.”⁹

17. Similarly, public utility regulation is only justified under conditions of market failure, of which monopoly is the most prominent example.¹⁰ The Telecommunications Act of 1996 adopted this general perspective, with its numerous provisions that limit regulation to circumstances in which such regulation is necessary to correct market failure.¹¹

18. In the absence of a firm reason to believe that AT&T will have monopoly power, there is no reason to be concerned about “strategic behavior” or other potentially anticompetitive activities.

B. Monopolists Generally Have No Incentive To Retard Innovation in Adjacent Markets

19. Similarly, Lemley and Lessig have not shown that, even if AT&T would have monopoly power, it would use that power to restrict competition in the market they are concerned about -- the market for ISP services and Internet content. The general economics understanding today is that a monopolist will not have any incentive to restrict competition in the markets for goods or services that are used together with the monopolist’s own goods. Lemley

⁸Frank Easterbrook, *The Limits of Antitrust*, 63 Texas L. Rev. 1, 2 (1984).

⁹*Id.* at 17.

¹⁰*E.g.*, CHARLES F. PHILLIPS, JR., THE REGULATION OF PUBLIC UTILITIES 51, 71 (1993).

¹¹*E.g.*, 47 U.S.C. § 160 (FCC given forbearance power over all provisions not required to protect competition or consumers); 47 U.S.C. § 161 (FCC required to conduct biennial review of regulations and to eliminate any which competition make unnecessary); 47 U.S.C. § 271 (limiting the Bell Operating Companies’ exclusion from long distance markets to time in which local competition is undeveloped).

and Lessig posit that, because AT&T would have monopoly power of the means of transmitting broadband content, AT&T would use that monopoly power to restrict innovation and competition in the development of new Internet content and services. Lemley and Lessig's argument, therefore, is a version of a "monopoly leverage" argument: that AT&T would use the leverage conferred by its (alleged) monopoly in one market (i.e., the transmission systems) to impede innovation and competition in another market (i.e., the market for Internet content and services).

20. AT&T's mere ownership of a monopoly, while it might give AT&T the ability to impede competition in related markets, does not necessarily give it the incentive to try to do so. In fact, a monopolist generally has every incentive to encourage innovation and competition in adjacent markets. While there are limited circumstances in which this is not true, Lemley and Lessig have not provided any specific reason to believe that AT&T, as a (hypothetical) monopolist of cable television systems, would behave anticompetitively in the market for Internet services. Rather, Lemley and Lessig have simply adopted the fallacy that a company that may have the ability to impede competition in related markets would also have the incentive to do so.

21. One of the earliest insights of the law-and-economics analysis of antitrust was that, in general, a monopolist has no incentive to attempt to limit the development of markets for goods that are used in conjunction with the monopolist's goods. To the extent customers use the monopolist's good together with goods developed in related markets, the monopolist will only injure demand for its own product -- and reduce its total profits -- if it attempts to limit the development of those related goods. As then-professor Richard Posner put it in 1976 concerning the leading example of such conduct, tying arrangements: "If the price of the tied product is higher than the purchaser would have had to pay on the open market, the difference will represent

an increase in the price of the final product or service to him, and he will demand less of it, and will therefore buy less of the tying product.”¹² Herbert Hovenkamp has put it more bluntly: “[E]conomists have discredited thoroughly the leverage theory”¹³

22. Instead, a monopolist would want to *encourage* the development of complementary goods, or goods for which the monopolist’s product or service is an input, because to do so would *increase* demand for the monopolist’s own goods.

23. The same should be true of AT&T. AT&T’s monopoly (if one it would have) would be in the transmission systems for broadband content and other Internet services. Professors Lemley and Lessig simply argue that AT&T’s bundling of its ownership of cable systems with its affiliated Internet Service Provider (ISP) will give it the ability and incentive to retard innovation by companies that would provide content or other services that AT&T’s subscribers might wish to access. To the contrary, AT&T will have the incentive to encourage innovation in those services, and the competitive provision of those services, for that will maximize demand for the asset over which it has the purported monopoly. There is no presumptive reason to believe that AT&T’s ownership of the wires, or its combination of access with ISP service, will be anticompetitive.

24. To be sure, the general rule that monopolists will have no incentive to restrict adjacent markets has qualifications. Even the early work recognized that bundling might permit

¹²RICHARD A. POSNER, *ANTITRUST LAW: AN ECONOMIC PERSPECTIVE* 173 (1976); *see also id.* at 198-201 (same in relation to vertical mergers); ROBERT H. BORK, *THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF* 366-74 (1978).

¹³Herbert Hovenkamp, *Tying Arrangements and Class Actions*, 36 VAND. L. REV. 213, 260 (1983).

price discrimination that reduced consumer surplus.¹⁴ Similarly, under certain stringent assumptions, a vertical merger or other vertical foreclosure can be anticompetitive by raising rivals' costs.¹⁵ And, where the adjacent market is characterized by certain returns to scale, a monopolist might have an incentive to engage in tying or other anticompetitive behavior.¹⁶ Nevertheless, each of the instances in which such anticompetitive behavior would be rational depends upon very specific assumptions about the characteristics of the market.

25. Lemley and Lessig, however, provide no reason to believe that any of the foregoing, very specific circumstances exist in this market. The general presumption ought to be that monopolists will not be assumed to act anticompetitively in adjacent markets. The burden must be on those who assert that a monopolist will have incentives to seek to extend their monopolies to explain why such actions might be rational. As Richard Posner said in 1976: "A second - and fatal - weakness of the leverage theory is its inability to explain *why* a firm with a monopoly of one product would want to monopolize complementary products as well."¹⁷

26. For these same reasons, there is every reason to believe AT&T's recent commitment to negotiate open access agreements with unaffiliated ISPs.¹⁸

¹⁴POSNER, *supra* note 12, at 174.

¹⁵See, e.g., J.A. Ordover, G. Saloner, & S. Salop, *Equilibrium Vertical Foreclosure*, 80 AM. ECON. REV. 127 (1990); T. Krattenmaker & S. Salop, *Anticompetitive Exclusion: Raising Rivals' Costs To Achieve Power over Price*, 96 YALE L.J. 209 (1986).

¹⁶See, e.g., Patrick DeGraba, *Why Lever Into a Zero-Profit Industry: Tying, Foreclosure, and Exclusion*, 5 J. ECON. & MGMT. STRATEGY 433 (1996); Michael Whinston, *Tying, Foreclosure, and Exclusion*, 80 AM. ECON. REV. 837 (1990).

¹⁷POSNER, *supra* note 12, at 173.

¹⁸Wall Street Journal, Dec. 7, 1999, at B6.

III. Incentives of “Old AT&T” for Anticompetitive Behavior

27. Professors Lemley and Lessig draw an equivalence between certain anticompetitive behavior by the integrated Bell System and what they expect will be the anticompetitive behavior by AT&T following its acquisitions of TCI and MediaOne. (Lemley & Lessig ¶¶ 25-28, 41.) Essentially, Lemley and Lessig seem to believe that the situation of AT&T as part of the Bell Operating Companies will, in relevant features, be recreated if AT&T acquires MediaOne (and other cable television systems).

28. But the story of the Bell System’s behavior is much more nuanced than Lemley and Lessig describe. The Bell System’s anticompetitive behavior (or, perhaps more accurately, the behavior challenged by the government), including that anticompetitive behavior which sought to delay certain innovations, can be traced in large part to manner in which the Bell System was regulated. It was those particular regulations which gave the Bell System the incentive to behave anticompetitively and in particular to seek to extend its monopoly over the telephone network to related markets for equipment and other services. Of course, the current AT&T is not subject to any of those incentive-distorting regulations.

29. *First*, in the 1960s, when Lemley and Lessig recount (¶¶ 28-28) that AT&T delayed the then-nascent Internet, AT&T was forbidden from entering computer communications. Under the 1956 Consent Decree, AT&T could not enter any business “other than the furnishing of common carrier communications services.”¹⁹ This restriction could only alter AT&T’s incentives. While AT&T would have had the incentive to encourage new uses of its network, it would have had the incentive to impede any innovations that threatened the common carrier business. And

¹⁹United States v. Western Elec. Co., 1956 Trade Cas. (CCH) ¶ 68,246 (D.N.J. 1956) (§ V).

this incentive would have been exaggerated, given that AT&T could not participate in any new markets that might be developed outside of common carrier communications services.²⁰

30. *Second*, the integrated Bell System was subject to price regulation in its principal services, which gave it the incentive to seek to control related markets in an attempt to recover lost monopoly rents. Lemley and Lessig relate (¶ 25) that AT&T attempted to limit the attachments to the network -- monopolizing the market for equipment and eliminating the opportunities for innovation at the “ends” of the network. But AT&T’s incentives to do so were entirely a result of the price regulation of its communications services.

31. Price regulation changes a monopolist’s incentives, for under price regulation a monopolist cannot earn its entire monopoly profit in the regulated market. A price-regulated monopolist, therefore, does have the incentive to seek to leverage its monopoly power into other markets, to gather for itself rents that it is not permitted to make in the primary market.²¹

32. *Third*, the integrated Bell System was subject to universal service obligations and to government-mandated cross-subsidies so that certain services (mainly residential access) would be provided below-cost. As a result, the Bell System provided other services (which were often

²⁰See Jordan Jay Hillman, *Telecommunications Deregulation: The Martyrdom of the Regulated Monopolist*, 79 NW. U.L. REV. 1183, 1185 (1985) (“If AT&T were to be confronted in its regulated markets with increasing competition, rigid pricing constraints and continuing obligations in support of universal service, perhaps relief was to be found in non-regulated markets. However, there were none; the terms of its 1956 antitrust consent decree barred AT&T’s entry into non-regulated markets. Of particular significance was Bell’s inability to provide the various data processing and retrieval services needed for the burgeoning integration of telecommunications and computer technologies. Given these circumstances, AT&T initially mounted a vigorous defense of its integrated system. Its zeal in that defense undoubtedly led it to the thin ice/deep water zone of the antitrust pond.”); PETER TEMIN, *THE FALL OF THE BELL SYSTEM: A STUDY IN PRICES AND POLITICS* 165 (1987) (discussing pressures put on AT&T by 1956 Consent Decree).

²¹BORK, *supra* note 12, at 376; POSNER, *supra* note 12, at 174 n.8; Hovenkamp, *supra* note 13, at 232-35; IX PHILLIP A. AREEDA, *ANTITRUST LAW* ¶ 1712d (1991).

complementary goods or services) at above-cost prices in order to recover its total costs of service.²² As such, the Bell System had exaggerated incentives to protect from competition those above-cost services that it was forced to rely upon in order to recover its total costs of service.²³

IV. AT&T's Acquisition of Cable Systems Does Not Create Incentives for Anticompetitive Behavior

33. Lemley and Lessig argue that AT&T will block innovation simply because its acquiring cable systems will give it significant ownership of the physical wires necessary for the delivery of Internet services. Lemley and Lessig suggest that AT&T's incentive to retard innovation in Internet services will come from its desire to protect a dominant position in a "network," and they further compare this incentive to Microsoft's incentive to protect its position within the network of Windows-compatible computer software.

34. Lemley and Lessig, however, seem not to have drawn the proper equivalence between the anticipated anticompetitive action and the asset that the monopolist would be trying to protect. AT&T would not attempt to restrict innovation in the Internet market because doing so would diminish demand for (and the value of) its wires. And restricting innovation in the Internet market would not have any effect on whatever market power AT&T might have over the

²²See generally Richard A. Posner, *Taxation by Regulation*, 2 BELL J. ECON. AND MGMT. SCI. 22 (1971).

²³See generally W. Brock & D. Evans, *Creamskimming*, in BREAKING UP BELL: ESSAYS ON INDUSTRIAL ORGANIZATION AND REGULATION 61, 64-69 (1983); G. Faulhaber, *Cross-Subsidization: Pricing in Public Enterprises*, 65 AM. ECON. REV. 966, 974 (1975). The Bell System was also subject overwhelmingly to rate-of-return regulation. That particular form of price regulation can create incentives not to innovate, although it can also create incentives to overinvest in capital which may increase innovation. While the exact effect of rate-of-return regulation on innovation is an empirical question subject to dispute in particular industries, there can be no question that it does distort incentives. See generally W. VISCUSI, ET AL., *ECONOMICS OF REGULATION AND ANTITRUST* 378-91 (2d ed. 1995).

means of delivering Internet content.

35. The Microsoft case is instructive, but I think it points in the opposite direction than Lemley and Lessig do. As I have written elsewhere, the Microsoft case, and Microsoft's alleged monopoly leveraging, is not principally about Microsoft seeking to extend its monopoly power over Windows into the related markets for browsers or other software.²⁴ Rather, as Lemley and Lessig at times seem to acknowledge (¶ 70) Microsoft's actions were designed to protect Windows itself from the threat that the Netscape browser (combined with Java) might present. Netscape threatened to make the operating system irrelevant, thus eroding Microsoft's Windows monopoly. In other words Microsoft behaved anticompetitively in order to protect its monopoly in its primary market -- the market for operating systems.

36. AT&T will have no equivalent incentives to restrict innovation in Internet services. AT&T's monopoly power -- if any it will have -- would be in physical means of delivery of broadband content. In other words, AT&T's monopoly power would derive from its ownership of the wires. It is inconceivable that any development in the types of services that Lemley and Lessig are concerned AT&T might restrict -- such as content or protocols or other Internet services -- would be a threat to AT&T's monopoly ownership of the wires. The equivalence to the Microsoft case would only come if AT&T had the ability to restrict the development of DSL services, wireless services, satellite services, or some other potential competitor to cable systems for delivery of broadband content.

37. Similarly, Lemley and Lessig's assertion that AT&T in the 1960s attempted to

²⁴James B. Speta, *Tying, Essential Facilities, and Network Externalities: A Comment on Piraino*, 93 NW. U.L. REV. 1277, 1282 (1999).

restrict the Internet's development actually contradicts their argument that AT&T would now restrict innovation in Internet services. As I noted above, AT&T was at the time restricted to providing common carrier communications services. The Internet would have been a substitute for those services, and AT&T's alleged anticompetitive actions can be explained by a desire to protect its monopoly in communications. The anecdote (even if true), however, provides no support for contending that AT&T "leveraged" (or would in the future leverage) its monopoly into a new market.

38. Lemley and Lessig do suggest that AT&T as a cable television provider might restrict video on demand or other Internet video services to eliminate competition with traditional cable programs. (Lemley & Lessig ¶ 58.) This comes closer to the Microsoft scenario, but fails for a different reason. The alleged AT&T monopoly that gives Lemley and Lessig pause is AT&T's ownership of cable wires, not AT&T ownership of networks or production studios. AT&T would only attempt to restrict Internet video if AT&T owned video production assets. But following the TCI and MediaOne mergers, AT&T will own cable systems (to wit, wires and distribution facilities), not production companies.

39. For just these reasons, AT&T's current behavior is not monopoly leveraging. If AT&T were attempting to limit competition for ISP services and Internet content, it would not permit customers to "click through" to the content on the Internet. The principal examples that Lemley and Lessig provide of ISP services that might be injured -- video and new audio services (¶¶ 47-48) -- are not restricted by AT&T per se. ISPs can compete with @Home by doing what AOL has done, offering a "content only service" that AT&T customers can reach through their service.

40. The current @Home restrictions also do not seem to be examples of monopoly leveraging. Lemley and Lessig point to three features of the current @Home acceptable use policy as examples of anticompetitive conduct: (a) subscribers may not download more than 10 minutes of broadcast quality video, (b) subscribers may not host web pages, and (c) subscribers may not resell their service. AT&T maintains on the other hand that the restrictions are based upon the capacity limitations of the cable systems. The inference that makes economic sense is that the restrictions are truly based upon the physical limitations of the systems. This is because AT&T would only have more demand for its service if it eliminated these restrictions.

IV. The “Network” Nature of Broadband Internet Access Will Provide Incentives for Openness, Not For Anticompetitive Behavior

41. Professors Lemley and Lessig dismiss as “naive” (¶ 87) the Cable Services Bureau’s conclusion that market forces will compel AT&T to provide open access to its Internet access service. But this is the generally accepted economic theory -- that even a monopolist will want innovation and competition in related markets. In this Part, I further dispute Lemley and Lessig’s conclusion by offering a model of demand for Internet services. I first establish that Lemley and Lessig make the assumption that AT&T will not act to maximize its profits. I think that is unrealistic. And once we assume that AT&T will maximize its profits, I offer a model of demand for broadband Internet services that demonstrates that AT&T can maximize its profits by encouraging competition among ISPs and other content providers. I advance this argument in greater detail in my forthcoming article.

42. Lemley and Lessig make the remarkable assertion that AT&T will not be affected if its “closed access policy ... slow[s] the rate of subscription to cable modem service, because the

bundled service AT&T provides is less attractive than an open alternative.” Lemley & Lessig ¶ 87. They write that “there is no reason to believe that AT&T ... will recognize or respond to this market threat.” *Id.* This is nothing less than an argument that AT&T will not maximize its profits. Lemley and Lessig elsewhere in their comments state unequivocally that “we should expect corporate entities to behave in a profit maximizing manner.” *Id.* ¶ 28. Their unwillingness to believe it at this point in their argument is startling.

43. AT&T should be expected to maximize its profits whether or not it is subject to effective competition. But Lemley and Lessig seem to believe that AT&T will not, in part, because it will not be subject to competition from any other broadband transmission platform. I have argued in Part II.A that Lemley and Lessig have not carried their burden on this point.²⁵

44. Still, even if it is assumed that cable systems will have a monopoly over access to the broadband Internet, AT&T will have a strong market incentive to provide open access to unaffiliated ISPs and other content providers. In particular, I believe that the demand for broadband Internet access will depend crucially upon the variety of services that are made available over those wires. Because subscriber demand will be very sensitive to the availability of a variety of services, AT&T will have an incentive to encourage innovation and open access in the

²⁵Lemley and Lessig argue that competition among platforms would not reduce the incentive-dampening effects that AT&T’s significant ownership of cable wires might cause because individual consumers would not “feel” the loss and would not switch from cable to other platforms. *See* Lemley and Lessig ¶ 64. But this seems implausible, for it ignores that owners of alternative platforms will have the incentive to *encourage* the development of innovations that are (hypothetically) not permitted by AT&T to its customers. The owners of the alternative platforms will then advertise these “unique” offerings to consumers, which will discipline any attempts by AT&T to limit the content available to its customers. In fact, Lemley and Lessig’s argument in this regard is fundamentally inconsistent with their argument that the merger -- by cutting the number of independent cable firms providing access -- independently harms innovation. *See* Lemley & Lessig ¶ 67 (“If [the five cable companies] were independent, then the decision of some networks to block certain kinds of Internet services would not necessarily influence any other networks. Thus the threat to innovation would not be as great.”).

provision of these services. In particular, AT&T will not alone be able to promise potential subscribers as wide a variety of services as would an open market. AT&T will therefore have a strong market incentive to encourage innovation by other parties. To explain this conclusion requires a short discussion of “network externality” economics.

45. Since the mid-1970s, a branch of economics has developed dealing with the peculiar demand effects occasioned by what are called “network” goods. A network exists when an individual consumer’s demand for a good depends upon the number of other consumers that also demand the good. When it does, the market is said to exhibit “network externalities.”²⁶

46. In the classic case of a network externality, a consumer’s demand for the good increases based on the number of other purchasers of the good, because the good itself becomes more valuable to individual consumers as others also purchase that good. Consider telephone service. If I am the only person purchasing telephone service, it is not worth anything to me. It may be worth something to me to be able to call my parents, and something more if I can reach all of my relatives or all of my friends. The value of telephone service continues to increase (although not necessarily at a constant rate) as more other individuals (and businesses) subscribe to telephone service. This feedback effect gives rise to a “direct network externality.”

47. A related form of network arises in markets in which there are so-called hardware and software goods. Hardware goods are those goods, usually durables, that provide the

²⁶See generally Kenneth D. Boyer, *Network Externalities*, in NETWORKS, INFRASTRUCTURE, AND THE NEW TASK FOR REGULATION 13-17 (Werner Sichel & Donald L. Alexander, eds. 1996); Anne Perrot, *Compatibility, Networks, and Competition: A Review of Recent Advances*, 27 TRANSP. SCI. 62, 64-66 (1993); Joseph Farrell & Garth Saloner, *Standardization, Compatibility, and Innovation*, 16 RAND J. ECON. 70, 70-71 (1985); Michael L. Katz & Carl Shapiro, *Network Externalities, Competition, and Compatibility*, 75 AM. ECON. REV. 424, 426-27 (1985). Professor Lemley has written on network externalities in Mark A. Lemley & David McGowan, *Legal Implications of Network Economic Effects*, 86 CAL. L. REV. 479 (1998).

underlying technology for other goods or services. Software goods are those that provide the particular flavor of the good or service that the consumer demands. A common example is video cassette players: Consumers desire to watch movies. To do so, they need a video cassette player (a hardware good) and some prerecorded video tapes (the software goods). Other examples are computer operating systems and computer applications, turntables and records, and compact disc players and compact discs. These markets display network externalities if consumer demand for the hardware good is influenced by the variety of software goods that are compatible with the hardware. This will often be the case: consumers are more likely to buy the video cassette player that plays more of the available movies and are more likely to buy the operating system compatible with the widest variety of applications programs. But the supply and variety of software goods depends upon total consumer demand, and, hence, an individual consumer's value for the hardware good depends upon (and increases with) the number of consumers purchasing the same hardware good -- because a larger number of consumers purchasing the hardware good creates a greater market for (and hence a more diverse supply of) the complementary software goods. These sorts of network effects are referred to as "indirect network externalities."

48. I believe that the market for broadband access services will exhibit *indirect* network externalities. Most residential purchasers of broadband access are not, in all likelihood, simply purchasing a higher speed connection for the purpose of sending and receiving particularized information at higher speeds, although some may do that. Rather, broadband access is merely a component of the overall package of goods they are purchasing: Internet access, video on demand, news services, interactive gaming, and other services. In this sense, broadband access and the related information goods are hardware and software goods. One of

the leading telecommunications consulting and analysis firms, the Yankee Group, has written that “in the broadband service market, ... content is king. Specifically, content that requires a fat pipe is king. Therefore, the proliferation of bandwidth-intensive applications is ultimately the key to the significant adoption of broadband service.”²⁷

49. Chairman Kennard has echoed this thought: “Consumers -- the people who actually drive a market -- deserve and will demand an open platform. They are used to openness in the dial-up world, and they will not want to be denied it in the broadband environment.”²⁸ In fact, the transformation of Prodigy, CompuServe, and AOL itself seem instructive, for each of them attempted to compete based on proprietary content. Each found that they could only increase and maintain subscribership if it offered access to the widest variety of content -- open access to the Internet and the Web. As one analyst put it in 1995: “All online services are incorporating the World Wide Web into their strategy. If they don’t, they could have a limited future because the Web is where the greatest amount of new content is being created.”²⁹

50. Applying the insights from indirect network externalities models to broadband access suggests that open access rules are probably unnecessary and could be counterproductive.

51. *First*, especially in initial periods of deployment, broadband access providers must

²⁷The Yankee Group, *Internet Market Strategies* (Dec. 1988) (<http://www.yankeegroup.com/imsv4n15.html>).

²⁸Remarks of William E. Kennard (July 20, 1999) (<http://www.fcc.gov/Speeches/Kennard/spwek924.html/>).

²⁹See Jiri Weiss, *Online Services Take Web for a Spin*, *PC World*, Nov. 1995, at 54 (quoting Karen Burka of SIMBA Information); see also Mick O’Leary, *AOL versus the Web for Consumer Research*, *Database*, April/May 1998, at 79; Ross Laver, *High-Tech Dinosaurs?*, *Maclean’s*, Nov. 11, 1996, at 50; Jack Eagen, *Online Goes Big Time: The Commercial Services Are Beating the Web by Joining It*, *US News & World Report*, Nov. 20, 1995, at 104.

ensure a supply of complementary information services. If consumers view broadband access simply as a hardware good -- necessary to the functioning of information services and not a good to be purchased on its own -- then a broadband provider must either provide those goods itself or arrange for a source of supply. To the extent that there is risk involved in the deployment of the broadband technology, a provider will often find it more efficient to internalize the risk by developing the information services itself. Moreover, in early periods especially, the hardware provider must convince purchasers that there will be *some* complementary goods, and an efficient way to make that commitment is to guarantee supply oneself.

52. *Second*, aside from this early-mover problem, the producer of a hardware good has a strong incentive to permit entry into the market for the supply of software goods. This is because a consumer's demand for the hardware good increases with an increase in the variety of software goods. More precisely, the consumer's demand for the hardware good depends upon the consumer's expectations concerning the variety of software goods that will be available in equilibrium. However, a network owner that monopolizes the provision of complementary goods has a commitment problem. In equilibrium, a monopolist will always supply a smaller quantity of goods than a competitive market. Consumers know this, and because they must make some investment to switch to the technology in the first place, consumers will not purchase where the risk of later exploitation is too great. This applies to broadband access networks, because consumers must invest in equipment -- cable modems or wireless equipment and compatible computer peripherals -- in order to switch to the service.

53. Even apart from the commitment problem, innovation is an eclectic, partially serendipitous activity. And AT&T knows this. In the information economy, all parties

understand that variety is most likely to flourish where there are numerous actors independently pursuing different paths.

54. Thus, a rational broadband access provider will not restrict its customers to accessing only information services provided by it. Rather, the broadband access provider has the incentive not to restrict the market for information services and the availability of those services to its subscribers *even if* the broadband access provider has a monopoly in the provision of broadband access. Where indirect network effects are strong, as I believe they are in the provision of residential broadband access, even a monopolist would have the incentive to encourage a wide variety of information services to increase subscribership.

VI. The Potential Dangers of An Open Access Rule

55. Open access rules may decrease the broadband access provider's incentives to deploy the platforms in the first instance. A network owner's attempts to increase subscribership require it to sacrifice some of the potential returns from the platform, which raises the possibility that returns will be insufficient to ensure that the new network is deployed. This effect can be mitigated "if the network sponsor captures some of the benefits derived from a larger network. This can occur if the hardware supplier has a stake in the supply of software as well as hardware, either through vertical integration, a joint venture, or contract."³⁰ Given congressional and FCC policy to encourage the near-term deployment of broadband access platforms, an open access rule that limited a platform provider's ability to benefit from the increasing popularity of its platform seems counterproductive.

³⁰Michael L. Katz & Carl Shapiro, *Systems Competition and Network Effects*, 8 J. ECON. PERSP. 93, 102 (1994).

56. Lemley and Lessig are confident that “[i]t is possible to grant whatever incentives are needed by setting the appropriate price for control of the wires themselves.” Lemley & Lessig ¶ 98. But their confidence in regulatory omniscience is unsupported. My model suggests that AT&T will make a deal with other providers, for such a deal is in AT&T’s own interest. If regulators assert jurisdiction to set the price, instead of permitting the market to function, it will simply create opportunities for parties to use the regulatory process to win access at rates that are “too low.”

VII. Conclusion: “Presumptions” and Predicates for Regulation

57. Lemley and Lessig conclude where they begin, with an argument that open access rules should be imposed because “we know very little about how this market functions.” (Lemley & Lessig ¶ 104.) We do know, however, that regulation is costly, distorts incentives, and creates its own opportunities for strategic behavior. We also know that monopoly invites its own demise, as others seek to capture a portion of the monopolist’s profits.

58. Regulation should therefore respond to a theory of market failure. Absolute proof is not necessary, but there should be some reason to believe that some market actor or actors will have both the ability and incentive to impede competition or injure consumers.

59. I do not believe that the case for regulation has been made here. AT&T’s acquisition of cable systems has not been shown to create any market power in the market for delivery of broadband Internet, much less market power likely to persist for a significant period. Moreover, no reason has been offered to believe that, even if AT&T were to acquire market power, it would have any incentive to impede competition in the Internet and content markets.

60. To the contrary, AT&T (even if a monopolist) will maximize its profits by

providing consumers what they demand -- the widest, cheapest variety of broadband content and other services. And AT&T will provide it in the manner it knows will work best -- by fostering openness, competition, and innovation by all comers in those markets. AT&T, in other words, will have every incentive to encourage the open architecture of a broadband Internet.