October 29, 2002


Marlene H. Dortch
Secretary
Federal Communications Commission
TW-A325
445 Twelfth St., SW
Washington, DC 20554

Re: Docket No. 02-70

Dear Ms. Dortch:

The following was sent to Catherine Bohigian in response to a request made by Commissioner Martin.

In accordance with Section 1.1206(b), 47 C.F.R. ə 1.1206, this letter is being filed electronically with your office today.

Respectfully submitted,

Harold Feld
Associate Director

October 29, 2002

Catherine Bohigian
Media Advisor
Commissioner Martin
Federal Communications Commission
445 12th St., SW
Washington, DC 20554

Re: Docket No. 02-70
*Application of AT&T Corp. and Comcast Corp.*

Dear Ms. Bohigian:

Attached please find the material requested by Commissioner Martin in our meeting last week. I have attached the following:

1. Excerpts from CFA, *et al.*'s *Petition To Deny* predicting that a combined AT&T Comcast would abuse its market power to extract significant concessions from ISPs.

2. Excerpts from the *Reply to Opposition*.

3. Excerpts from comments filed by CFA, *et al.* on January 4, 2002, in the Commission's Horizontal Ownership Proceeding, Docket No. 98-82, providing the basic economic model for these predictions.

4. Excerpts from the Commission's *AOL Time Warner Merger Order* defining broadband markets and making consideration of the impact on broadband markets a necessary part of the Commission's public interest analysis.

If you have any questions, please feel free to contact me at (202) 454-5684.

Sincerely,

Harold Feld
Associate Director
MEDIA ACCESS PROJECT
1625 K. St.
Suite 1118
Washington, DC 20006
*Counsel for CFA, et al.*

**FROM THE PETITION TO DENY**
**Pages 23-24**

### A. OPEN COMMUNICATIONS NETWORKS WILL SUFFER A SETBACK AS A RESULT OF THE MERGER

When cable operators decided to enter the communications business by offering high-speed Internet access, they incurred the obligations to operate those systems in an open and nondiscriminatory manner. AT&T insisted that it would meet that obligation in a voluntary manner. AT&T's final broken promise is a commitment to Congress, the Federal Communications Commission and the American public that they would voluntarily provide non-discriminatory access to their broadband service offering. They broke that promise by dragging their feet for three years, in the meantime capturing the most lucrative customers under exclusive arrangements.[1] The terms and conditions that they now offer for access are completely antithetical to a true open communications system.[2]

The commercial access that AT&T and Comcast are offering involves the network owners

- choosing a small number of ISPs who can sell a restrictive set of services;
- telling the ISPs what they can and (more importantly) cannot sell, particularly streaming video and end-user generated content and applications;
- controlling the customer relationship and the ability of non-affiliated ISPs to differentiate themselves; and
- placing independent ISPs in a price squeeze that stifles innovation on the Internet by charging a toll for access (the charge unaffiliated ISPs must pay for carriage) that is so high that there are few resources and little market left for new applications or content.

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[1] Intermodalism Study, pp 25-31.
[2] Intermodalism Study, pp. 36-38; UNE Comments, pp. 67-72.

Allowing the merger will exacerbate the problem because one large closed system is worse than two smaller closed systems.[3] By bringing an ever-larger segment of the market under the control of a single entity, steadfastly opposed to non-discriminatory access, the merger weakens the incentive to provide open access (a large enough market share insulates the dominant firm) for the system and forecloses a larger segment of the market to independent content providers. It allows a dominant firm to more easily dictate standards.[4]

[3] Intermodalism Study, pp. 8-10.
[4] Intermodalism Study, pp. 10-13; UNE Comments, pp. 33-46.

**FROM THE REPLY TO OPPOSITION**
**Pages 12-18**
**HIGH SPEED INTERNET ACCESS**

The response of AT&T Comcast and their experts to the demonstration that they have market power in advanced telecommunications services and are abusing it is to state,

(1) incorrectly that narrowband and broadband are the same product,[5]

(2) improperly define the broadband access market by failing to distinguish between business and residential customer,[6]

(3) allow one additional ISP (out of over 7,000 ISPs) to market Internet access over their wires,

(4) promise to allow one-click access to the Internet, and

(5) point out that they own no broadband content whatsoever.[7]

These answers do not alleviate the severe anticompetitive problem posed by merger.

It has been well established since the AT&T MediaOne merger that broadband Internet is a different service than narrowband.[8] All of the arguments put forth by AT&T Comcast that rely on competition between broadband and narrowband must be rejected by the Commission.

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[5] Shelanski Replies, para. 22.
[6] Shelanski Replies, para. 17.
[7] Shelanski Replies, para. 38.
[8] Federal Communications Commission, 2001, *Applications for Conset to Transfer Control of Licenses and Seciton 214 Authorizations by Time Warner Inc. and America Online, Inc.,* paragraph 69, Department of Justice, *AT&T MediaOne Consent Decree,* 2000; Rubinfeld Daniel and Hal. J. Singer, 2001. "Open Access to Broadband Networks: A Case Study of the AOL/Time Warner Merger." *Berkeley Technology Law Journal.* 16. Hausman, Gerry A., J. Gregory Sidak, and Hal J. Singer. 2001. "Residential Demand for Broadband Telecommunications and Consumer Access to Unaffiliated Internet Content Providers." *Yale Journal on Regulation*. 18..

Our initial comments showed a very sharp distinction in the penetration of cable modem service and DSL service in different customer classes.[9] By failing to properly define the product market, AT&T Comcast and their witnesses understate the market share of the merged company and overstate the competition between cable and DSL.

AT&T Comcast fail to describe the terms and conditions under which a small number of unaffiliated ISPs will be allowed to market high speed Internet access service over cable modem plant. By all accounts in the press, these terms will not allow meaningful competition between AT&T Comcast and independent ISPs.[10]

The promise of one click access to the Internet is meaningless from the point of view of competition. AT&T Comcast and their experts argue that as long as anyone can put anything on the Internet that constitutes competition for AT&T Comcast, but a close look at this arrangement shows otherwise.[11]

- This allows AT&T Comcast to monopolize the business of selling access to the Internet. Moreover, by monopolizing the business of selling access to the Internet, AT&T Comcast can easily strangle the business of selling content.

- The click-through-only approach does not allow independent ISPs to compete for consumer dollars until after the cable and telephone companies have charged consumers between $40 and $50 for Internet access, which undercuts any serious opportunity to compete. There is little discretionary income to compete for.

- The click-through-only approach glosses over the severe restrictions on the products and functionalities that independent ISPs can offer to the public.

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[9] Consumer Federation of America, 2002c, Attachment "The Failure of Intermodal Competition in Cable and Communications Markets, p. 24.
[10] Consumer Federation of America, 2002c, Attachment "The Failure of Intermodal Competition in Cable and Communications Markets, pp. 36-38..
[11] Shelanski Replies, para. 38.

**BROADBAND CONTENT MARKETS**

The fact that AT&T Comcast owns no broadband content is incorrect and, even if it were true, would not alter the fact that through their manipulation and control of access, they can dictate to the content market.

The claim that they own no broadband content of their own is absurd on its face. They own a great deal of the type of broadband content that is most critical to the development of the broadband marketplace – full motion video and they have a strong interest in controlling the roll out of this content to preserve their market power over distribution, even when they do not. own content.

The applicants claim they "have virtually no interests in "Broadband Content. " with just a minor 3% investment by Comcast in Intertainer.[12] Through Comcast Interactive Comcast has invested in broadband and interactive companies with commercial entities highly involved in the broadband content creation business, including MetaTV, NDS (run by Rupert Murdoch), Replay TV, Respond TV, Tivo, Bolt.com (leading youth site).[13] It is also involved with Wink, a leading ITV provider.[14]

Their roll out and management of high-speed Internet access service has been driven by their desire to protect their market power over the productions and distribution of this content. Cable modem operators have acted in parallel to prevent the development of such competition, first by having joint ownership of an Internet service provider that explicitly restricted such applications, now by coincidentally imposing conditions on use of the service to preclude such competition.

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[12] AT&T Replies, p. 74.
[13] http://www.civentures.com/portfoliomain.htm
[14] http://www.bizjournals.com/philadelphia/stories/2000/11/27/daily11.html.

Creating a single entity that acts as the lead gatekeeper in the transition between the traditional one-way video market and the interactive video market poses a major threat to the public interest. The applicants have not been candid about the changing nature of the basic model for television, and how these changes may negatively impact competition in the video (and broadband) markets.[15] As the applicant admits, it is engaged in the development of interactive television[16] and video on demand. As the Commission should know from its own proceedings on the matter, the emerging business model for digital and interactive TV is based on an integration of traditional video programming with the interactivity now observed online, especially the World Wide Web. Comcast officials have already indicated that they are committed to the "widespread deployment" of interactive TV.[17]

AT&T officials have recently indicated the role which these changes are influencing their system architecture as well.[18] The "everything on demand" paradigm is fundamentally changing the TV business, with companies like Comcast well advanced with their plans.[19] The Commission can also learn more about the current evolution of the market by examining new applications being incorporated into the cable platform [20]

Applicants will be able to effectively shape emerging marketplace. As CED Magazine noted recently, in its article on how the cable industry will be incorporating control over streaming video in its set-top boxes. " Adding streaming media capabilities

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[15] AT&T Replies, p. 31.
[16] AT&T Replies, p. 6.
[17] See, for example, http://www.metatv.com/news/new/042001_28mil.htm and http://www.philly.com/mld/philly/business/3155109.htm.
[18] http://www.cedmagazine.com/ced/2002/0602/06d.htm.
[19] http://www.cedmagazine.com/ced/2002/0202/id2.htm
[20] http://www.opencable.com/opencableprimer.html.

to set-tops could also open revenue doors for MSOs, perhaps in a walled-garden environment, where the operator controls what can and cannot be streamed. Cable operators "don't want to just be a pipe provider says " (David) Novak (director of marketing of PaceMicro Technology America's) . At the same time, "they don't want to lose control of their network."[21]

AT&T Comcast will be able to effectively shape the contours of the emerging new TV marketplace, given its control over the return path for the "T-commerce" applications which are at the heart of the emerging marketplace. As noted in Multichannel News, "Forecasters are sticking with their predictions that television commerce will outpace the cable industry's new darling, video-on-demand. Some estimates put t-commerce revenue at $14 billion within 10 years - double the VOD revenue stream."[22] The control which the proposed company will have on the Video On Demand space will also be specific, permiting the company to also gain unqiue commercial advantages in this major new cable TV programming marketplace. In addition to the proposed company involvement with key VOD distributer InDemand, The Video on Demand marketplace is sending "shockwaves" across the entire entertainment industry.[23]

The applicants have positioned themselves to be a key gatekeeper for this important new "must-have" product for consumers. It is through the control of the prime bandwidth pipeline which will create the contours of the broadband marketplace. The ability to store and process applications (content, commerce) at the head-end or the

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[21] http://www.cedmagazine.com/ced/2002/0402/id2.htm.
[22] Online Holiday Sales Lift ITV Outlook, 1/14/2002.
[23] Free or Not, VOD Steamrolls Ahead, *Multichannel News* 5/13/2002)

set-top box will provide the company with a critical advantage in the distribution of content. AT&T Comcast will be a must-have partner, given the control it will have over the distribution layer.

As for Microsoft's involvement with Comcast, the FCC should not be fooled by their denials over the impact the investment will have on the proposed company. BusinessWeek itself termed such that. Comcast CEO Brian Roberts claim the Microsoft stake comes with "no strings attached;…could be an enormous understatement. Bill Gates & Co. hopes that its stake in Comcast will buy it broad distribution of its MSN Internet service via cable, which would be a great coup for the No. 2 online service."[24] And as ZDNET reported, the agreement is directly related to the merger, as Microsoft's funds are being used to address the debt which AT&T brings to the deal.[25]

As for Cablelabs and set-top deployment, once again the applicants are not being forthcoming. It is a well-known fact that the consumer electronic industry has not been satisfied that cable companies are openly sharing specifications for set-top boxes so they can be reliably sold.[26]And given the prominent role which Brian Roberts has played leading CableLabs, as its Chair and Vice-chair, the applicants should be more forthcoming about the control their companies (and industry) have over the entire set-top infrastructure. As Gary Shapiro (in his capacity as the chairman of the Home Recording Rights Coalition) explained in a March 14, 2002 letter to the Senate Judiciary Committee, the requirement by Cablelabs that electronic manufacturers and others must sign the "Point of Deployment-Host Interface License Agreement gives content providers and

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[24] AT&T-Comcast's Big Winner: Microsoft, December21, 2001
[25] http://zdnet.com.com/2100-1106-801615.html

cable operators the power to dictate how consumers use content. 'Once given this power, a movie studio, or cable or satellite operator, could simply turn off any interface at will, effectively making the consumer home network a part of its own distribution system,' Shapiro said in the letter."[27]

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[26] Multichannel News, Standards, Cooperation Needed for Retail
May 13, 2002.

[27] Multichannel News, CableLabs Chief Counters Allegations 4/9/2002) See also: HRRC *Urges Public Review And Fcc ActionNow That "Secret" Phila LicenseMade Public* (http://hrrc.org/html/what_s_new.html)

**FROM COMMENTS FILED IN THE COMMISSION'S CABLE HORIZONTAL OWNERSHIP PROCEEDING, DOCKET NO. 98-82 (FILED JANUARY 4, 2002).** These comments provide the underlying economic theory for the analysis in the Petition. While I have excerpted what appear to me as the most relevant, I urge reading of the entire economic analysis.

**Pages 52-61**

## II. MARKET STRUCTURE ANALYSIS CONCLUDES THAT THE CABLE INDUSTRY HAS MARKET POWER THAT MUST BE CHECKED BY A HORIZONTAL LIMIT

### A. SUMMARY

Recognizing the failure of the Commission to lay a proper analytic framework to sustain its rule, the Commission early in its Notice requests "theoretical justification and empirical evidence of alleged harms of concentration."[28] Later in the Notice, it cites theories that claim "a concentrated market may enjoy efficiencies as a result of economies of size and scale."[29] The Notice is quick to point out that "this potential benefit of concentration, however, depends upon several factors that are not likely to occur in practice."[30] These factors do not apply to the cable industry.

This chapter presents the conceptual framework on which the horizontal limit ought to be based, and indeed on which most communications public policy is based. It first describes the characteristics of economic markets with which public policy is concerned – the structure of markets, which dictates the conduct of producers and determines industry performance.

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[28] ¶ 7.
[29] ¶36
[30] ¶39

This section then discusses unique characteristics of information, communications, and video markets. It shows that these characteristics tend to produce monopolistic and oligopolistic markets, which lead to troubling public policy outcomes.

Finally, the chapter discusses and rejects the claims that monopolies or highly-concentrated markets should be embraced as a superior form of organization in the multichannel video industry. It reviews the strong theoretical case that monopoly in this industry is likely to lead to abuses of market power and harm to consumers and is not likely to be innovative or consumer-friendly.

## B. ECONOMIC THEORY USED TO ANALYZE MARKET STRUCTURE

### 1. Elements of Market Structure Analysis

Economic public policy is primarily concerned with market performance (see Exhibit IV-1).[31] The concept of performance is multifaceted, including both efficiency and fairness.[32] The measures of performance to which we traditionally look are pricing,

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[31] Scherer, F. M. and David Ross, Industrial *Market Structure and Economic Performance* (Boston, Houghton Mifflin: 1990), p. 4.

> We seek to identify sets of attributes or variables that influence economic performance and to build theories detailing the nature of the links between these attributes and end performance. The broad descriptive model of these relationships used in most industrial organization studies was conceived by Edward S. Mason at Harvard during the 1930s and extended by numerous scholars.

Shepherd, William, G., *The Economics of Industrial Organization* (Prentice Hall, Engelwood Cliffs, N.J., 1985), p. 5, presents a similar view.

[32] Scherer and Ross, p. 4.

> We begin with the fundamental proposition that what society wants from producers of goods and services is good performance. Good performance is multidimensional… Decisions as to what, how much and how to produce should be efficient in two respects: Scarce resources should not be wasted, and production decisions should be responsive qualitatively and quantitatively to consumer demands.
>
> The operations of producers should be progressive, taking advantage of opportunities opened up by science and technology to increase output per unit of input and to provide consumers with superior new products, in both ways contributing to the long-run growth of real income per person. The operation of

quality, and profits. They are the most direct measure of how society's wealth is being allocated and distributed.

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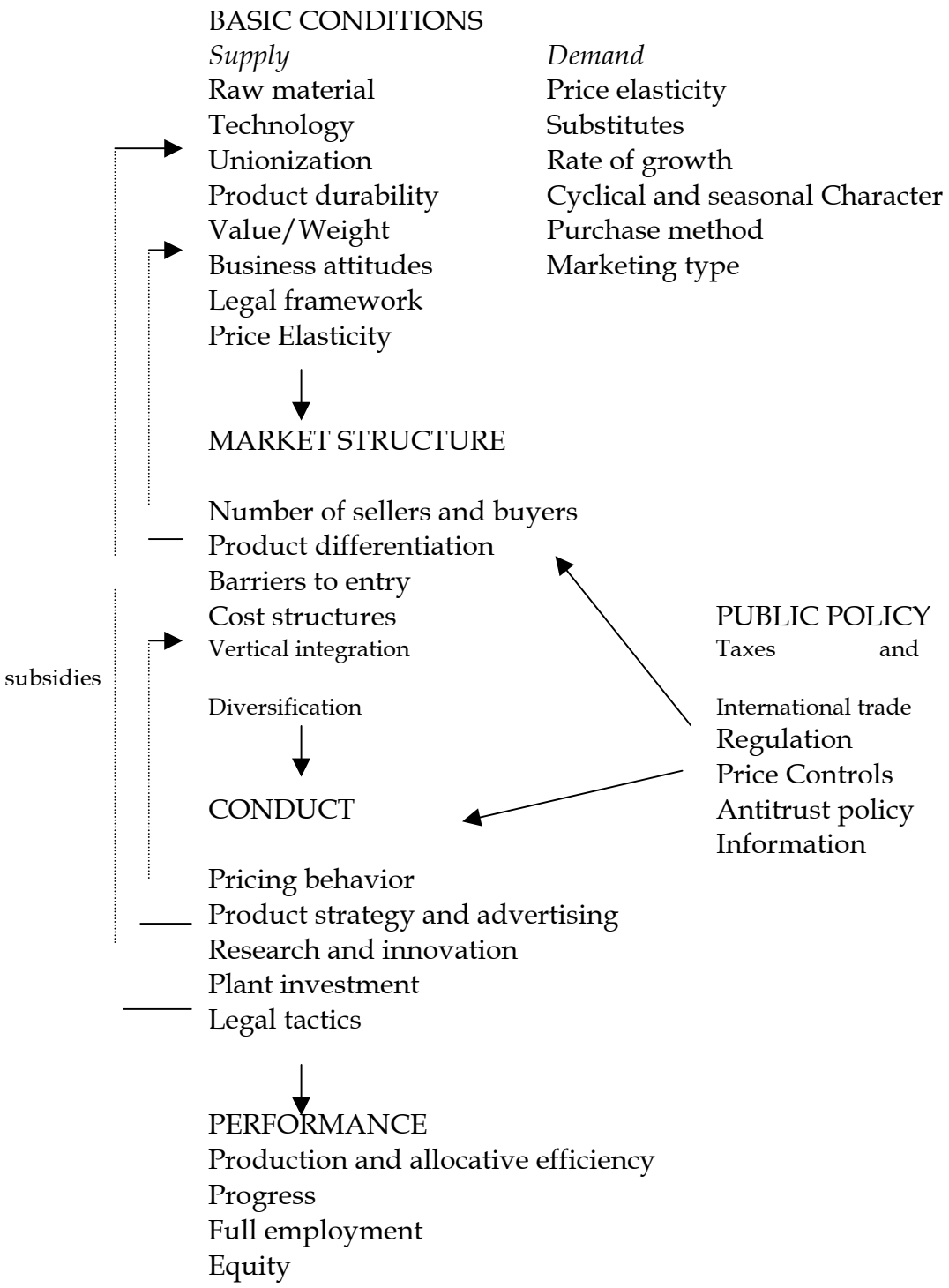
producers should facilitate stable full employment of resources… The distribution of income should be equitable. Equity is notoriously difficult to define, but it implies at least that producers do not secure rewards in excess of what is needed to call forth the amount of services supplied.

EXHIBIT IV-1:
THE STRUCTURE-CONDUCT-PERFORMANCE PARADIGM




SOURCE: Scherer and Ross, F. M., and David Ross, *Industrial Market Structure and Economic Performance* (Houghton Mifflin Company: Boston, 1990), p. 5.

The performance of industries is determined by a number of factors, most directly the conduct of market participants. Do they compete? What legal tactics do they employ?

How do they advertise and price their products?[33] That conduct is only part of the overall analytic paradigm and is influenced by other factors is central to the fabric of this analysis.

Conduct is affected and circumscribed by market structure. Market structure includes an analysis of the number and size of the firms in the industry, their cost characteristics and barriers to entry, and the basic conditions of supply and demand.[34]

Market structure is also influenced by basic conditions, such as the elasticities of supply and demand as well as the constraints of available technologies.[35]

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[33] Scherer and Ross, p. 4.

> Performance in particular industries or markets is said to depend upon the conduct of sellers and buyers in such matters as pricing policies and practices, overt and taciturn interfirm cooperation, product line and advertising strategies, research and development commitments, investment in production facilities, legal tactics (e. g. enforcing patent rights), and so on.

[34] Scherer and Ross, p. 5.

> Conduct depends in turn upon the structure of the relevant market, embracing such features as the number and size distribution of buyers and sellers, the degree of physical or subjective differentiation prevailing among competing seller's products, the presence or absence of barriers to entry of new firms, the ratio of fixed to total costs in the short run for a typical firm, the degree to which firms are vertically integrated from raw material production to retail distribution and the amount of diversity or conglomerateness characterizing individual firms' product lines.

[35] Scherer and Ross, p. 5.

> Market structure and conduct are also influenced by various basic conditions. For example, on the supply side, basic conditions include the location and ownership of essential raw materials; the characteristics of the available technology (e.g. batch versus continuous process productions or high versus low elasticity of input substitution); the degree of work force unionization; the durability of the product; the time pattern of production (e.g. whether goods are produced to order or delivered from inventory); the value/weight characteristics of the product an so on. A list of significant basic conditions on the demand side must include at least the price elasticity of demand at various prices; the availability of (and cross elasticity of demand for) substitute products; the rate of

### 2. Competition vs. Market Power

Market structures that support competition are the primary object of public policy because "[c]ompetition has long been viewed as a force that leads to an ideal solution of the economic performance problem, and monopoly has been condemned."[36] The predominant reason for the preference for competitive markets reflects the economic performance they generate, although there are political reasons to prefer such markets as well.[37] In particular, competition fosters an efficient allocation of resources, the absence of profit, the lowest cost production, and a strong incentive to innovate.[38] Where competition breaks down, firms are said to have market power[39] and the market falls short of these results.[40]

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> growth and variability over time of demand; the method employed by buyers in purchasing (e.g. acceptance of list prices as given versus solicitation of sealed bids versus haggling); and the marketing characteristics of the product sold (e.g. specialty versus convenience shopping method).

[36] Scherer and Ross, p. 15.

[37] Scherer and Ross, p. 18.

[38] Scherer and Ross, p. 20.

> The cost of producing the last unit of output – the marginal cost – is equal to the price paid by consumers for that unit… It implies efficiency of resource allocation…
>
> With price equal to average total cost for the representative firm, economic (that is, supra normal) profits are absent…
>
> In long-run equilibrium, each firm is producing its output at the minimum point on its average total cost curve…
>
> One further benefit is sometimes attributed to the working of competition, although with less logical compulsion. Because of the pressure of prices on costs, entrepreneurs may have especially strong incentives to seek and adopt cost-saving technological innovation. Indeed, if industry capacity is correctly geared to demand at all times, the *only* way competitive firms can earn positive economic profits is through innovative superiority.

[39] Scherer and Ross, pp. 17…18.

> Pure monopolists, oligopolists, and monopolistic competitors share a common characteristic: each recognizes that its output decisions have a perceptible influence on price… All three types possess some degree of power over price, and so we say that they possess monopoly power or market power…
>
> The power over price possessed by a monopolist or oligopolist depends upon the firm's size *relative to* the market in which it is operating.

[40] Scherer and Ross, Chapter 18.

Market structure analysis identifies situations in which a small number of firms control a sufficiently large part of the market to make coordinated or reinforcing activities feasible. Through various implicit and explicit mechanisms, a small number of firms can reinforce each other's behavior rather than compete. Identification of when a small number of firms can exercise this power is not a precise science. Generally, however, when the number of significant firms falls into the single digits, there is cause for concern, as the following suggests.

> Where is the line to be drawn between oligopoly and competition? At what number do we draw the line between few and many? In principle, competition applies when the number of competing firms is infinite; at the same time, the textbooks usually say that a market is competitive if the cross effects between firms are negligible. Up to six firms one has oligopoly, and with fifty firms or more of roughly equal size one has competition; however, for sizes in between it may be difficult to say. The answer is not a matter of principle but rather an empirical matter.[41]

Pure and perfect competition is rare, but the competitive goal is important.[42] Therefore, public policy pays a great deal of attention to the relative competitiveness of markets as well as the conditions that make markets more competitive or workably competitive. Summarizing the literature, Scherer and Ross develop a useful list of these characteristics as follows:

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[41] J. W. Friedman, Oligopoly Theory (Cambridge: Cambridge University Press, 1983), pp. 8-9.

[42] Scherer and Ross, p. 16…17

> In modern economic theory, a market is said to be competitive (or more precisely, purely competitive) when the number of firms selling a homogeneous commodity is so large, and each individual firm's share of the market is so small, that no individual firm finds itself able to influence appreciably the commodity's price by varying the quantity of output it sells…
>
> Homogeneity of the produce and insignificant size of individual sellers and buyers relative to their market (that is, *atomistic* market structure) are sufficient conditions for the existence of pure competition, under which seller possess no monopoly power. Several additional structural conditions are added to make competition in economic theory not only "pure" but "perfect." The most important is the absence of barriers to entry of new firms, combined with mobility of resources employed.

Structural Criteria

- The number of traders should be at least as large as scale economies permit.
- There should be no artificial inhibitions on mobility and entry.
- There should be moderate and price-sensitive quality differentials in products offered.

Conduct Criteria

- Some uncertainty should exist in minds of rivals as to whether price initiatives will be followed.
- Firms should strive to attain their goals independently, without collusion.
- There should be no unfair, exclusionary, predatory, or coercive tactics.
- Inefficient suppliers and customers should not be shielded permanently.
- Sales promotions should be informative, or at least not misleading.
- There should be no persistent, harmful price discrimination.

Performance Criteria

- Firms' production and distribution operations should be efficient and not wasteful or resources.
- Output levels and product quality (that is variety, durability, safety, reliability, and so forth) should be responsive to consumer demands.
- Profits should be at levels just sufficient to reward investment, efficiency, and innovation.
- Prices should encourage rational choice, guide markets toward equilibrium, and not intensify cyclical instability.
- Opportunities for introducing technically superior new products and processes should be exploited.
- Promotional expenses should not be excessive.
- Success should accrue to sellers who best serve consumer wants.[43]

In its Notice, the FCC appears to reject any elements of what is essential to promote competition and instead proposes a narrow notion of effective competition which is inadequate. It states that:

> Effective competition, in this context, seems to mean competition sufficient to provide alternative means for programmers viably to reach consumers thus protecting consumer choice and welfare.[44]

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[43] Scherer and Ross, pp. 53-54.
[44] ¶ 24.

If this definition is suggests that the existence of the mere possibility of alternatives for program delivery is sufficient "to protect consumer choice and welfare," then it is simply wrong. Competition must be sufficiently developed within a market to produce a reasonable approximation of the performance results generally associated with competition for that market to be workably competitive.[45] The Commission's desire for simplicity is laudable, but it cannot be achieved at the cost of undermining the essence of generally accepted elements of competition policy and the public policy goals that Congress set for the Commission.

### C. THE INDUSTRY IS NOT COMPETITIVE AND SERVES AS A PUBLIC GOOD

It has long been recognized that information production, communications networks, and video programming exhibit unique economic characteristics. It is useful to think of multichannel video as a communications platform that provides an environment in which information is produced. It is defined by three layers – the physical layer, the logical or code layer, and the content layer.[46] The physical layer has two primary assets: devices and transmission media.[47] The logical layer involves the codes and standards with which appliances interconnect, interoperate, and communicate. The content layer

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[45] See also Peter Asch, *Industrial Organization and Antitrust Policy* (New York: John Wiley and Sons, 1983), pp. 100-104,

[46] Yochai Benkler, "From Consumers to Users: Shifting the Deeper Structure of Regulation Toward Sustainable Commons and User Access," *Federal Communications Law Journal*, 56 (2000) (hereafter Consumers to Users), see "Intellectual Property and the Organization of Information Production," forthcoming in *International Journal of Law and Economics*, (hereafter, Intellectual Property); "Coase's Penguin, or Linux and the Nature of the Firm," *Conference on the Public Domain"* Duke University Law School, (November 9-11, 2001) (hereafter, Coase's Penguin); "The Battle Over the Institutional Ecosystem in the Digital Environment," *Communications of the ACM*, 44:2 (February, 2001); Lawrence Lessig, *The Future of Ideas* (New York: Random House, 2001), p. 23. Lessig notes that Tim Berners-Lee (*Weaving the Web: The Original Design and Ultimate Destiny of the World Wide Web by Its Inventor* (San Francisco: Harper SanFranciso, 1999), identifies four layers, transmission, computer, software and content.

[47] ¶18.

involves information products, both outputs and inputs.[48] It is a platform because there are strong complementarities between the layers.[49]

It has long been recognized that information production exhibits characteristics of public goods, with positive externalities and high first-copy costs.[50] Information is non-excludable and non-rivalrous.[51] Once it is produced, it is difficult to prevent it from being shared. The consumption of information (by reading or viewing) by one person does not detract from the ability of others to derive value from consuming it.

Information frequently has positive direct and indirect externalities (and occasional negative externalities) associated with its production. It produces benefits to bystanders that cannot be easily captured in the transactions between the private parties.

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[48] The Notice (9, 10) divides the content layer into two functions, program production and program packaging.

[49] Carl Shapiro and Hal R. Varian, *Information Rules* (Cambridge: Harvard Business School Press, 1999), pp. 9 – 15; Richard N. Langlois, "Technology Standards, Innovation, and Essential Facilities: Toward a Schumpeterian Post-Chicago Approach," in Jerry Ellig (Ed.), *Dynamic Competition and Public Policy: Technology, Innovations, and Antitrust Issues* (Cambridge: Cambridge University Press, 2001), p. 207, calls them system products – "Most cumulative technologies are in the nature of systems products, that is products that permit or require simultaneous functioning of a number of complementary components." Complementarities exist where standards knit the layers of the platform together. In this proceeding, they do not play a large role, although the transition to a new standard has proven to be a major challenge for the agency and the industry.

[50] C. Edwin Baker, *Media, Markets and Democracy* (Cambridge: Cambridge University Press, 2002), pp. 297-307 (hereafter Media, Markets). pp. 8-14, see also "Giving Up on Democracy: The Legal Regulation of Media Ownership," Attachment C, *Comments of Consumers Union, Consumer Federation of America, Civil Rights Forum, Center for Digital Democracy, Leadership Conference on Civil Rights and Media Access Project,* (before the Federal Communications Commission, In the Matter of Cross Ownership of Broadcast Station and Newspaper/Radio Cross-Ownership Waiver Policy, MM Docket No. 01-235, 96-197; December 3, 2001); Benkler, Intellectual Property, p.5; as well as "Siren Songs and Amish Children: Autonomy, Information, and Law," *New York University Law Review*," 76 (April 2001);). "Through the Looking Glass: Alice and the Constitutional Foundations of the Public Domain," *Conference on the Public Domain"* Duke University Law School, (November 9-11, 2001) (hereafter, Through the Looking Glass); "Property Commons, and the First Amendment: Towards a Core Common Infrastructure," *Brennan Center for Justice, New York University Law School*, March 2000 (hereafter Core Common Infrastructure); "Free As Air to Common Use: First Amendment Constraints on Enclosure of the Public Domain," *New York University Law Review*,74 ( May 1999) (hereafter Free as Air).

In some respects it is also subject to network effects. Its production and distribution become more valuable as more people have access to it. Information is also a major input to its own output. Where these externalities are direct and strong, it exhibits positive feedback loops. Putting it into the world enables subsequent production at lower cost by its original producers or other producers.

To the extent that information and communication are extremely important inputs into the production process for other goods and services, they have a special economic role. They are often viewed as infrastructure.

Over the past century-and-a-half, information production has exhibited economies of scale typical of the industrial age. Capital intensive technologies and high first-copy costs have created substantial economies that dictate very large scale production. This was not always the case, nor need it be in the future, as discussed below, but it has been the fact of life for information production in the industrial age.

Modern information products also exhibit significant nonsubstitutability and strong preferences.[52] Different types of information products and institutions have evolved to fill different needs and to provide different functions. The result is little ability for individual to substitute between media products or institutions.

It has long been recognized that these characteristics of information render it highly likely that its markets will not be made up of numerous companies competing

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[51] The NPRM, 15-16 launches its analysis based on several of these characteristics.

[52] Comments of Consumers Union, Consumer Federation of America, Civil Rights Forum, Center for Digital Democracy, Leadership Conference on Civil Rights and Media Access Project, (before the Federal Communications Commission, In the Matter of Cross Ownership of Broadcast Station and Newspaper/Radio Cross-Ownership Waiver Policy, MM Docket No. 01-235, 96-197; December 3, 2001) (hereafter Consumers Union, et al, Newspaper Broadcast Crossownership).

vigorously (atomistically competitive).[53] Rather, they tend to be tight, differentiated oligopolies or monopolistically competitive.

> Monopolistic competition theory applies to media goods. They, like utilities, characteristically manifest the "public good" attribute of having declining average costs over the relevant range of their supply curves due to a significant portion of the product's cost being its "first copy cost," with additional copies having a low to zero cost. There are a number of important attributes of monopolistic competition that are relevant for policy analysis and that distinguish it from the standard model of so-called pure competition, the standard model that underwrites the belief that a properly working market leads inexorably to the best result (given the market's givens of existing market expressed preferences and the existing distribution of wealth). The first feature to note here is that in monopolistic competition often products prevail that do not have close, certainly not identical, substitutes. Second, this non-substitutability of the prevailing monopolistic product will allow reaping of potentially significant monopoly profits.[54]

Public policy has been centrally concerned with preventing the abuse of this market power and with promoting competition at all layers of the communications platform through a wide range of mechanisms. At various times and in different layers, this policy has included structural regulation of ownership, setting standards, requiring

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[53] Shapiro and Varian, pp. 22-23.

> Information is costly to produce but cheap to reproduce.
> Once the first copy of an information good has been produced, most costs are sunk and cannot be recovered.
> Multiple copies can be produced at roughly constant per-unit costs.
> There are no natural capacity limits for additional copies.
> These cost characteristics of information foods have significant implications for competitive pricing strategy.
> The first and most important point is that markets for information will not, and *cannot,* look like text-book perfect competitive markets in which there are many suppliers offering similar products, each lacking the ability to influence prices.

[54] *Study of Who Benefits Whom in Differentiated Product Markets*, 2000; with Peter Siegelman *Race and Radio: Preference Externalities, Minority Ownership and the Provision of* Shapiro and Varian, pp. 28, 54, 87-89,Joel Waldfogel, *Who Benefits Whom in Local Television Markets?,* November 2001, Roundtable On FCC Ownership Policies October 29, 2001. Other papers in this series entered in the record of the above hearing include, *Preference Externalities: An Empirical Programming to Minorities*, 2001 with Lisa George, *Who Benefits Whom in Daily Newspaper Markets?,* (2000); as well as the statement *Comments on Consolidation and Localism* (2001).

carriage of programming, public interest obligations in programming, regulation of rates, and the like.

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**Pages 67-68**

### 1. Ways in Which Market Power Manifests Itself in the Industry

The model that has emerged in this industry is one in which only the facility owner with a dominant technology that is a critical input for service delivery can leverage control of transmission facilities to achieve domination of content services. With proprietary control over the network for which there is a lack of adequate alternatives, such an owner can lock in consumers and squeeze competitors out of the broader market. Whether we call them essential facilities,[55] choke points,[56] or anchor points,[57] the key leverage point is controlling access facilities.

It is hard to imagine private entities that possess this market power would refrain from using it to their advantage. Theoretical claims that monopolists have little motivation to engage in anticompetitive activity across layers of the platform or product markets have been refuted. There is ample evidence that these anti-competitive

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[55] Langlois, p. 194.

[56] Mark Cooper, "Open Access to the Broadband Internet: Technical and Economic Discrimination in Closed Proprietary Networks," *University of Colorado Law Review,* Fall 2000).

[57] Sanford C. Bernstein and McKinsey and Company, *Broadband!*, January, 2000 (hereafter Bernstein), pp. 18…21,

> Broadband access platforms are the anchor points for much of the value at stake and vehicles for accessing new revenue streams.
> However, the current set of alternatives for reaching customers with broadband connections is inadequate. At least for the time being, cable is closed, meaning that much of the value is, in effect, ceded to the platform rather than captured by the content/applications providers…
> Furthermore, access is currently a bottleneck, and access winners have the potential to leverage their privilege positioned to ensure long-term value creation.

behaviors may be attractive to a new economy monopolist for static and dynamic reasons.[58]

Companies can exercise market power in the core product by conquering neighboring markets, erecting cross-platform incompatibilities, raising rivals' costs, and preventing rivals from achieving economies of scale. Companies can increase profits by enhancing their ability to engage in price discrimination. By driving competitors out of neighboring markets, new monopolies may be created, and the ability to preserve market power across generations of a product may be enhanced by diminishing the pool of potential competitors.

The dominant players in the physical layer can readily distort the architecture of the platform to protect their market power.[59] They have a variety of tools to create barriers to entry [60] such as exclusive deals,[61] retaliation,[62] manipulation of standards,[63]

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[58] Langlois, pp. 195 –202; Michael Katz & Carl Shapiro, "Antitrust and Software Markets", in *Competition, Innovation And The Microsoft Monopoly: Antitrust And The Digital Marketplace* (Jeffrey A. Eisenbach & Thomas M. Leonard eds., 1999), pp. 70-80; Lansuz A. Ordover and Robert D. Willig, Access and Bundling in High Technology Markets, in *Competition, Innovation And The Microsoft Monopoly: Antitrust And The Digital Marketplace* (Jeffrey A. Eisenbach & Thomas M. Lenard eds., 1999) ; Rubinfeld, *supra* note, in *Competition, Innovation And The Microsoft Monopoly: Antitrust And The Digital Marketplace* (Jeffrey A. Eisenbach & Thomas M. Lenard eds., 1999)at 877-81; Steven C. Salop, *Using Leverage to Preserve Monopoly*, in *Competition, Innovation And The Microsoft Monopoly: Antitrust And The Digital Marketplace* (Jeffrey A. Eisenbach & Thomas M. Lenard eds., 1999).

[59]Langlois, Franklin M. Fisher, Innovation and Monopoly Leveraging, ," in Jerry Ellig (Ed.), *Dynamic Competition and Public Policy: Technology, Innovations, and Antitrust Issues* (Cambridge: Cambridge University Press, 2001).

60. Joseph Farrell & Garth Saloner, Installed Base and Compatibility: Innovation, Product Preannouncements and Predation, 76 AM. ECON. REV. 940, 948-51 (1986) Michael Katz & Carl Shapiro, Product Innovation with Network Externalities, 40 J.INDUS. ECON. 55, 73 (1992)..Richard Makadok, Can First-Mover and Early Mover Advantages Be Sustained in an Industry with Low Barriers to Entry/Imitation?, 19 STRATEGIC MGMT. J. 683, 685 (1996).; Ulrich Witt, "Lock-in" vs. "Critical Masses"–Industrial Change Under Network Externalities, 15 INT'L J. INDUS. ORG., 753, 768-69 (1997). Robin Mansell, Strategies for Maintaining Market Power in the Face of Rapidly Changing Technologies, 31 J. ECON. ISSUES 969, 970 (1997).

and strategies that freeze customers.[64] Firms can leverage their access to customers to reinforce their market dominance[65] by creating ever larger bundles of complementary assets.[66] As the elasticity of demand declines over the course of the product life cycle, market power lodged in the physical layer results in excessive bundling[67] and overpricing of products under a variety of market conditions.[68] Control over the product cycle can impose immense costs by creating incompatibilities,[69] forcing upgrades,[70] and by spreading the cost increases across layers of the platform[71] to extract consumer surplus.[72]

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61. Melissa A. Schilling, Technological Lockout: An Integrative Model of the Economic and Strategic Factors Driving Technology Success and Failure, 23 ACAD. MGMT. REV. 267, 270 (1998), at 276.

62. Willow A. Sheremata, New Issues in Competition Policy Raised by Information Technology Industries, 43 ANTITRUST BULL. 547, 573-74 (1998) Robert A. Woroch et al., Exclusionary Behavior in the Market for Operating System Software: The Case of Microsoft, in OPENING NETWORKS TO COMPETITION: THE REGULATION OF PRICE AND ACCESS (David Gabel & David Weiman eds., 1997).

63. *See* Sheremata, *New Issues in Competition,* , at 560; *see also* CHARLES H. FERGUSON, HIGH STAKES NO PRISONERS: A WINNER'S TALE OF GREED AND GLORY IN THE INTERNET WARS 309 (Three Rivers Press ed., 1999), p. 307; Mark A. Lemley & David McGowan, *Could Java Change Everything? The Competitive Propriety of a Proprietary Standard*, 43 ANTITRUST BULL. 715 (1998), p. 732.

64 Joseph Farrell & Michael L. Katz, The Effect of Antitrust and Intellectual Property Law on Compatibility and Innovation, 43 ANTITRUST BULL., 645, 650 (1998), pp. 643-45; Sheremata, New Issues in Competition,

65.Makadok, at 693.

66. David B. Office, "CHESS and Competing in the Age of Digital Convergence," *in Competing in the Age of Digital Convergence* 27 (Harvard Business School ed., 1997), p. 26; *see also* Robert E. Daisy & Cecilia Conrad, *Commodity Bundling*, 74 AM. ECON. REV. 377 (1984).

67. Carmen Mattes and Pierre Regime, *Compatibility and Bundling of Complementary Goods in a Duopoly*, 50 J. INDUS. ECON. 46 (1992);

68 Joseph P. Guilt Nan, The Price Bundling of Services: A Normative Framework, 51 J. MKTG. 74 (1987); Carmen Mattes and Pierre Regime, Compatibility and Bundling of Complementary Goods in a Duopoly, 50 J. Indus. Econ. 46 (1992). Lester Teller, A Theory of Monopoly of Complementary Goods, 52 J. BUS. 211-30 (1979); Richard Schmalensee, Gaussian Demand and Commodity Bundling, 57 J. BUS. 211-30.

69.Jay Pil Choi, *Network Externalities, Compatibility Choice and Planned Obsolescence*, 42 J. Indus. Econ. 167 (1994), pp 171-73.

70.*See* Glenn Ellison & Drew Fudenberg, "The Neo-Luddite's Lament: Excessive Upgrades in the Software Industry," 30 RAND J. ECON. 253, 272 (2000); Drew Fudenberg & Jean Tirole, *Upgrades, Trade-ins, and Buybacks*, 28 *Rand J. Econ*. 235, 236 (1998).

71.*See* FERGUSON, 309-10.

In information markets, creating incompatibilities or blocking the flow of information undermines consumer value.[73]

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**Pages 103-104**

### 1. Conduit and Content Discrimination Arise Because of the Large Size of Vertically-Integrated Firms, Leading to Anticompetitive Outcomes

All of this finger-pointing by industry players reflects more than the obvious and somewhat embarrassing hypocrisy of self-interested corporations – there is a strong theory of discrimination outlined by these parties.

The experts for the local telephone companies spend a great deal of time demonstrating that "contrary to the claims of the hands off advocates… a vertically integrated broadband provider such as AT&T will have a strong incentive and opportunity to discriminate against unaffiliated broadband content providers."[74] They point out that "the traditional models of discrimination do not depend on the vertically integrated firm obtaining some critical level of downstream market share."[75] Nevertheless, the size of

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72 *Id.* at 176-77. K. Sridhar Moorthy, "Market Segmentation, Self Selection, and Product Lines Design," 3 *Mktg. Sci.* 303 (1984); Marcel Thum, "Network Externalities, Technological Progress, and the Competition of Market Contracts," 94 *Int. J. Indus. Org.* 280, 285-86 (1997).

73 Langlois, p. 221,

> The owner of a dominant standard may thus want to manipulate the standard in ways that close off the possibilities for a competitor to achieve compatibility. This has a tendency to retard the generational advance of the system.

74 Hausman, Sidak and Singer, p. 134.

> 75 Hausman prohibition on exclusive contracts. As discussed below, outside of Section 628(c)(2)(D), programming is already being withheld from small cable companies.

75 Hausman, Sidak and Singer, p. 134.

75 Hausman, Sidak and Singer, p. 156; ACA, p. provides the calculation for cable operators

> The major MSOs will be the clear winners in these transactions. MSOs granted exclusive distribution rights will have an opportunity to attract DBS subscribers with exclusive programming, resulting in increased subscriber revenues (a minimum of $40-$50 per subscriber) and increased system values (at least $3,500-$5,000 per subscriber).

the vertically-integrated firm matters since "a larger downstream market share enhances the vertically integrated firm's incentive to engage in discrimination."[76] Two types of discrimination can be practiced by integrated broadband providers – conduit and content.

In implementing conduit discrimination, the vertically-integrated company refuses to distribute its affiliated content over competing transmission media.[77] In so doing, it seeks to drive consumers to its transmission media and weaken its rival.[78] This is profitable as long as the revenue gained by attracting new subscribers exceeds the revenue lost by not making the content available to the rival. Market size is an important factor.[79]

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> Where do ACA members fit into these transactions? Nowhere. ACA members operate locally, not regionally or nationally. In situations involving regional or national exclusive distribution rights, there is little incentive to carve out exceptions for smaller cable systems. For each small system subscriber lost under exclusivity, the vertically integrated program provider will likely lose revenue between $0.10 and $0.75 per month, depending on the service. In contrast, for each former DBS subscriber gained through regional or national exclusive program offerings, the MSO with exclusive distribution rights will gain all monthly revenue from that subscriber, plus increased system value. In economic terms, an external cost of this gain will be the cost to small cable companies and consumers of reduced program diversity.

[76] Hausman, Sidak and Singer, p. 156.

[77] Hausman, Sidak and Singer, p. 159.

> [A] cable broadband provider will engage in conduit discrimination if the gain from additional access revenues from broadband users offsets the loss in content revenues from narrower distribution…
>
> To capture the gains from such discrimination, the vertically integrated cable provider must have a cable footprint in which to distribute its broadband portal service, either through direct ownership or through an arrangement to share the benefits of foreclosure with other cable providers

[78] ACA, p. 14.

> **Vertically integrated programming providers will have an incentive to enter into regional or national exclusive programming contracts aimed at DBS competitors.**
>
> To gain a competitive advantage over EchoStar/DirecTV, owners of vertically integrated programming will likely enter into exclusive programming contracts with preferred regional or national MSOs, both affiliated and non-affiliated. The most efficient and valuable basis to grant exclusivity will be on a regional or national basis, rather than on a franchise-by-franchise basis.

[79] Rubinfeld and Singer, p. 567.

Content discrimination involves an integrated provider "insulating its own affiliated content from competition by blocking or degrading the quality of outside content."[80]

> Content discrimination… would benefit the cable provider by enhancing the position of its affiliated content providers in the national market by denying unaffiliated content providers critical operating scale and insulating affiliated content providers from competition. Content discrimination would thus allow the vertically integrated content provider to earn extra revenues from its own portal customers who would have fewer opportunities to interact with competing outside content.[81]

One of the more dynamic benefits of discrimination is the potential to devalue competitors, either driving them out of business or making them attractive takeover targets. This problem occurs to the smaller entities in the industry.[82] This would also be a dynamic benefit to the content provided by the affiliated supplier.[83]

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> *Hence, a cable broadband provider will engage in conduit discrimination if the gain for additional access revenues from broadband users offsets the loss in content revenues form narrower distribution.*
> What determines whether conduit discrimination will be profitable. Simply put, if a cable broadband transport provider that controls particular content only has a small fraction of the national cable broadband transport market, then that provider would have little incentive to discriminate against rival broadband transport providers *outside of its cable footprint.* The intuition is straightforward: out-of-franchise conduit discrimination would inflict a loss on the cable provider's content division, while out of region cable providers would the primary beneficiaries of harm done to non-cable competitors.

[80] Hausman, Sidak and Singer, p. 159.

[81] Hausman, Sidak and Singer, p. 159.

[82] ACA, p. 14.

> **Vertically integrated programming providers will have an incentive to deny programming to small cable companies that are competitors.**
> In competitive situations, owners of vertically integrated programming have a powerful incentive to deny programming to small cable companies. A handful of ACA members already have service areas that overlap those of some major MSOs. Because of the expansion of MSO facilities and the expansion of independent cable systems, competition between MSO's and ACA members will likely increase. By offering exclusive programming, an MSO will gain an overwhelming competitive advantage over an independent cable operator. As discussed above, the MSO will gain subscribers and monthly revenues worth far more than any license fees lost (or higher license fees paid) through exclusive distribution arrangements.

**Pages 112-16**

## A. LOCAL AND NATIONAL MARKET POWER IN THE CABLE INDUSTRY

### 1. Local Markets Are a Virtual Monopoly

Head-to-head competition between cable companies is virtually non-existent. Out of 3000 plus cable systems, head-to-head competition exists in fewer than 200, although another 150 have certified entry. In short, only bout 1 percent of franchise territories have experience head-to-head competition between cable companies. While a number of other communities have authorized additional overbuilding, this activity is slowing, as the regional bell operating companies pull back and pure overbuilders retrench.[84]

Cable's dominance as the multichannel medium is overwhelming, with a subscribership of approximately two-thirds of all TV households. Its penetration is over four times as high as the next multichannel technology, satellite. Because a large number

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**Vertically integrated programming providers will have an incentive to deny programming to acquisition targets…**

Many ACA members own cable systems adjacent to systems owned by major MSOs. A common transaction in the industry, and an important exit strategy for smaller systems, is the sale of a system to a major MSO. As in any acquisition, the buyer has an incentive to obtain the system at the lowest price.

Cable systems are generally valued on revenues or cash flow, with the subscriber base being a key factor in those measures. By denying access to programming, an owner of vertically integrated programming could readily decrease the revenues and subscriber base of a small acquisition target. The MSO buyer could then acquire the system at a deflated price. A less obvious exercise of market power would occur in the context of sale negotiations, where the threat of denial of program access could force price concessions.

[83] ACA, p. 13.

The cable-affiliated programmer will probably win in these transactions as well. The competitive advantage from exclusive distribution rights will increase MSO demand for exclusive programming deals, supporting higher license fees. The increased license fees will offset, and probably exceed, loss of revenues from excluded distributors. In this way, vertically integrated programmers can also gain from exclusivity.

of satellite subscribers live in areas that are not served by cable, competition in geographic markets is less vigorous than the national totals suggest. Moreover, as will be demonstrated below, cable and satellite occupy very different places in the market and are not head-to-head competitors.

This monopoly at the point of sale is reinforced by a strong trend toward regionalization in which one company gains ownership of many firms in a region. Clustering has increased sharply since 1994, up by almost 75 percent.[85] Approximately two-thirds of all subscribers were clustered at the end of 1997.[86]

The failure of competition in multichannel video is most evident in local markets. Approximately 95 percent of the homes passed in the country are served by only one cable company.[87] Satellite has about 10 million subscribers in markets where cable and satellite meet, suggesting cable retains an 85 percent market share at the point of sale.[88] The HHI index at the local level is above 7000, indicating an extremely concentrated market for multchannel video service. As discussed above, these market shares and levels of concentration for cable operators are virtual monopolies.

**2. Local Cable Market Power is Exacerbated by National Concentration**

Market power at the local level is reinforced by concentration at the national level. The dominant incumbent cable companies never compete head-to-head. In fact, if they were willing to compete with one another by building new cable systems, the

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[84] FCC, Seventh Annual Report,, p. 20, notes that cable operators in only 330 communities have been granted status as effectively competitive on the basis of overbuilding.
[85] FCC, Seventh Annual Report, Table C-2.
[86] Paul Kagan Associates, *Major Cable TV System Clusters*, 1998.
[87] FCC, Seventh Annual Report, p. 20.
[88] FCC, Seventh Annual Report, p.34, notes increasing urban subscribers, but figure show that satellite is still disproportionately rural.

ownership limit would not be binding. Subscribers that they won as new entrants would not count against the national cap.

Discussion of the concentration in the national market is not focused on the field of potential entrants into local distribution, it centers on the cable operators as purchasers of programming.

The wave of concentration in the industry is striking (see Exhibit VIII-1). When cable was deregulated in 1984, the distribution segment was not concentrated at all (HHI about 350), with the equivalent of about 30 equal sized competitors. A decade later, concentration had advanced to the point where the distribution segment had the equivalent of about 9 equal-sized competitors (HHI about 1100). As fewer and fewer firms exist in the industry, the chances that the dominant position in any given market will be challenged decline.

Although the FCC claims that the cable TV market falls just below the level of being moderately concentrated (HHI = 954), it arrives at this conclusion by ignoring AT&T's substantial ownership interests in Cablevision and AOL Time Warner. Taking AT&T's ownership interests into account places the cable TV market into the moderately-concentrated category. Including the TWE holdings, the market would be just below the highly-concentrated level. The two pending mergers (ATT/Comcast; EchoStar/DirecTV) would put it above the highly-concentrated level.

EXHIBIT VIII-1: CONCENTRATION OF NATIONAL CABLE EYEBALL MARKET

| YEAR | | 4-FIRM | HHI |
|---|---|---|---|
| 1984 | | 28 | 357 |
| 1889 | | 46 | 867 |
| 1992 | | 48 | 928 |
| 2000 | | | |
| | with attribution | 60 | 1113 |
| | with TW | 69 | 1772 |
| 2002 | | | |
| | with attribution ATT/Comcast EchoStar/DirecTV | 75 | 1918 |

SOURCES: Federal Communications Commission, In the Matter of Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming, First Report, CC Docket No. 94-48, Seventh Report, CC Docket No 00132.
With attribution attributes 1.6 million TW and 4.3 million Cablevision subscribers to AT&T.

**RELEVANT SECTIONS OF THE AOL TIME WARNER MERGER ORDER DISCUSSING COMMISSION'S BROADBAND AUTHORITY**

¶¶17-26

17. In its review of the instant merger, the FTC found that the merger would harm competition in the residential Internet access marketplace and imposed conditions on the merging parties requiring them to afford access to Time Warner's cable plant to unaffiliated ISPs, requiring them not to discriminate against unaffiliated content under certain circumstances, requiring AOL Time Warner to market AOL's DSL services in the same manner and at the same retail price in Time Warner cable areas as in other areas, and to hold separate Road Runner, a cable ISP, from AOL's ISP service until AOL Time Warner offers an unaffiliated ISP on all AOL Time Warner cable systems.[89]

18. After reviewing the comments filed in this proceeding,[90] we find that, subject to certain conditions designed to mitigate merger-specific harms, and in light of the terms of the FTC Consent Agreement, the public interest benefits of the proposed merger outweigh the public interest harms. Among many issues raised by commenters, we focus particularly on four potential harms. First, we find that the proposed merger would give AOL Time Warner the ability and incentive to harm consumers in the residential high-speed Internet access services market by blocking unaffiliated ISPs' access to Time Warner cable facilities and by otherwise discriminating against unaffiliated ISPs in the rates, terms and conditions of access. To remedy this harm, this *Order* conditions approval of the merger on certain conditions relating to AOL Time Warner's contracts and negotiations with unaffiliated ISPs. Second, we find that the merger would make it more likely that AOL Time Warner would be able to solidify its dominance in the high-speed access market by obtaining preferential carriage rights for AOL on the facilities of other cable operators. We particularly find that the merger would harm the public interest by allowing for greater coordinated action between AOL Time Warner and AT&T in the provision of residential high-speed Internet access services. To remedy these harms, we impose a condition forbidding the merged firm from entering into contracts with AT&T that would give AOL exclusive carriage or preferential terms, conditions and prices. Third, we find that the proposed merger would enable AOL Time Warner to dominate the next generation of advanced IM-based applications. To remedy this harm, we impose a condition requiring AOL Time Warner, before it may offer an advanced IM-based application that includes streaming video, to provide interoperability between its NPD-based applications and those of other providers, or to show by clear and convincing evidence that circumstances have changed such that the public interest will no longer be served by an interoperability condition. Fourth, although we have concerns that the merger may give AOL Time Warner the ability and the incentive to discriminate against the interactive television ("ITV") services of unaffiliated video programming networks, we find that the terms of the FTC Consent Agreement will adequately protect the public interest by prohibiting certain types of discrimination and that it is not necessary for us to impose further conditions in this proceeding; however, we have initiated a Notice of Inquiry ("*ITV NOI*") to

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[89] *In the Matter of America Online, Inc. and Time Warner Inc.*¸ FTC Docket No. C-3989, Agreement Containing Consent Orders; Decision and Order, 2000 WL 1843019 (FTC) (proposed Dec. 14, 2000) ("FTC Consent Agreement").

[90] *See* Appendix A for a list of commenters in this proceeding.

explore ITV issues in the market generally.[91] Subject to the conditions described above, we find that the proposed merger will serve the public interest.

## PUBLIC INTEREST FRAMEWORK

19. Sections 214(a) and 310(d) of the Communications Act require the Commission to determine whether the Applicants have demonstrated that the public interest would be served by transferring control of AOL's and Time Warner's Commission license authorizations to AOL Time Warner.[92] Our statutory mandate, confirmed by our precedent, requires that we weigh the potential public interest harms of the proposed transaction against the potential public interest benefits to ensure that the Applicants have demonstrated that, on balance, the merger serves the public interest and convenience.[93] The Applicants bear the burden of proving that the transfer will advance the public interest.[94]

20. In conducting its public interest inquiry, the Commission examines four overriding questions: (1) whether the transaction would result in a violation of the Communications Act or any other applicable statutory provision;[95] (2) whether the transaction would result in a violation of the Commission's rules;[96] (3) whether the transaction would substantially frustrate or impair the Commission's implementation or enforcement of the Communications Act and/or other related statutes, or would interfere with the objectives of the Communications Act and/or other related statutes;[97] and (4) whether the transaction promises to yield affirmative public interest benefits.[98]

21. The Commission's analysis of public interest benefits and harms includes, but is not limited to, an analysis of the potential competitive effects of the transaction, as informed by traditional antitrust principles.[99] While an antitrust analysis, such as that undertaken by the

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[91] *See Nondiscrimination in the Distribution of Interactive Television Services Over Cable*, CS Docket No. 01-7, Notice of Inquiry ("*ITV NOI*"), FCC 01-15 (rel. Jan. 19, 2001).

[92] 47 U.S.C. §§ 214(a), 303(r), 310(d). *See WorldCom-MCI Order*, 13 FCC Rcd at 18030 ¶ 8 (1998)*; Bell Atlantic-NYNEX* Order*,* 12 FCC Rcd at 20000 ¶ 29.

[93] *SBC-Ameritech Order*, 14 FCC Rcd at 14736 ¶ 46; *WorldCom-MCI Order*, 13 FCC Rcd at 18031 ¶ 10.

[94] *AT&T-TCI Order*, 14 FCC Rcd at 3169-70 ¶ 15 (1999); *WorldCom-MCI Order*, 13 FCC Rcd at 18031 ¶ 10 n.33 (citing 47 U.S.C. §309(e) (burdens of proceeding and proof rest with the applicant.)).

[95] *AT&T-MediaOne Order*, 15 FCC Rcd at 9820-21 ¶ 9; *SBC-Ameritech Order*, 14 FCC Rcd at 14737 ¶ 48.

[96] *Id.*

[97] *Id.*

[98] *Id.*

[99] Although the Commission's analysis of competitive effects is informed by antitrust principles and judicial standards of evidence, it is not governed by them, which allows the Commission to arrive at a different assessment of likely competitive benefits or harms than antitrust agencies may find based solely on antitrust laws. *See FCC v. RCA Communications,* 346 U.S. 86, 96-97 (1953) ("To restrict the Commission's action to cases in which tangible evidence appropriate for judicial determination is available would disregard a major reason for the creation of administrative agencies, better equipped as they are for weighing intangibles by specialization, by insight gained through experience,

Department of Justice or, in this case, the Federal Trade Commission, focuses solely on whether the effect of a proposed merger "may be substantially to lessen competition,"[100] the Communications Act requires the Commission to make an independent public interest determination, which includes evaluating public interest benefits or harms of the merger's likely effect on future competition.[101] To find that a merger is in the public interest, therefore, the Commission must "be convinced that it will enhance competition."[102]

22. Our public interest evaluation necessarily encompasses the "broad aims of the Communications Act."[103] These broad aims include, among other things, ensuring the existence of a nationwide communications service, available to everyone; implementation of Congress's pro-competitive, deregulatory national policy framework designed to open all telecommunications markets to competition; the preservation and advancement of universal service; and the acceleration of private sector deployment of advanced services.[104] Our public interest analysis may also entail assessing whether the merger will affect the quality of telecommunications services or will result in the provision of new or additional services to consumers.[105] Thus, apart from traditional antitrust concerns, we are required to consider, among other things, whether the proposed merger will further the statutory goals of "assur[ing] that cable communications provide and are encouraged to provide the widest possible diversity of information sources and services to the public,"[106] and "promot[ing] competition in the delivery of diverse sources of video programming . . ."[107]

23. The Supreme Court has found that decentralization of information production serves values that are central to the First Amendment. Indeed, the Court has repeatedly emphasized the Commission's duty and authority under the Communications Act to promote diversity and competition among media voices: It has long been a basic tenet of national communications policy that "the widest possible dissemination of information from diverse and antagonistic

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and by more flexible procedure.") *See also WorldCom-MCI Order,* 13 FCC Rcd at 18034 ¶ 13 (*citing RCA Communications,* 346 U.S. at 94; *United States v. FCC*, 653 F.2d 72, 81082 (D.C. Cir. 1980) (*en banc*) (The Commission's "determination about the proper role of competitive forces in an industry must therefore be based, not exclusively on the letter of the antitrust laws, but also on the 'special considerations' of the particular industry."); *Teleprompter-Group W*, 87 FCC 2d 531 (1981), *aff'd on recon.,* 89 FCC 2d 417 (1982) (Commission independently reviewed the competitive effects of a proposed merger); *Equipment Distributors' Coalition, Inc., v. FCC,* 824 F.2d 937, 947-48 (1st Cir. 1993) (public interest standard does not require agency to "analyze proposed mergers under the same standards that the Department of Justice . . . must apply.).

[100] 15 U.S.C. § 18.

[101] *See WorldCom-MCI Order,* 13 FCC Rcd at 18032-33 ¶¶ 12-13; *Bell Atlantic-NYNEX Order*, 12 FCC Rcd at 19987 ¶ 2.

[102] *Bell Atlantic-NYNEX Order,* 12 FCC Rcd at 19987 ¶ 2.

[103] *AT&T-TCI Order*, 14 FCC Rcd at 3168-69 ¶ 14; *WorldCom-MCI Order*, 13 FCC Rcd at 18030-31 ¶ 9.

[104] *WorldCom-MCI Order*, 13 FCC Rcd at 1830-31¶ 9.

[105] *See, e.g., id.*

[106] 47 U.S.C. § 521(4).

[107] 47 U.S.C. § 523(a).

sources is essential to the welfare of the public."[108] Accordingly, the Court had "no difficulty" in concluding that the Commission's interest in "promoting widespread dissemination of information from a multiplicity of sources" is "an important governmental interest."[109]

24. Following passage of the 1996 Act, local telecommunications markets have been undergoing a transition to competitive markets. Therefore, a transaction may have predictable yet dramatic consequences for competition over time even if the immediate effect is more modest.[110] When a transaction is likely to affect local communications markets, our statutory obligation requires us to assess future as well as current market conditions. In doing so, the Commission may rely on its specialized judgment and expertise to render informed predictions about future market conditions and the likelihood of success of individual market participants.[111]

25. Where necessary, the Commission can attach conditions to a transfer of licenses and authorizations in order to ensure that the public interest is served by the transaction.[112] Section 214(c) of the Communications Act authorizes the Commission to attach to the certificate "such terms and conditions as in its judgment the public convenience may require."[113] Similarly, section 303(r) of the Communications Act authorizes the Commission to prescribe restrictions or conditions, not inconsistent with law, that may be necessary to carry out the provisions of the Act.[114] Indeed, unlike the role of antitrust enforcement agencies, the Commission's public

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[108] *Turner Broadcasting System, Inc. v. FCC*, 512 U.S. 622, 663 (1994) (*quoting United States v. Midwest Video Corp.*, 406 U.S. 649, 668 n.27 (1972)).

[109] *Turner Broadcasting*, 512 U.S. at 663. *See also Review of the Commission's Regulations Governing Television Broadcasting: Television Satellite Stations Review of Policy and Rules*, 14 FCC Rcd 12903, 12910-12916 (1999). *See also Red Lion Broadcasting Co. v. FCC*, 395 U.S. 367, 390 (1969) ("It is the purpose of the First Amendment to preserve an uninhibited marketplace of ideas in which truth will ultimately prevail, rather than to countenance monopolization of that market, whether it be by the Government itself of a private licensee."); *Turner Broadcasting,* 512 U.S. at 657 ("[T]he potential for abuse of this private power over a central avenue of communication cannot be overlooked. The First Amendment's command that government not impede the freedom of speech does not disable the government from taking steps to ensure that private interests not restrict, through physical control of a critical pathway of communication, the free flow of information and ideas.").

[110] *WorldCom-MCI Order*, 15 FCC Rcd at 9822 ¶ 12; *SBC-Ameritech Order,* 14 FCC Rcd at 3170 ¶ 51.

[111] *Id*.

[112] *See* 47 C.F.R. § 1.10; *WorldCom-MCI Order*, 13 FCC Rcd at 18031-32 ¶ 10.

[113] 47 U.S.C. § 214(c). *See WorldCom-MCI Order,* 13 FCC Rcd at 18031-32 ¶ 10; *Bell Atlantic-NYNEX Order*, 12 FCC Rcd at 20002 ¶ 30 n.59 (*citing Atlantic Tele-Network, Inc. v. FCC*, 59 F.3d 1384, 1389-90 (D.C. Cir. 1995).

[114] 47 U.S.C. § 303(5). *See WorldCom-MCI Order,* 13 FCC Rcd at 18032 ¶ 10 n.36 (*citing FCC v. Nat'l Citizens Comm. for Broadcasting*, 436 U.S. 775 (1978) (broadcast-newspaper cross-ownership rules properly adopted pursuant to section 303(r)); *U.S. v. Southwestern Cable Co.,* 392 U.S. 157, 178 (1968) (section 303(r) powers permit Commission to order cable company not to carry broadcast signal beyond station's primary market); *United Video, Inc. v. FCC,* 890 F.2d 1173, 1182-83 (D.C. Cir. 1989) (syndicated exclusivity rules adopted pursuant to section 303(r) authority).

interest authority enables it to impose and enforce certain types of conditions that result in a merger yielding overall positive public interest benefits.[115]

26. Where a license transfer applications shows that the merger would yield affirmative public interest benefits and would not violate the Communications Act or Commission rules, nor frustrate or undermine policies and enforcement of the Communications Act, there is no need for extensive review and expenditure of considerable resources by the Commission and interested parties.[116] This is not the case with regard to this proposed transaction. We analyze the potential public interest harms and benefits of this proposed merger, absent conditions, in the next sections.

**¶¶52-74**

# ANALYSIS OF POTENTIAL PUBLIC INTEREST HARMS

52. Parties opposing the merger have alleged that the combination of AOL and Time Warner will harm the public interest with respect to the provision of various services. We address below the effects of the merger on only those services that may be affected adversely by the merger, based on commenters' allegations and our own analysis. Specifically, we examine the merger's potential effects on (1) high-speed Internet access services, (2) services based on instant messaging, (3) interactive television services, (4) electronic programming guides, (5) carriage of television broadcast signals, (6) increased concentration among MVPDs, and (7) competition among MVPDs. In addition, we examine the merger's potential public interest harms in light of AOL Time Warner's ownership and contractual relationships with AT&T Corp.[117]

## HIGH-SPEED INTERNET ACCESS SERVICES

53. In this section, we examine the effects of the proposed merger on competition in residential high-speed Internet access services.[118] We again confront in the merger context whether to impose some conditions regarding access to the cable platform for unaffiliated ISPs seeking to provide these services. The Applicants have argued that (i) this case is indistinguishable from prior cases such as *AT&T-MediaOne* in which the Commission declined to require AT&T to open its cable networks to unaffiliated ISPs, and (ii) imposing an access condition here is inconsistent with the Commission's pending *Notice of Inquiry* on high-speed Internet access ("*Cable Access NOI*"),[119] which explores the need for rules of general applicability. We disagree.

54. We find that the circumstances presented by these applications are dramatically different from those presented in our former cases, and compel a different result. AOL is by far

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[115] *See WorldCom-MCI Order,* 13 FCC Rcd at 18034-35 ¶ 14.
[116] *AT&T-TCI Order,* 14 FCC Rcd at 3170 ¶ 16.
[117] The City of Daytona Beach raises certain concerns about local franchise matters that we do not address because they are not merger-specific. *See* Letter from Richard F. Quigley, Assistant Manager for Support/Technology Services, City of Daytona Beach, to Magalie Roman Salas, Secretary, FCC, dated Aug. 18, 2000 ("Daytona Beach Aug. 18 Ex Parte"), at 7 (advocating a merger condition requiring AOL Time Warner to set aside channel capacity and facilities for public access, educational and government ("PEG") channels).
[118] We describe these services more fully below.
[119] *See Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities,* GN Docket No. 00-185, Notice of Inquiry ("*Cable Access Notice of Inquiry*" or "*Cable Access NOI*"), FCC 00-355 (rel. Sept. 28, 2000).

the largest narrowband ISP and has been the leading advocate and supporter of the "open access" movement. The proposed merger represents a substantial shift in strategy for AOL and a dramatic change in the ISP/cable system landscape. AOL seeks to purchase the second largest cable system in the country and would obtain in the transaction programming assets that could give it even greater bargaining power to negotiate access to other cable systems. After the merger, AOL would have a unique concentration of assets (vast narrowband membership and the product that has created it, access to Time Warner cable systems, and extensive Time Warner content assets) that could well give it sufficient power to bargain its way onto all other platforms (indeed at preferential terms) without any change in government regulation.

55. None of the prior mergers involved a comparable combination of assets or a comparable potential impact on competition among broadband ISPs. Moreover, while the access issue affects the whole industry, as our *Cable Access NOI* indicates, this merger would place AOL Time Warner in a unique position that may justify conditions inapplicable to others.

56. As further elaborated below, we find that, absent mitigating conditions, the proposed merger would undermine competition in the provision of residential high-speed Internet access services. We find in particular that these services constitute a relevant product market distinguishable from residential narrowband Internet access services. We also find that the proposed merger would give AOL Time Warner both the ability and the incentive to discriminate against unaffiliated ISPs and alternative (non-cable) high-speed platforms within Time Warner cable territories, and to obtain exclusive or preferential carriage for its own Internet access services from other cable providers. As a result, the proposed merger would frustrate statutory goals and Commission policies designed to ensure that the American public has access to a diversity of information sources and to widely available advanced services.

57. We conclude, however, that these potential harms will be substantially averted by the terms of the FTC Consent Agreement.[120] The FTC Consent Agreement requires, among other provisions discussed below, (1) that AOL Time Warner make available to subscribers at least one unaffiliated ISP on Time Warner's cable systems before AOL itself begins offering service; that AOL Time Warner allow two other unaffiliated ISPs onto its cable systems within 90 days after AOL's commencement of service; and that AOL Time Warner negotiate in good faith for non-discriminatory access to its cable systems with any ISPs requesting such access; (2) that AOL Time Warner not interfere with content passed along the bandwidth contracted for by unaffiliated ISPs, or discriminate on the basis of affiliation in the transmission of content that AOL Time Warner has contracted to deliver to subscribers over their cable systems; and (3) that AOL Time Warner market and offer AOL's DSL services in the same manner and at the same retail price in Time Warner cable areas where affiliated, cable-based Internet access service *is* available as in those areas where affiliated, cable-based Internet access service is *not* available.[121] Because we conclude that the FTC Consent Agreement will not avert all the potential harms to the public interest that would result from the proposed merger, we impose certain additional conditions to ensure that AOL Time Warner does not disadvantage unaffiliated ISPs on its cable systems through several indirect means not squarely addressed by the FTC Consent Agreement.

58. The decisions we make in this proceeding do not necessarily portend any specific policy determinations in future proceedings, such as the *Cable Access NOI* or the *ITV NOI*,[122] which will be based on the record in those proceedings. If the Commission were to determine in

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[120] *See* FTC Consent Agreement; FTC Press Release.
[121] FTC Press Release at 2.
[122] *See* Section IV.D, *infra* (Interactive Television Services).

the context of those proceedings that rules of general applicability were warranted, this Order does not determine or prejudge whether the conditions we adopt here should apply industry-wide. The assessment of what types of generally applicable rules, if any, would be appropriate will flow from the record developed in those proceedings. Should those proceedings ultimately result in rules of general applicability or yield any findings on market definition contrary to our finding here, the Commission may revisit the merger conditions imposed in this section, either on its own motion or upon the Applicants' request.

59. Our authority to address the merger's impact on competition for high-speed Internet access services derives from our statutory duty to ensure that the proposed transaction serves the public interest.[123] As discussed in Section II above, we conduct our public interest inquiry by determining, among other things, whether the proposed transaction would substantially frustrate or impair the Commission's implementation or enforcement of the Communications Act, or would interfere with the objectives of the Act or of other statutes.[124] Several such objectives are relevant to our analysis here. First, in adopting the 1996 Act, Congress established a clear national policy to "promote the continued development of the Internet" and "to preserve the vibrant and competitive free market that presently exists for the Internet and other interactive computer services unfettered by Federal or State regulation."[125] Concurrently, Congress charged the Commission with "encourag[ing] the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans."[126] The principal purpose of such capability is to facilitate the use of advanced services, of which residential high-speed Internet access services are one kind.[127] Finally, "it has long been a basic tenet of national communications policy that the widest possible dissemination of information from diverse and antagonistic sources is essential to the welfare of the public."[128] This national policy to promote

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[123] 47 U.S.C. § 214(a), § 310(d); *see also id.* § 303(r).

[124] *AT&T-MediaOne Order*, 15 FCC Rcd at 9820-21 ¶ 9. In conducting our public interest inquiry, we also examine whether the proposed transaction would result in a violation of the Communications Act or any other applicable statutory provision, and whether it would result in a violation of the Commission's rules. *Id.* The record does not indicate that the proposed transaction would result in any such violations with respect to residential high speed Internet access services.

[125] 47 U.S.C. § 230(b)(1)-(2).

[126] *Id.* § 157 nt.; *see also id.* § 1 (FCC was created "so as to make available, so far as possible, to all people of the United States . . . a rapid, efficient, Nationwide, and world-wide wire and radio communication service with adequate facilities at reasonable charges"). Congress defined "advanced telecommunications capability" as "high-speed, switched, broadband telecommunications capability." 47 U.S.C. § 157 nt.

[127] *See, e.g.*, *Second Inquiry Concerning the Deployment of Advanced Telecommunications Capability Pursuant to Section 706 of the Telecommunications Act of 1996*, CC Docket No. 98-146, Second Report, FCC 00-290 (rel. Aug. 21, 2000) at ¶ 3 ("*Second 706 Report*") (noting that "[w]ith advanced telecommunications capability consumers can take advantage of advanced services that allow residential and business consumers to create and access content, sophisticated applications, and high-bandwidth services").

[128] *Turner Broadcasting System, Inc. v. FCC*, 512 U.S. 622, 663 (1994) (internal quotation marks omitted).

the public's access to a diversity of viewpoints from a multiplicity of sources finds expression in statutory law as well as in previous decisions of this Commission.[129]

60. Our authority to review the impact of the proposed transaction on the public interest goes hand in hand with broad authority to attach conditions to the proposed transfer of lines and licenses to ensure that the transfer actually serves the public interest. Section 303(r) of the Act authorizes the Commission to prescribe restrictions or conditions, not inconsistent with law, that may be necessary to carry out the provisions of the Act.[130] Similarly, Section 214(c) of the Communications Act authorizes the Commission to attach to the certificate "such terms and conditions as in its judgment the public convenience and necessity may require."[131]

61. We find that, absent mitigating conditions, the proposed transaction would interfere with each of the objectives discussed above. The merger would imperil the continued existence of a vibrant and competitive free market for development of the Internet because AOL Time Warner would have the ability and the incentive to discriminate against unaffiliated ISPs on its own cable platform, and to obtain exclusive carriage for its Internet access services on the networks of other cable providers.[132] These outcomes would also thwart the deployment of advanced telecommunications capability to all Americans by limiting choice in the realm of residential high-speed Internet access services and, potentially, by threatening the survival of ISPs unaffiliated with AOL Time Warner as consumers migrate from narrowband to high-speed services.[133] These outcomes would likewise diminish the public's ability to obtain information

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[129] *See, e.g.*, 47 U.S.C. § 257(b) (noting that one of the "policies and purposes" of the Communications Act is to "favor[ ] diversity of media voices"); *id.* § 521 nt (codifying findings and policy underlying Cable Television Consumer Protection and Competition Act of 1992) ("There is a substantial governmental and First Amendment interest in promoting a diversity of views provided through multiple technology media."); *AT&T-MediaOne Order*, 15 FCC Rcd at 9818-20 ¶¶ 3-5 (considering proposed merger's effects on "diversity and competition" in video programming and its effects on "openness and diversity of broadband Internet content"). We note that we are not here determining the proper legal classification of Internet services provided by cable operators. *See Cable Access NOI* (soliciting comments on proper legal classification of such services). Our determination not to address that issue in this proceeding is consistent with our determination not to do so in *AT&T-MediaOne*. *See AT&T-MediaOne Order*, 15 FCC Rcd at 9872 ¶ 126.

[130] 47 U.S.C. § 303(r).

[131] *Id.* § 214(c).

[132] Discrimination by AOL Time Warner against unaffiliated ISPs on the merged company's cable platform could take the form of an outright refusal to carry such ISPs, or it might occur more subtly -- for example, by degrading unaffiliated ISPs' quality of service, limiting their features and functionalities, or discriminating against them in terms and conditions of access. AOL Time Warner could also facilitate discrimination against unaffiliated ISPs on the platforms of other cable operators by using its leverage over video programming to obtain (via explicit contract or tacit agreement) exclusive or preferential treatment for AOL Internet access services that would be denied to its competitors.

[133] *See* Letter from Stephen Heins, Director of Marketing, NorthNet, to Robert Pitofsky, Chairman, FTC, and William E. Kennard, Chairman, FCC, dated Oct. 10, 2000

from diverse sources, as customers of the nation's second largest cable operator (AOL Time Warner) would have little choice but to access the Internet through service providers affiliated with that entity.[134] Furthermore, as we discuss below, discrimination by AOL Time Warner against unaffiliated ISPs in the market for residential high-speed Internet access services would facilitate discrimination by that company in favor of its own broadband content, a result that could constrain consumers' access to the "widest possible" array of information over high-speed technology.[135] If, in contrast, AOL Time Warner were obligated to carry multiple, unaffiliated ISPs over its network on non-discriminatory terms, those ISPs could serve as an alternative outlet for non-AOL Time Warner content, making it more likely that AOL Time Warner's affiliated ISPs would feature such content themselves to remain competitive. For all of these reasons, we conclude that our duty to ascertain that the proposed transaction serves the public interest requires us to condition our approval on the terms we describe below. We have narrowly tailored these terms to augment the terms in the FTC Consent Agreement, and to avoid duplication of those terms. Each of the conditions we impose is designed to ensure that the transaction does not interfere with the aforementioned statutory objectives.

## Background

62. Internet access services consist principally of connectivity to the Internet provided to end users.[136] These end users may be residential consumers, businesses, content providers, or application providers. In this analysis, we focus on Internet access services provided to residential consumers.

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("NorthNet Oct. 10 Ex Parte") at 7 (noting that "[m]any independent ISPs have concluded that the[] terms [proposed by Time Warner] present no reasonable basis for independent ISPs to compete on a commercially viable basis," and concluding that "[b]y offering terms that are totally unacceptable, Time Warner keeps its network effectively closed"); Letter from Earl W. Comstock, Esq., Sher & Blackwell, Counsel for EarthLink, to Magalie Roman Salas, Secretary, FCC, dated Oct. 18, 2000 ("EarthLink Oct. 18 Ex Parte") at 1 (arguing that the terms of Time Warner's recent proposals "would make the arrangements economically infeasible for ISPs not affiliated by ownership with the applicants").

[134] More subtle discrimination by AOL Time Warner would also narrow the public's access to information from diverse sources, though in more subtle ways: AOL Time Warner's cable customers would have a "choice" between using affiliated ISPs on the one hand or unaffiliated ISPs relegated to offering an inferior product on the other.

[135] Discrimination by AOL Time Warner against unaffiliated ISPs with respect to carriage on the company's cable network would facilitate discrimination by AOL Time Warner in favor of its own broadband content by enabling the merged firm to exclude non-AOL Time Warner content from its Internet access services without facing competitive pressure from other ISPs on the same cable network who would presumably supply non-AOL Time Warner content.

[136] We refer to "Internet access services," in the plural, to reflect the fact that such services offer differing speeds of access; technical performance; price; availability of customer support; and extent of content. Our use of the term "Internet access services" is meant to encompass services provided not only by ISPs, but also by so-called online service providers ("OSPs"), such as AOL, which combine content with Internet access services.

63. The majority of residential and small business consumers who purchase Internet access services do so from ISPs offering relatively low-speed access (typically between 28 and 56 kilobits per second ("kbps")) over local telephony plant, otherwise known as "narrowband" (or "dial-up") service.[137] Customers of these ISPs typically pay $22 per month or less for unlimited usage.[138] Major nationwide dial-up ISPs include AOL, AT&T's WorldNet, MSN, and EarthLink. LECs operating within their service territories, Erol's, and thousands of other ISPs offer service locally or regionally.[139] High-speed (or "broadband") Internet access is available through several different technologies, including cable, digital subscriber line ("DSL"),[140] fixed terrestrial wireless, and satellite.[141] In general, high-speed access enables consumers to communicate over the Internet at speeds that are many times faster than the speeds offered through dial-up telephone connections. With high-speed Internet access, consumers can send and view content with little or no transmission delay, utilize sophisticated "real-time" applications, and take advantage of other high-bandwidth services.

64. Cable operators that provide high-speed Internet access services to their subscribers often do so by purchasing some components of such services from another company. In particular, a cable operator typically contracts with an Internet connectivity provider (such as Road Runner, Excite@Home, or High-Speed Access Corporation)[142] to link its cable headend to the Internet, which entails providing routers, servers, and a dedicated Internet connection.[143] The

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[137] While the fastest of narrowband modems have the theoretical capability to support 56 kbps downstream, Commission regulations limit narrowband modems to 53 kbps.

[138] *See ISP Buyer's Guide: Dial-Up ISPs*, CNET INTERNET, at http://home.cnet.com/internet/0-3762-7-2518427.html?tag=st.int.3762-7-2518426txt.3762-7-251842 (visited Dec. 5, 2000).

[139] NorthNet indicates that there are "7,000 or so ISP's throughout the United States." *See* NorthNet Oct. 10 Ex Parte at 1.

[140] Generally, unless we state otherwise, our references to "DSL" throughout this Order refer to asymmetric DSL ("aDSL"). Asymmetric DSL is the most common variant of DSL used by residential customers, and is available at various speeds ranging up to 6.1 mbps downstream and 640 kbps upstream. *See Second 706 Report*, FCC 00-290 at ¶ 36; *id.* at ¶ 47. Presently, at lowest cost, aDSL service usually provides transmission at 384-640 kbps downstream and 90-128 kbps upstream.

[141] The Commission's *Second 706 Report* contains a detailed description of high-speed Internet access *via* various technologies. The characteristics of the services offered via these respective technologies may vary. *See generally Second 706 Report*. The *Report* defines "high-speed" services as "those services with over 200 kbps capability in at least one direction." *Id*. at 8. It distinguishes such services from "advanced services," which it defines as the "subset" of high speed services "capable of 200 kbps or greater transmission in *both* directions." *Id.* (emphasis in original).

[142] We note that Excite@Home and Road Runner also function as high-speed ISPs.

[143] A cable headend is "the origination point for signals in the cable system. It has parabolic or other appropriately shaped antennas for receiving satellite-delivered program signals, high-gain directional antennas for receiving distant TV broadcast signals, directional antennas for receiving local signals, machines for playback of taped programming and commercial insertion, and studios for local origination and community access programming." Walter Ciciora et al., MODERN CABLE TELEVISION TECHNOLOGY

cable operator, in turn, generally retains responsibility for installing the modems upon which end users rely, for upgrades to the cable system plant, and for marketing. The cable operator and the Internet connectivity provider often divide billing and technical support functions. From the perspective of the consumer, these services form one product -- residential high-speed Internet access service.

65. Presently, the majority of residential high-speed Internet users connect to the Internet via cable. The main competitor to cable in the market for residential high-speed Internet services is currently DSL, which LECs provide over existing telephone plant.[144] As of November 2000, there were approximately 3 million customers in the United States accessing the Internet via cable[145] and more than 1.7 million accessing it via DSL lines.[146] Although DSL subscriptions appear to be growing at a faster rate than cable Internet subscriptions,[147] analysts differ as to whether and how quickly DSL will catch up with cable.[148] Excite@Home and Road Runner are the two largest high-speed ISPs, serving a majority of all high-speed subscribers.[149] The remaining subscribers are splintered among a handful of other cable operators that do not offer

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12 (1999). The headend also houses all equipment for connection of the cable system to the Internet. *Id.*

[144] With the addition of certain electronics to the telephone line, carriers can transform the copper loop that already provides voice service into a conduit for high-speed data traffic.

[145] Kinetic Strategies, Inc., *Cable Modem Market Stats & Projections*, CABLE DATACOM NEWS, Nov. 8, 2000, at http://www.cabledatacomnews.com/cmic/cmic16.html (visited Nov. 14, 2000).

[146] TeleChoice, Inc., *TeleChoice DSL Deployment Summary – Updated 11/13/00*, at http://www.xdsl.com/content /resources/deployment_info.asp (visited Nov. 14, 2000). Of these customers, approximately 67%, or 1,160,000, are residential. We note that the Commission has undertaken a semi-annual data collection concerning high-speed Internet access subscribers. *See* Federal Communications Commission, *High-Speed Services for Internet Access: Subscribership as of June 30, 2000*, at http://www.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/IAD/hspd1000.pdf. The foregoing report found one million DSL subscribers and 2.2 million cable modem subscribers as of June 30, 2000. We use other publicly available sources here because they are more recent.

[147] *Second 706 Report*, FCC 00-290 at ¶¶ 191-96. In the past 18 months, numerous companies have made substantial investments in DSL. For example, SBC Corp. has announced plans to invest $6 billion in an infrastructure deployment throughout its 13-state region in order to make DSL available to nearly 77 million homes. *See* SBC Communications, Inc., *SBC Set to Trial DSL Neighborhood Broadband Gateways* (press release), Aug. 23, 2000; SBC Communications, Inc., *SBC Launches $6 billion Broadband Initiative* (press release), Oct. 18, 1999.

[148] *See* Confidential Appendix IV-A-1, Note 1.

[149] Excite@Home has approximately 1.7 million subscribers in the United States. *See* http://www.corporate-ir.net/ireye/ir_site.zhtml?ticker=ATHM&script=410&layout=-6&item_id=131059 (visited Nov. 14, 2000). RoadRunner has 1.1 million subscribers in the United States. *See* Road Runner Corp., *Road Runner Sets Record Third Quarter* (press release), Oct. 16, 2000.

Internet access services through Road Runner or Excite@Home, and a number of DSL, fixed wireless, and direct broadcast satellite ("DBS") competitors.[150]

66. Residential high-speed Internet access services are also provided through satellite technology, which employs a radio relay station in orbit above the earth to receive, amplify, and redirect signals. Satellite-based Internet access services are offered by DBS providers such as DirecTV, and may be offered within the next several years by low earth orbit ("LEO") satellites deployed by firms such as Teledesic. At present, satellite-based Internet access services can supply high-speed transmission only in the "downstream" direction, that is, from the Internet to the end user's home; the end user must use narrowband telephone lines for the "upstream" transmission of data from the home to the Internet.[151] Although satellite providers are working to address this deficiency, two-way high-speed transmission facilitated by satellite may not be widely available for several years.[152] As of today, DBS providers offering the "one-way" technology have captured only a very small share of the market for residential high-speed Internet access services.[153]

67. Finally, residential high-speed Internet access services are also being offered -- albeit on a much smaller scale as yet -- through "fixed wireless" technologies, including local multipoint distribution systems ("LMDS") and multichannel multipoint distribution systems ("MMDS"). Fixed wireless technology typically employs microwave transmission facilities to transmit data to and from residential consumers. Although several firms have made significant investments to develop fixed wireless technology, high-speed Internet access services using such technology is not yet widely available to consumers, and may not be commercially deployed for use by residential consumers on a large scale in the immediate future.[154]

**Discussion**

**Relevant Markets**

68. The possibility that AOL Time Warner would engage in anticompetitive conduct must be evaluated in the context of relevant markets. A relevant market is the smallest market -- defined in terms of both the pertinent product and the pertinent geographical area -- for which the elasticity of demand is sufficiently low that a firm supplying the entire market could profitably

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[150] *See* Kinetic Strategies, Inc., *Commercial Cable Modem Launches in North America*, CABLE DATACOM NEWS, at http://CableDatacomNews.com/cmic/cmic7.html (visited Nov. 14, 2000) (listing cable high-speed Internet launch locations and ISPs). Examples of other ISPs serving cable subscribers include the ISP Channel and Adelphia PowerLink serving Adelphia customers, and High Speed Access serving Charter customers.

[151] One company, StarBand, in partnership with Microsoft and Gilat-to-Home, offers two-way satellite transmission for Internet access, but the speeds generally do not reach or exceed 200 kbps in both directions except during off-peak hours (midnight to six in the morning). Conversation with StarBand Customer Service, Dec. 4, 2000 at 1-877-827-4290; *see also* http://www.starband.com (visited Dec. 4, 2000).

[152] *But see* Peter S. Goodman, *Dishing Up a New Link to the Internet*, WASH. POST, Nov. 6, 2000, at A1 (reporting inception of two-way high-speed service by Starband/Gilat-to-Home).

[153] *Second 706 Report*, FCC 00-290 at ¶ 111.

[154] The most significant firms in upperband fixed wireless services are Teligent, Inc. and Winstar Communications Inc., which target business (not residential) customers. The most significant firms in lowerband MMDS fixed wireless services are WorldCom and Sprint. *Second 706 Report*, FCC 00-290 at ¶¶ 42-55, 107-10.

reduce output and elevate its price substantially over a sustained period of time.[155] In defining the relevant market, it is useful to analyze whether the firm at issue could profitably impose a "small but significant and non-transitory" increase in price, *i.e.,* could raise prices without losing a significant portion of sales to competitors.[156]

69. We begin by addressing whether high-speed Internet access services, as distinct from narrowband services, constitute the relevant product market in determining the effects of the proposed merger on the public interest.[157] We conclude that they do.[158] We find particularly significant the fact that high-speed Internet access services include features unavailable over narrowband, such as access to high-bandwidth content that is impractical over dial-up connections. Analysts agree that over time the Internet will become a more absorbing experience,

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[155] William M. Landes & Richard A. Posner, *Market Power in Antitrust Cases*, 94 HARV. L. REV. 937 (1981).

[156] *See generally* Horizontal Merger Guidelines Issued by the U.S. Department of Justice and the Federal Trade Commission, 57 Fed. Reg. 41,552 (dated Apr. 2, 1992, as revised Apr. 8, 1997).

[157] Although the record in this proceeding does not reflect much debate over this question, it has engendered considerable disagreement in other recent proceedings before the Commission. *See, e.g.*, *AT&T-MediaOne Order*, 15 FCC Rcd at 9866 ¶ 116 (noting "rigorous debate on the record" regarding whether a separate market exists for residential high-speed Internet access service).

[158] As we explain further below, our finding in this proceeding that residential high-speed Internet access services constitute a product market distinct from narrowband services will not restrict the Commission's ability to consider market definition questions that may arise in the context of the *Notice of Inquiry* concerning high-speed Internet service or any other future Commission proceeding. As we have previously noted, "[a]n individual proceeding in which the Commission defines relevant product and geographic markets, such as a proposed license transfer, may present facts pointing to narrower or broader product markets" than those defined in a proceeding that does not focus on license transfers. *In the Matter of Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993*, FCC 00-29 (Aug. 18, 2000) ("Fifth Annual CMRS Competition Report") at 3 n.4. Moreover, we recognize that the exercise of defining relevant markets is inherently dynamic, reflecting ongoing changes in the costs of providing various services and in the tastes and preferences of consumers. It would be particularly appropriate to revisit issues of market definition in a period of rapid technological change and service convergence, as the factual predicates underlying a market definition in one proceeding may no longer be valid at the time of another proceeding.

Separately, we note that the FTC, in its analysis of the proposed merger, concludes that a relevant input market consisting of ISP purchases of high-speed data transmission services also exists. *See* Federal Trade Commission, *In the Matter of America Online, Inc. and Time Warner Inc.*, Docket No. C-3989 ("FTC Complaint") at 3, 5, 6. We find that any concerns we share with respect to this market are adequately addressed in our analysis of the consumer market for high-speed Internet access services, which is usually supplied using these transmission services as an input.

in which dynamic content supplements and supplants static pages of information.[159] Even at present, the experience of "surfing" the Internet is more immediate and efficient over high-speed connections, at which users can move between texts as if they were flipping pages of a book. Increasingly the Internet is also becoming a multimedia experience, complete with film and audio clips as well as other high-bandwidth applications. Full-screen video is already commonly available over the Internet, and other applications, such as video-on-demand, telemedicine, full-featured software applications, and distance learning are available or under development.[160] Such applications so completely change the experience of using the Internet that the difference can be likened to the contrast between looking at a still photograph and watching a movie.[161] The existence of high-speed transmission is necessary to spur development of such applications, and consumers with narrowband connectivity are unable to experience (or in some instances even access) such content in the manner intended, *i.e.*, rapidly and in real-time.[162]

70. Another factor supporting our conclusion that high-speed Internet access services constitute a discrete market is the high consumer costs involved in switching to a high-speed platform. Consumers switching to high-speed service from dial-up (or between high-speed services) experience costs significantly higher than those involved in switching between dial-up providers. Switching between dial-up services typically entails a telephone call, a software download, and rarely, a one-time connection fee on the order of $25.[163] In contrast, switching from dial-up to high-speed service often entails several telephone calls, at least one installation visit from a high-speed service provider, and a fee on the order of several hundred dollars to

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[159] *See, e.g.*, George Gilder, TELECOSM: HOW INFINITE BANDWIDTH WILL REVOLUTIONIZE OUR WORLD 252 (2000); Francois Bar et al., *Access and Innovation Policy for the Third-Generation Internet*, TELECOMMUNICATIONS POLICY, July-Aug. 2000, at 7; Carol Wilson, *Broadband: Get Ready for the Gale*, ZDNN, June 26, 1999, at http://www.zdnet.com/zdnn/stories/news/0,4586,2281301,00.html (visited Nov. 14, 2000).

[160] *See* RealNetworks, Inc., *Full Screen Video with RealPlayer Plus 5.0, G2, 7, and 8*, at http://service.real.com/fullscreen/default.html (visited Nov. 14, 2000) (full screen video); Pixelon, Inc., at http://www.pixelon.com (visited Nov. 14, 2000) (same); Infovalue Computing, Inc., at http://www.infovalue.com (visited Nov. 14, 2000) (video-on-demand applications); University of Virginia, at http://www.telemed.virginia.edu/ (visited Nov. 14, 2000) (telemedicine); Arizona State University, *ASU Distance Learning Technology*, at http://www-distlearn.pp.asu.edu (visited Nov. 14, 2000) (distance learning).

[161] Indeed, narrowband users cannot watch television- or film-quality video clips via the Internet unless they download such clips in their entirety in advance before playing them, a process that is prohibitively time-consuming over narrowband connections for all but the shortest clips. Users with high-speed Internet access, in contrast, can obtain "streaming" software that enables them to view television- and film-quality video clips with little or no delay after clicking on an appropriate link.

[162] *See, e.g.*, Dain Rauscher Wessels, *Bullish on Broadband,* June 8, 2000, at 22; Kathy Kincade, *Top 10 Telemedicine Programs for 1999: Experience Pays Off*, TELEHEALTH MAGAZINE, at http://www/telehealthmedmag.com (visited May 19, 2000).

[163] *See,e.g.,* EarthLink, Inc., at http://www.earthlink.net/join (visited Nov. 14, 2000). EarthLink normally charges a $25 set-up fee, but that fee is waived if the customer signs up over the Internet.

cover the cost of the installation and a high-speed modem.[164] Furthermore, switching to high-speed service may also necessitate upgrading the end user's PC to one with the requisite microprocessing capacity and an Ethernet port for cable modem attachment; such an upgrade may increase the cost of switching by a thousand dollars or more.[165]

71. The record developed in *AT&T-MediaOne* also supports our definition of the relevant market for high-speed Internet access services. In that proceeding, numerous commenters raised the issue of market definition, and all who addressed the issue (other than AT&T and MediaOne) maintained that residential high-speed Internet access services constitute a market separate from narrowband services.[166] The commenters cited the following reasons (among others):

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[164] *See Second 706 Report*, FCC 00-290 at App. C., ¶ 10 & nn. 2, 8; *see also* Deja.com, Inc., *Bell South: User Reviews*, at http://www.deja.com/products/at_a_glance/glance.xp?PDID=8378 (visited Nov. 14, 2000) (describing difficulties such as numerous installation visits and customer service telephone calls, neither of which guaranteed full and successful installation); United States General Accounting Office, *Telecommunications: Technological and Regulatory Factors Affecting Consumer Choice of Internet Providers*, GAO-01-93, Oct. 2000, at 18 (indicating that both DSL and cable modem service require a higher price than dial-up Internet access service, and that DSL involves additional installation fees); Excite@Home, Inc., at http://www.home.com/xfooter/pricing.html (visited Dec. 4, 2000) (indicating that Excite@Home costs between $39.95 and $44.95 per month, dial-up costs between $14.95 and $21.95, and DSL costs between $39.95 and $189.96 (with additional ISP charges); but including the cost of a second phone line in calculating cost of dial-up service); Road Runner Corp., at http://rrcorp.central.rr.com/hso/explore_pricing.asp (visited Dec. 4, 2000) (indicating similar monthly fees); Verizon Communications, Inc., at http://www.bell-atl.com/infospeed/more_info/pricing.html (visited Dec. 4, 2000) (indicating that Verizon offers DSL service starting at $39.95 per month with no installation or equipment charges if the customer self-installs the service, and a $120.00 installation charge if a technician visit is required).

[165] *See* Walter S. Mossberg, *Those in the Market for a PC: Heed the Fall Buyer's Guide*, Oct. 19, 2000, at http://ptech.wsj.com./archive/ptech-20001019.html (visited Jan. 2, 2001) (noting that high-speed connections typically require an Ethernet port). Some consumers with older computers may need to upgrade their computers in order to meet the minimum technical requirements for high-speed access service. For instance, ZDNET reports that, "The basic requirements for a system to work with today's cable modems are either a PC with at least a 66 Mhz 486 processor or a Macintosh with at least a 68040 processor, and 16 Mb of memory. Of course performance will improve with faster processors and more RAM on either platform. The Road Runner service recommends 32 Mb of RAM and a 166 Mhz Pentium or 250 Mhz PowerMac." ZDNET, *What You Need and Getting Connected*, at http://www.zdnet.com/zdhelp/stories/main/0,5594,2278598-4,00.html (visited Dec. 4, 2000). Technical requirements for DSL are similar. *See id.*

[166] *Applications for Consent to Transfer of Licenses and Section 214 Authorizations from MediaOne Group, Inc., Transferor, to AT&T Corp., Transferee*, CC Docket No. 99-251, Bell Atlantic Comments at 28-34; *id.*, GTE Comments at 14-29; *id.*, MCI Comments at 9; *id.*, U S West Comments at 14-15; *id.*, *Declaration of Rubinfield and Sidak* (Attachment

- High-speed Internet access services support all the content and applications that narrowband access services do, but also allow access to services that will never be technically feasible over narrowband.[167]

- High-speed access services are "always on," a feature currently unavailable over narrowband access services.[168]

- Preliminary quantitative studies indicate that narrowband and high-speed access services occupy separate markets.[169]

These reasons corroborate our finding in this proceeding that a separate market for high-speed Internet access services does exist.

72. We also find it noteworthy that AOL itself argued in the *AT&T-TCI* merger proceeding that high-speed Internet access services occupy a market separate from narrowband services, and that AOL does not contradict its earlier position here.[170] AOL's comments in *AT&T-TCI* did not include a formal market definition, but they referred repeatedly to the merged firm's potential position as the "dominant provider of . . . broadband data transport"[171] in the "nascent broadband marketplace."[172] While AOL and Time Warner do not maintain in this proceeding that there is a separate market for high-speed Internet access services, they do not deny the existence of such a market.[173]

73. Finally, we note that the Department of Justice ("DOJ"), analyzing the relevant market in the course of its review of the AT&T-MediaOne merger, found that high-speed Internet access services occupy a market separate from narrowband services. DOJ defined this separate market as one encompassing the "aggregation, promotion, and distribution of broadband" content and

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to GTE Comments) at 11. *But see id.*, AT&T Reply Comments at 69, 71-75 (arguing that high-speed and narrowband Internet access services constitute part of the same market).

[167] *Id.*, Bell Atlantic Comments at 30; *id.*, GTE Comments at 14-18 & Appendix B at 11 (*Declaration of Rubinfeld and Sidak*); *id.*, U S West Comments at 14-15.

[168] *Id.*, Bell Atlantic Comments at 30; *id.*, GTE Comments at 14.

[169] *Id.*, *Declaration of Rubinfeld and Sidak* (Attachment to GTE Comments) at 8 (citing *Declaration of Professor Jerry A. Hausman* at ¶¶ 4-10 (Attachment to Comments of America Online, Inc., *in Applications for Consent to the Transfer of Licenses and Section 214 Authorizations from Tele-Communications, Inc., Transferor, to AT&T Corp., Transferee*, CS Dkt. No. 98-178)); *see also* Hal R. Varian, *Estimating the Demand for Bandwidth*, Aug. 1999, at http://www.sims.berkeley.edu/~hal/Papers /wtp/wtp.pdf.

[170] *Applications for Consent to the Transfer of Licenses and Section 214 Authorizations from Tele-Communications, Inc., Transferor, to AT&T Corp., Transfere*e, Comments of America Online, *passim*.

[171] *Id.* at 16.

[172] *Id.* at 32.

[173] The Applicants contend that regardless whether the relevant market is defined to include narrowband and broadband Internet access services or broadband Internet access services alone, the proposed merger would not undermine competition. *See* Applicants' Reply Comments at 21-23.

services;[174] under its analysis, the market includes the transmission facilities used for distribution of broadband content and services, as well as portals that aggregate and market that content.[175] DOJ further found that narrowband Internet service is not a substitute for broadband service, as "[m]uch of this broadband content will not be readily accessible or attractive to narrowband users, because of the much longer times that are needed to transmit the data through narrowband facilities."[176]

[174] DOJ Consent Decree at ¶ 25 (Competitive Impact Statement).
[175] *Id.* at ¶¶ 25-27.
[176] *Id.* at ¶ 22.