



ORIGINAL

July 2, 2001

Re: Docket No. 010345-TP; Petition by AT&T  
Communications of the Southern States, Inc. et al.

Ms. Blanco S. Bayo  
Director, Division of Records and Reporting  
Florida Public Service Commission  
2540 Shumard Oak Blvd.  
Tallahassee, FL 32399-0850

Dear Ms. Blanco:

The Progress & Freedom Foundation is a non-profit, non-partisan research foundation which broadly studies the impact of the digital revolution and its implications for public policy. Since passage of the Telecommunications Act of 1996, we have focused a significant part of our research effort on telecommunications reform issues relating to implementation of the act.

In connection with our telecommunications policy research work, we have become aware of the proceeding pending before the Commission concerning the petition filed by AT&T and others proposing structural separation of BellSouth into separate wholesale and retail corporate entities. Our research, some of which is enclosed, shows that under structural separation, investment and innovation would be reduced, new entry would be deterred, and the prospects for a truly competitive telecommunications market would be harmed.

We understand that in a notice dated June 20, 2001, the Commission scheduled a workshop on the structural separation issue for July 30-31. We may take the opportunity to submit other materials prior to that time and/or to request the opportunity to make a presentation during the workshop. But in the meantime, in light of our interest in the structural separation issue, we wanted to make available the enclosed materials in your docketed proceeding.

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Please do not hesitate to contact me if you have any questions.

Sincerely,

A handwritten signature in black ink, reading "Randolph J. May". The signature is written in a cursive, flowing style.

Randolph J. May  
Senior Fellow and  
Director of Communications Policy Studies

Enclosures

CC: All active parties (without enclosures)

February 26, 2001

The Honorable W.J. (Billy) Tauzin  
U.S. House of Representatives  
2183 Rayburn House Office Building  
Washington, D.C. 20515

Dear Mr. Chairman:

Five years ago, Congress passed the Telecommunications Act of 1996, an Act designed "to promote competition and reduce regulation in order to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid deployment of new telecommunications technologies." While there has been a great deal of debate about specific aspects of the Act's implementation, the goals of competition and deregulation have -- until recently -- never been seriously questioned.

In recent weeks, however, some telecommunications companies have advanced ideas that call into question the Act's central premises and challenge its most basic goals. Specifically, the idea of requiring "structural separation" of local telephone companies into separate wholesale and retail companies has been advanced recently by AT&T Chairman & CEO Michael Armstrong as well as by others.

As analysts who have spent much time studying telecommunications policy issues, each of us has written and commented upon various aspects of the Telecommunications Act, and there are important disagreements among us on many specific issues. This said, however, we agree strongly and unanimously that the wholesale/retail break-up proposal would constitute a setback to the clear vision of the Telecommunications Act of 1996 to achieve competition in all telecommunications markets, including the local service marketplace.

Since 1996, competition in local telephone markets has increased significantly. Indeed, the FCC has concluded that competition has developed sufficiently in four states to allow entry by the former Bell Operating Companies in those states into the long-distance marketplace. The market for services to businesses is competitive in most if not all metropolitan areas. The FCC bases its current strategic plan on the conclusion that "vigorous competition" will exist in telecommunications markets within five years.

Implementation of the Act has not been without problems, and the difficulties now being experienced by certain Competitive Local Exchange Carriers (CLECs) are an unfortunate example. But the fact that some firms are performing poorly in the marketplace -- despite numerous regulatory advantages -- is hardly cause for returning to the failed model of regulated monopoly.

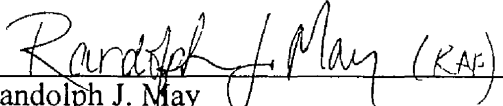
Make no mistake, the "structural separation" proposals now being floated are, virtually by definition, proposals to concede that the local loop indefinitely will remain a monopoly. Indeed, they are premised specifically on the idea that the local loop is an "essential facility" that cannot be duplicated and therefore must be made available to all at a government-regulated price. To accomplish this, the break-up proposals would turn the local infrastructure over to a so-called "loopco," which, as a practical matter, would remain a regulated monopoly.

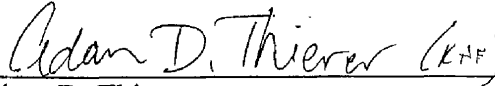
Mandatory wholesale/resale separation clearly is inconsistent with the vision of the Telecommunications Act. The Act envisioned that, after a transitional period and with non-structural "equal access" regulatory safeguards in place, facilities-based competition would develop in the local services marketplace, making traditional public utility-type regulation unnecessary. By contrast, the break-up proposal assumes that the services of the "wholesale" entity will continue to be subject to rate regulation and non-discrimination obligations for the indefinite future. The "wholesale-only" company would have little or no incentive to make the investments in local infrastructure that are necessary to maintain this country's leadership in the Information Age, including the large investments necessary to provide innovative broadband services. Similarly, competitive carriers would have little incentive to invest in their own facilities as long as they are assured of "open access" to incumbents' facilities at below-market rates.

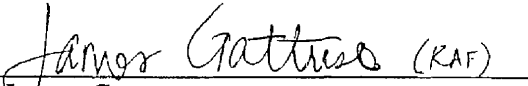
Reasonable people can disagree over specific elements of the Telecommunications Act, and certainly there are grounds for criticizing the way the Act has been implemented by the FCC. But there is no basis whatsoever for rejecting the Act's most fundamental premises or turning away from its central vision. Rather than taking a step that assumes re-monopolization of the telecommunications marketplace, we need to build on the progress that has already been made and stay the course of deregulation and competition Congress set just five years ago.


Thank you for your consideration of these comments.

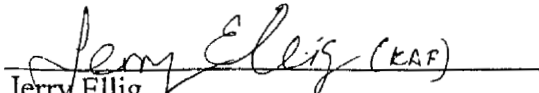
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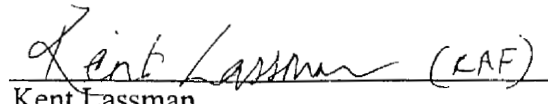
  
Randolph J. May  
Senior Fellow & Director of  
Communications Policy Studies  
The Progress & Freedom Foundation

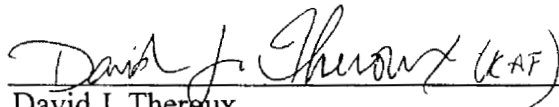
  
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purposes only

cc: The Honorable John McCain  
The Honorable John D. Dingell  
The Honorable Ernest F. Hollings

### LOCAL EXCHANGE COMPETITION: PROGRESS IN PENNSYLVANIA

by Joseph S. Kraemer and Randolph J. May\*

*Almost a year ago, The Progress & Freedom Foundation released a study which showed that the proposal of the Pennsylvania Public Utility Commission to require Verizon (then Bell Atlantic) to establish separate corporate entities for its "wholesale" and "retail" operations was unsound. In that study, the authors pointed out that, curiously, the PUC anticipated completing the follow-on proceeding necessary to implement a structural break-up of Verizon within approximately the same one year time-frame that it anticipated the Pennsylvania market would be declared "irreversibly" open to local competition.*

*In this new study, the authors conclude that: (1) competition exists in Pennsylvania and has become embedded in the fabric of the state's telecommunications industry; (2) competition in Pennsylvania is geographically dispersed; (3) local exchange competition is occurring across the three major customer segments (i.e., large business, small/medium business, and residential; (4) local exchange competition will intensify in Pennsylvania, with collateral benefits to consumers of lower prices, higher service levels, and more innovative products and services; and (5) the emphasis in the near-term will be focused more heavily on data and video services.*

*The December 1999 PFF study concluded that whatever merits a structural separation approach may have had in the past, it is counterproductive at this time to impose such a costly remedy in the face of developing competition. In light of the evidence which shows that competition in the local exchange market in Pennsylvania is gaining a secure foothold, from a policy perspective the rationale for imposition of structural separation and other unnecessarily costly regulations is weaker now than a year ago.*

\* Joseph S. Kraemer is Director, LECG, LLC and Senior Fellow, The Progress & Freedom Foundation. Randolph J. May is Senior Fellow & Director of Communications Policy Studies for The Progress & Freedom Foundation. The views expressed here are their own and do not necessarily reflect those of the Foundation or its Board of Directors.

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## **I. EXECUTIVE SUMMARY**

### **A. Local Exchange Competition: Pennsylvania**

In its Opinion and Order released September 30, 1999 in the so-called global proceeding, the Pennsylvania Public Utility Commission said, in effect, that it anticipated that the Pennsylvania local competition market would be irreversibly open to competition in approximately one year (in other words, about now).<sup>1</sup> Therefore, it seems appropriate at this time to examine whether competition indeed is gaining a secure foothold. As explained below, the evidence shows that considerable competitive progress already has been made in Pennsylvania and that competition in the local exchange market may be expected to continue to intensify.

Based on the available information, the following observations and conclusions are justified with respect to competition in Pennsylvania.

- 1. Competition exists in Pennsylvania and has become embedded in the fabric of the state's telecommunications industry.**
- 2. Competition in Pennsylvania is geographically dispersed.**
- 3. Local exchange competition is occurring in Pennsylvania across the three major customer segments (i.e., large business, small/medium business, and residential).**
- 4. Local exchange competition will intensify in Pennsylvania, with collateral benefits to consumers of lower prices, higher service levels, and more innovative products and services.**
- 5. The emphasis in the near-term will be focussed more heavily on data and video services.**

From a public policy perspective, regulation of telecommunications in Pennsylvania needs to take into account the competitive environment. As the market becomes more competitive, the need for traditional regulation of the ILECs (e.g., cost allocation requirements; rate setting; review of affiliate transactions) becomes less necessary. Indeed, the imposition of the more costly and burdensome regulatory mandates, such as imposition of structural separation requirements, may become entirely counterproductive.

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<sup>1</sup> Joint Petition of Nextlink Pennsylvania, et. al., Opinion and Order, Docket Nos. P-00991648 and P-00991649, September 30, 1999, at 226.



## **B. Local Exchange Competition: Overview**

In February 1996, President Clinton signed the Telecommunications Act of 1996 ('the Act') into law.<sup>2</sup> The principal objective of the 1996 Act was "to provide for a pro-competitive, de-regulatory national policy framework designed to accelerate rapidly private sector deployment of advanced telecommunications and information technologies and services to all Americans by opening all telecommunications markets to competition."<sup>3</sup>

Among its myriad provisions, the Act required local telephone companies (now designated incumbent local exchange carriers or ILECs) to offer:

- 1. Total Service Resale (TSR):** retail ILEC services at wholesale rates for resale by competitive local exchange carriers (CLECs); and
- 2. Unbundled Network Elements (UNEs):** ILEC network components (i.e., "elements") such as switching, transport, and loops, on an unbundled and non-discriminatory basis.

For the first time ever in this country, the Act created a mass market for competitive local exchange services. Given the size of the local exchange market (i.e., over \$100 billion annually), scores of CLECs were created or expanded to take advantage of the opportunity. Many of these CLECs were new organizations (e.g., Hyperion, Winstar, RCN) but others were established carriers (e.g., AT&T and MCI) that wanted to bundle local and long distance services in one package to increase margins and reduce customer turnover.

In the late 1990s a new type of competitive local exchange carrier emerged, the data local exchange carrier (DLEC), that took advantage of the availability of unbundled local loops and collocation space provided by ILECs, and the emergence of digital subscriber loop (DSL) technology that permitted an ordinary copper loop to provide high speed digital service to business and residential customers within about three miles of an ILEC central office. The DLEC leases collocation space in the central office for a DSLAM (digital subscriber line access multiplexer) which packetizes the data from each customer, combines the traffic and forwards it to the switching center of the DLEC over (usually leased) fiber optic facilities. A key use for DSL services is access to the Internet, and DSL providers often wholesale their DSL service offerings to Internet Service Providers, who have the relationship with end users.

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<sup>2</sup> Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (codified in scattered sections of 47 U.S.C.).

<sup>3</sup> H.R. Conf. Rep. No. 104-458 at 113 (1996).

Technologies now being deployed permit voice traffic to be combined with data traffic using a single DSL packet stream using an "integrated access device" on the customer's premises.<sup>4</sup> As a result, a DLEC will be able to provide multiple voice lines and high speed data access over a single copper pair.

### **C. Types of Competitors in the Local Exchange Market**

The term "competitive local exchange carrier", or CLEC, is a broad designation that covers several different types of companies that have chosen to enter the local exchange market. Almost without exception, the business strategies of these new entrants have been to focus upon specific segments (e.g., large businesses or moderate-to-high income residential) and specific geographic locations within the local exchange market (e.g., downtown core, suburban business parks, high density multifamily dwelling units). The major types of CLECs are listed below:

- 1. Integrated Communications Providers (ICPs);**
- 2. Cable Television Companies;**
- 3. Wireless Service Companies (Mobile and Fixed);**
- 4. Interexchange Carriers (IXCs);**
- 5. ILECs Operating Out of Territory; and**
- 6. Energy Companies.**

ILECs confront numerous different types of companies acting as CLECs. The competitors use one or more technologies, usually in multiple geographic areas, to penetrate specific market segments. Furthermore, multiple CLECs often combine or are consolidated into a larger and more effective competitor to the ILECs.

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<sup>4</sup> See *BCR Access* (March 2000), p.4-13.

## **II. LOCAL EXCHANGE COMPETITION: AN OVERVIEW OF COMPETITIVE DEVELOPMENTS AND STRATEGIES**

The telecommunications marketplace has been divided historically into long distance (or toll) services and local exchange service. Prior to the late-1990s, widespread competition in the local exchange did not exist. Recently, federal legislation and regulatory decisions have created the local exchange business opportunity and shaped the terms and conditions under which the new entrants could operate. This section of the report: (1) traces the legislative and regulatory history; and (2) describes the evolution of the business strategies of new entrants in reaction to both regulatory/legislative events and market conditions. The section of the report (Local Exchange Competition: New Entrants Secure Foothold in Pennsylvania) following this one addresses local competition developments specifically in Pennsylvania.

### **A. Regulatory Situation Prior To The Telecommunications Act of 1996**

In the decade before the passage of the Telecommunications Act of 1996, a new type of telecommunications company emerged in major urban markets. At various times these new competitors were designated Metropolitan Area Networks (MANs), Alternative Access Vendors (AAVs), Alternative Local Transport Providers (ALTs) and finally, Competitive Access Providers (CAPs), which was the term in use at the time the Act was signed into law in February 1996. CAPs deployed fiber optic-based networks to link large businesses and government agencies to the points-of-presence of interexchange carriers (IXCs)<sup>5</sup> such as AT&T, MCI and Sprint, bypassing the access facilities of the local telephone companies. CAPs also linked two or more sites of the same customer in that city (e.g., a bank headquarters to the bank's remote data center).

The core business of the CAPs was providing high volume point-to-point connections using fiber optics. The major customers of the CAPs (i.e. IXCs and large end users) used them because the CAPs: (a) offered generally lower prices and had volume discounts; (b) provided modern all-fiber networks; (c) supplied network redundancy; and (d) met customer requirements for diverse routing of access circuits.

In 1993 the Federal Communications Commission (FCC) required local telephone companies to offer collocation at their central offices to qualified parties, such as CAPs and

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<sup>5</sup> The AT&T divestiture (1984) separated the telephone market in the United States into long distance and local segments. Until the passage of the Act, the largest ILECs (i.e., the seven regional Bell operating companies [RBOCs]) could not carry traffic between local access and transport areas (LATAs). The IXCs paid access charges to the RBOCs to originate and terminate IXC traffic. These access charges became the single, largest operating expense of the IXCs. This created an economic imperative on the part of the IXCs to reduce access charges any way they could which in turn led to IXCs entering the local markets directly and/or supporting competitors of the ILECs.

IXCs.<sup>6</sup> Thereafter, the CAPs could interconnect their networks to the networks of the telephone company, but only for interstate services. This extended the effective network footprint of the CAPs by allowing them to use telephone company network facilities to originate and terminate traffic. Instead of building their own ubiquitous network facilities, CAPs could build out a high density core network and lease telephone company facilities to reach customer sites where the level of traffic would not justify the cost of building CAP facilities. CAPs also began to deploy switches to enter the market for switched services.

However, into the mid-1990s, the local competition market focussed on almost entirely large corporate users, government agencies and the IXCs. Medium and small businesses that were not located in high rise buildings or office parks, as well as residential customers, generally were excluded from having an alternate supplier to their local telephone company.

Prior to the passage of the Act, the regulatory environment was extremely confusing. The FCC took quite a few pro-competition actions but only controlled interstate services. The position of state regulators varied by state. Some states (e.g., New York) began to encourage local competition while other states attempted to maintain a near-monopoly for their local exchange carriers. This environment forced the new entrants to adjust their business strategy to accommodate the rapidly changing regulatory environment.

## **B. The Impact of the Telecommunications Act of 1996**

Throughout most of 1995, Congress debated the entire range of issues that affected telecommunications in the United States. In February 1996, President Clinton signed the Act into law. Among its myriad provisions, the Act required local telephone companies (now designated incumbent local exchange carriers or ILECs) to offer:

- 1. Total Service Resale (TSR):** retail ILEC services at wholesale rates for resale by competitive local exchange carriers (CLECs); and
- 2. Unbundled Network Elements (UNEs):** ILEC network components (i.e., "elements") such as switching, transport, and loops, on an unbundled and non-discriminatory basis.

In order to optimize their business strategy, CLEC management had to understand the economic tradeoffs between and among a facilities-based entry approach, TSR, and a UNE-based strategy.

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<sup>6</sup> Expanded Interconnection with Local Telephone Company Facilities, Second Report and Order and Third Notice of Proposed Rulemaking, 8 FCC Rcd 7374 (1993); Expanded Interconnection with Local Telephone Company Facilities, Memorandum Opinion and Order, 9 FCC Rcd 5154 (1994); *Bell Atlantic v. FCC*, 24 F. 3d 1441 (D.C. Cir. 1994).

For the first time ever in this country, the Act created a mass market for competitive local exchange services. Given the size of the local exchange market (i.e., over \$100 billion annually) scores of CLECs were created or expanded to take advantage of the opportunity. Many of these CLECs were new organizations (e.g., Hyperion, Winstar, RCN) but others were established carriers (e.g., AT&T and MCI) that wanted to bundle local and long distance services in one package to increase margins and reduce customer turnover. To many, it appeared as if Congress had started a land rush with CLECs racing to stake their claims.

### **C. Local Exchange Competition: Evolution of CLEC Business Strategies (1996–Present)**

After the Act became law, CLECs could choose among three entry strategies: (1) construction of owned and operated facilities; (2) resale of ILEC facilities (TSR); or (3) purchase and resale of UNEs. In August 1996 the FCC released its Interconnection Rules which specified the terms upon which the ILECs should open up their network. In general, the terms were considered favorable to CLECs.<sup>7</sup>

For example, the FCC had mandated that ILECs permit access by CLECs to the operations support systems (OSS) of the ILECs. This term refers to the computer systems, databases, and personnel that ILECs use to provide service to their retail customers. The range of functions enabled by OSS includes order placement, order status tracking, repair and maintenance support, and compilation and distribution of billing information. In addition, the ILECs had to provide electronic and manual interfaces that allowed CLECs access to all the OSS functionality necessary for the CLEC to provide service through a TSR or UNE-based strategy.

TSR pricing was usually set at a discount from retail service prices. In the absence of an agreement between the CLEC and the ILEC, the discounts were set by state regulatory commissions, usually after a lengthy hearing process. This was a first for the state commissions because they had never previously had to establish a pricing framework for wholesale local exchange services. The commissions struggled to balance multiple overlapping issues and risks that included: (1) continuing investment in facilities by both CLECs and ILECs; (2) encouraging competition in terms of price and value-added services; (3) establishing a market presence rapidly for competitors even as their networks were being built out; and (4) minimizing future regulatory actions and/or litigation. The general level of wholesale discounts set in 1996 and 1997 tended to be 25% or less. The expectation was that this would provide sufficient margin so that a CLEC could create a profitable business.

Both large and small CLECs had two business objectives: (1) minimize up front

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<sup>7</sup> Implementation of Local Competition Provisions of the Telecommunications Act of 1996, 11 FCC Record 15499 (1996).

capital requirements; and (2) enter the market rapidly. In 1996, of the three available entry strategies, TSR was chosen by the management of most CLECs because the TSR strategy seemed to accomplish most effectively the key business objectives (i.e. capital minimization and rapid entry).

Two key factors that influenced the adoption of TSR were: (1) a belief that a "first mover advantage" existed (i.e., the first CLEC into a specific market niche would gain a critical mass of customers while the second and third entrants would have a much more difficult time obtaining customers); and (2) the resale contracts between the ILECs and the CLECs specified a minimum volume within a maximum time in order to qualify for best wholesale price. The minimum volume requirement put pressure on the CLECs to acquire as many customers as fast as possible in order to meet contractual terms.

By mid-to-late 1998, it was clear that TSR was not viable as a stand alone long term CLEC strategy because: (1) the TSR did not provide sufficient margins to attain profitability; and (2) provisioning problems created order backlogs, increased processing costs, and caused customer service problems.

Therefore, CLECs adjusted their strategy to put more emphasis on facilities-based strategies than on TSR or UNEs. In most locations this strategic realignment was implemented successfully by the CLECs. For example in 1999, Bell Atlantic put into the public record that in New York, competitors served 1.1 million lines. Of these, 58% were served by competitor facilities, 28% were resold (i.e. TSR), and the remaining 14% based on UNEs.<sup>8</sup>

The investment community also began to refine its assessment of CLECs as investments. The emphasis shifted to favor facilities-based CLECs. For example, a July 1998 Morgan Stanley report emphasized that owning/controlling facilities was critical to a CLEC's success because of: (1) lower costs in the long run than other entry strategies; and (2) ease of provisioning one's own network. Consequently, by mid-1998, the CLECs preferred by investment banks like Morgan Stanley had facilities-based strategies.<sup>9</sup>

In the late 1990s a new type of competitive local exchange carrier emerged, the data local exchange carrier (DLEC), that took advantage of the availability of unbundled local loops and collocation space provided by ILECs, and the emergence of digital subscriber loop (DSL) technology that permitted an ordinary copper loop to provide high speed digital service to business and residential customers within about three miles of an ILEC central office. The DLEC leases collocation space in the central office for a DSLAM (digital subscriber line access multiplexer) which packetizes the data from each customer,

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<sup>8</sup> Application by Bell Atlantic New York for Authorization under Section 271 of the Communications Act to Provide In-region, InterLATA Service in the State of New York, 15 FCC Rcd 3953, 3960 (1999).

<sup>9</sup> CLECs: A New Paradigm, Morgan Stanley (July 15, 1998).

combines the traffic and forwards it to the switching center of the DLEC over (usually leased) fiber optic facilities.

A key use for DSL services is access to the Internet, and DSL providers often wholesale their DSL service offerings to Internet Service Providers, who have the relationship with end users. Businesses are frequently served by symmetric DSL (same bandwidth in each direction), while residential customers usually obtain asymmetric DSL (ADSL), which provides more bandwidth toward customers than away from them. ADSL has the advantage of coexisting with ordinary phone service on the same local copper loop, permitting ADSL to be added to an existing access line, reducing the cost and difficulty of DSL installation. The FCC has mandated that ILECs provide line sharing in which a competitive DLEC may provide its services over the same loop from which the customer is receiving basic telephone service from the ILEC.<sup>10</sup>

Technologies now being deployed permit voice traffic to be combined with data traffic using a single DSL packet stream using an "integrated access device" on the customer's premises.<sup>11</sup> As a result, a DLEC will be able to provide multiple voice lines and high speed data access over a single copper pair. Such an arrangement requires the voice traffic to be split out from the data traffic by the DLEC and delivered to a voice switch or gateway for interconnection to the switched voice network.

Finally, cable television companies have entered the CLEC business. As discussed below, cable television companies are using upgraded bi-directional cable systems to provide voice and data services.

#### **D. Types of Competitors in the Local Exchange Market**

The term "competitive local exchange carrier" or CLEC is a broad designation that covers several different types of companies that have chosen to enter the local exchange market. Almost without exception, the business strategies of these new entrants have been to focus upon specific segments (e.g., large businesses or moderate-to-high income residential) and specific geographic locations within the local exchange market (e.g., downtown core, suburban business parks, high density multifamily dwelling units). The major types of CLECs are described below.

##### **1. Integrated Communications Providers (ICPs)**

ICPs are the current reincarnation of what were designated as CAPs at the time of the Act's passage. As noted above, CAPs were fiber optic-based firms that provided service to IXC's and large end users. When CAPs installed their high-

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<sup>10</sup> Deployment of Wireless Services Offering Advanced Telecommunications Capability, 14 FCC Rcd 20912 (1999).

<sup>11</sup> See "IAD Roundup," *BCR Access* (March 2000), p.4-13.

volume, non-ubiquitous, limited access networks, large business users found an economic means to diversify their networks. From then on, large business users (including IXCs as well as end users) considered diverse routing, and even diverse suppliers, as mandatory for their networks. CAPs positioned themselves to become the alternative carrier and the source of diversity. In fact, CAPs sounded the death knell of the local exchange monopoly for large users initially and then as ICPs for small/medium businesses and residential customers.

By the late 1990s, for all intents and purposes CAPs no longer constituted a separate stand-alone industry. CAPs had been integrated with other companies, such as IXCs or cable companies, to provide seamless service in competition with the ILEC. The CAPs proved so effective at providing services to large customers that they were absorbed into larger entities.

The same process of integration may be underway with newly emerging DLECs: Verizon has recently announced an agreement to acquire NorthPoint, one of the three large, national DLECs, and SBC has announced an investment in Covad, another national DLEC.<sup>12</sup>

As described below, cable television companies have begun to compete for telephony and Internet access service business. There is natural synergy between CAPs and cable television. Cable networks serve primarily residential neighborhoods, while CAPs traditionally cover business centers. In combination, one or more cable companies plus a CAP cover essentially the main revenue areas of an ILEC metropolitan franchise area. This synergy accounts for the fact that cable companies have either purchased CAPs (e.g., Teleport – subsequently sold to AT&T) or begun their own (e.g., Adelphia's Hyperion now renamed Adelphia Business Solutions).

Just as cable television companies have begun to compete for telephony and Internet business, companies that in the past were thought of as Internet service providers will cross competitive boundaries to compete to enter the communications business. For example, AOL and Time Warner state in their merger materials that the Internet will serve a myriad of needs "as it explodes beyond the PC and is integrated into a range of devices from television to the telephone to radio to appliances." The two companies pledge that they "will take the lead in building bridges between the PC, the TV and the phone so that consumers can get information, be entertained and communicate anytime or anywhere."<sup>13</sup>

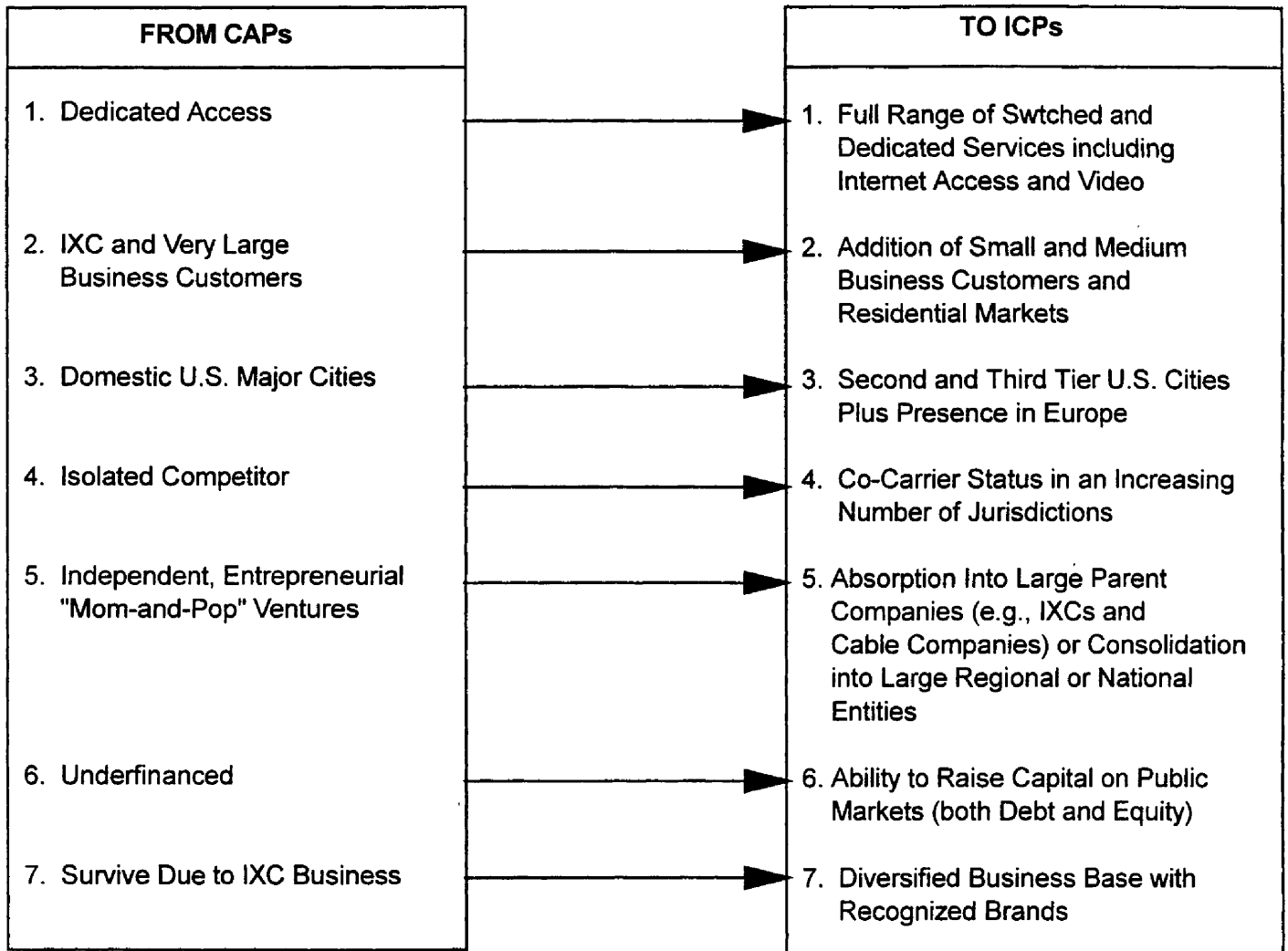
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<sup>12</sup> See Verizon press release, "Verizon and North Point to Merge DSL Business," August 9, 2000; see also SBC press release, "COVAD and SBC to Deliver Broadband Nation Wide," September 11, 2000.

<sup>13</sup> AOL/Time Warner brochure accompanying Joint Proxy Statement-Prospectus dated May 15, 2000.



Figure 1  
**Transition of the CAP Industry  
 (1988-2000)<sup>14</sup>**



<sup>14</sup> Updated from J. Kraemer, *Local Competition: The War of Many Against One (1997-2001)*, published by EDS/A.T. Kearney (1997), p.20-23.

## 2. Cable Television

The cable industry constitutes the most significant threat to ILECs because the cable plant – if upgraded to digital, reconfigured to a fiber-coax architecture, and made bi-directional – provides the infrastructure for facility-based competition. The cable network, if upgraded, is capable of video, high speed data, and voice while the ILECs' networks have traditionally been optimized currently for voice and low speed data.

Over the past 15 years, the cable industry has grown and consolidated. Over 65% of U.S. households use cable television as their primary source of television programming. Over 96 million homes are passed by cable facilities so that cable service is readily available to them.<sup>15</sup>

The core business of the cable television industry has been – and remains – to supply entertainment video to residential subscribers. To do so, cable companies typically supply 30 to over 50 channels to homes within the service territory in which they operate. However, the core business of cable (i.e., entertainment video) is undergoing significant change.

The home entertainment video market is in the process of becoming a commodity business with low margins, high churn, and little differentiation of content among the competitors (e.g., DirecTV satellite service by Hughes with over 150 digital channels). This creates the incentive for cable companies to either: (1) diversify into voice and data services (i.e., enter the local exchange market); or (2) sell out and exit the business. In the case of the second alternative, the buyer could be a larger cable company that most likely would offer voice and data services, an IXC that wants to use cable facilities to bypass the ILEC, or another telecommunications company that wants broadband access to the home.

Some cable companies, such as RCN, are building competitive cable networks to offer packages of "cable, telephone, and Internet services" in high density residential areas, including in Pennsylvania.<sup>16</sup> This is because market research shows that 50-60% of households express interest in purchasing multiple services (i.e., video, Internet access, and telephony) from a single service provider.<sup>17</sup> The primary decision factor for consumers is price. Consumers want

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<sup>15</sup> "Cable Television Industry Overview 2000," National Cable Television Association (NCTA), p.10.

<sup>16</sup> "RCN introduces its bundled communications services to residents of Eddystone, Pennsylvania," RCN press release (August 17, 2000).

<sup>17</sup> Much of the market research in this area is proprietary. For illustrative publicly available data see the presentation of one of the authors, J. Kraemer, at the *Strategies for the 21st Century Conference* that was sponsored by the Ivey School of Business of the University of Western Ontario (April, 2000).

to pay less for a bundle of services than they would pay if they got the services one-by-one from separate vendors.

The up-graded, digital, bi-directional plant of a cable company can provide currently such a service package over a single network facility. Indeed, the National Cable Television Association (NCTA), reports that at least nine large cable system operators offer phone service in more than 45 markets with almost 14 million cable telephone subscribers expected by 2005.<sup>18</sup> Many ILECs are handicapped competitively in selling a service bundle because they may be restricted by law or regulation from doing so, or they may do so only by employing higher cost structurally separate organizations.

For example, except in New York, Verizon may not provide long distance services in states in which the former Bell Atlantic provided local service, and even in New York must do so through a separate subsidiary.<sup>19</sup> As a result of FCC-imposed conditions imposed as part of the approval process for the Bell Atlantic/GTE merger, Verizon must also provide advanced services through a similar separate subsidiary, even though the 1996 Telecommunications Act does not impose such requirement.<sup>20</sup>

### **3. Wireless Service Companies (Mobile and Fixed)**

The term "mobile" covers the cellular and special mobile radio industries, as well as the digital personal communications services (PCS). From the viewpoint of an ILEC, mobile wireless service providers will increasingly be competitors in access, toll, and local services.<sup>21</sup>

Cellular service began in 1984 and, by mid-2000, cellular and PCS combined had 100 million subscribers (Figure 2).<sup>22</sup> In general, the ILECs have benefited from cellular and other currently deployed wireless services.<sup>23</sup> This favorable relationship began to deteriorate in the late 1990s when competition in the

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<sup>18</sup> "Cable Television Industry Overview," NCTA, p.9.

<sup>19</sup> Under Section 271 of the Act, the Bell ILECs must receive authorization from the FCC to provide long distance service after demonstrating compliance with a "competitive checklist." Under Section 272, authorized interLATA services must be provided through a separate subsidiary.

<sup>20</sup> See Application of GTE Corp., Transferor, and Bell Atlantic Corp., Transferee, FCC 00-221, (June 16, 2000), para. 260.

<sup>21</sup> For example, under the terms of the Act, cellular and PCS providers have the ability to provide bundled packages of local and long distances services without offering the presubscription option that incumbent landline carriers are required to offer. The Act exempts wireless service providers from equal access and presubscription obligations regarding long distance carriers.

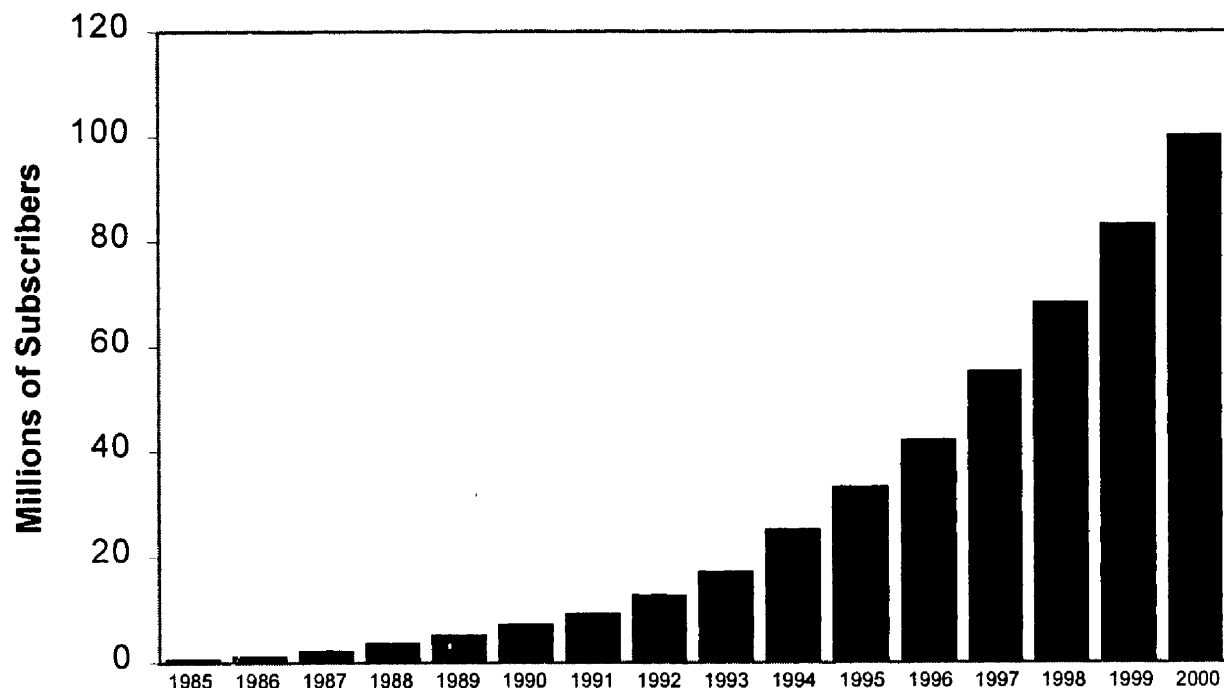
<sup>22</sup> "Industry Celebrates 100 Million Wireless Customers," Cellular Telephone Industry Association (CTIA) press release (July 26, 2000).

<sup>23</sup> Benefits to the ILECs have included: (a) increased revenues from cellular traffic, most of which is intraLATA mobile-to-fixed; and (b) additional network utilization that supports scale economies.

wireless industry intensified as PCS service providers entered the market.

Prior to the late 1990s, the cellular industry has enjoyed a "Golden Age" characterized by a duopoly of supply, easy access to capital, minimal requirements to provide high quality service to captive customers, and relatively high operating margins. This situation changed drastically as new competitors in the form of PCS licensees entered the market. PCS entry triggered a period of intense price competition, characterized by massive expenditures on advertising, brand positioning, and emphasis on premium customer service. Wireless carriers emphasize information technology and time-to-market for new services as sources of competitive advantage.

Figure 2  
**U.S. Wireless Subscribers**



Note: All figures are end of year, except 2000 (August)

Source: Cellular Telephone Industry Association

As we enter the first decade of the new century, local exchange competition from mobile service providers is expected to intensify:

- a. **The wireless industry has increasingly positioned itself as a**

**consumer service** (versus the high end business service positioning of the 1980s and early 1990s). This is beginning to create brand loyalty among residential customers who are the core bread and butter business of the ILECs. (To complicate matters, wireless users tend to be younger, better educated, and more affluent, a market segment that is targeted by the CLECs and ILECs.)

- b. **Falling prices for wireless service increase the probability of eventual competition between wireless and wire-based systems** for at least some portion of residential service. (The current monthly payment of the *marginal* wireless subscriber is less than \$30 per month for subscription and usage combined, while the *average* monthly bill is in the \$40-\$45 range, down from over \$50 five years ago.)<sup>24</sup>
- c. **Wireless companies now sell "pools" of minutes so that a consumer's cost per month is fixed** (unless the total number of minutes-of-use exceeds the pool limit).<sup>25</sup> Consequently, some consumers have begun to use their wireless phones at home rather than a wireline phone.
- d. Finally, **competition will drive wireless providers to seek partners among other ILEC competitors, including CAPs, cable television systems, IXCs, and electric utilities**. While the ILECs can be expected to do well against any one source of competition, a package of wireless and wireline services sold to residential and small business customers may offer a potent threat to a ILEC.

In addition to competition from mobile wireless service providers, ILECs also have to compete against CLECs using fixed wireless (i.e., neither radio is in motion) radio systems. For example, wireless local loop technology is being tested by AT&T.<sup>26</sup> Wireless local loops provide one or more lines for voice and data services to residential and/or small business customers without requiring a physical connection to the subscriber. In addition, certain other CLECs (e.g., XO) are deploying local multipoint distribution service (LMDS) or traditional point-to-point microwave at various frequencies to provide multi-line and high bandwidth service to large and medium business customers.<sup>27</sup>

WorldCom and Sprint have taken a different approach by acquiring "MMDS"

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<sup>24</sup> See the CTIA Semi-annual Wireless Industry Survey results, available on the CTIA web site at [www.wow-com.com](http://www.wow-com.com).

<sup>25</sup> "AT&T Wireless Improves the Nation's Most Popular Pricing Plan," AT&T Wireless press release (August 31, 2000).

<sup>26</sup> "AT&T 'Cuts the Cord' to Provide Services into Homes; Debuts Nation's First Wireless Communications Company" (March 21, 2000).

<sup>27</sup> See web sites of XO, Winstar, and Teligent.

frequencies, formerly used by “wireless cable” operators to provide broadband data services under new FCC rules that permit such frequencies to be used for two way services. These frequencies can travel much greater distances and are suitable for provision of services to residential and small business customers.

#### **4. Interexchange Carriers (IXCs)**

After the passage of the Act, IXCs used one or more strategies (e.g., facilities-based, TSR, or UNE-based) to enter the local exchange market.<sup>28</sup> IXCs that used a facilities-based strategy entered the local exchange market by: (a) buying CAPs (e.g., AT&T-Teleport and WorldCom-MFS); (b) direct entry (e.g., MCI Metro); and/or (c) affiliation with, or purchase of, cable TV companies (e.g.; AT&T’s purchase of TCI and MediaOne). Of course, IXCs also resold ILEC services and acquired UNEs (particularly local loops), as well as built and operated facilities in ILEC service territories.

In summary, with respect to IXC-ILEC competition, the competitive impacts of the Act have been to:

- a. Eliminate the artificial distinction between intraLATA and interLATA telephone markets;
- b. Open the local exchange market to competition;
- c. Increase competition in the long distance market (which will intensify even further when the RBOCs are allowed to enter this business); and
- d. Force consolidation among ILECs and IXCs and between ILECs and IXCs to gain the benefits of both economies of scale and scope.

#### **5. ILECs Operating Out of Territory**

In addition, ILECs that are adjacent to, or surround the service territories of, other ILECs can leverage their brand and economies of scale by extending their services into the service territory of an adjacent ILEC. There are two different types of ILECs that have done so. The first were “independent” (i.e., not affiliated with the pre-divestiture Bell system) telephone companies that saw an opportunity to increase revenues and operating profits by extending their business-knowledge and competencies to serve customers outside their core geographic service area. Examples include Alltel and Commonwealth

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<sup>28</sup> Also, IXCs affected local exchange competition by diverting access business from ILECs to CAPs. This ensured another source of supply for the IXCs and put pressure on the ILECs to reduce prices and provide high levels of customer service.

## Telephone.

The second type was the RBOCs which used various strategies to enter out-of-region local exchange markets. For example, USWest (now Qwest) created a cable subsidiary (MediaOne<sup>29</sup>) and purchased Continental Cable to provide video, Internet access, and telephony services. In addition, several RBOCs (Bell Atlantic, USWest, and SBC) acquired PCS spectrum to provide an out-of-region wireless service. As noted above, PCS (and cellular) are seen increasingly as in competition with traditional wire line local exchange service.

RBOCs are also expected to become facilities-based CLECs and enter local exchange markets. For example, SBC as a condition for the acquisition of Ameritech, pledged to enter 30 out-of-region markets as a CLEC. The top 50 markets from which SBC has committed to enter 30 no later than March 2002 are shown on Figure 3.<sup>30</sup>

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<sup>29</sup> USWest spun off MediaOne, which was acquired recently by AT&T. See Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations from; MediaOne Group, Inc., Transferor, To AT&T Corp. Transferee, 15 FCC Rcd 9816 (2000).

<sup>30</sup> SBC recently announced that it had negotiated a one billion dollar contract with Lucent to provide network equipment for this effort; See "SBC Communications Names Lucent Technologies Primary Supplier for SBC's Advanced National Network," Lucent press release (October 5, 2000).

Figure 3

**Out-of-Region Markets Targeted by SBC**

1. Albany, NY	26. Middlesex, NJ
2. Albuquerque, NM	27. Minneapolis-St. Paul, MN
3. Atlanta, GA	28. Nashville, TN
4. Baltimore, MD	29. Nassau, NY
5. Baton Rouge, LA	30. New Orleans, LA
6. Birmingham, AL	31. New York, NY
7. Boston, MA	32. Newark, NJ
8. Boulder, CO	33. Norfolk, VA
9. Buffalo, NY	34. Orlando, FL
10. Cedar Rapids, IA	35. Passaic, NJ
11. Charlotte, NC	<b>36. Philadelphia, PA</b>
12. Cincinnati, OH	37. Phoenix, AZ
13. Colorado Springs, CO	<b>38. Pittsburgh, PA</b>
14. Denver, CO	39. Portland, OR
15. Des Moines, IA	40. Raleigh, NC
16. Fort Lauderdale, FL	41. Richmond, VA
17. Greensboro, NC	42. Rochester, NY
18. Greenville, SC	43. Salt Lake City, UT
<b>19. Harrisburg, PA</b>	44. Seattle, WA
20. Honolulu, HI	45. Syracuse, NY
21. Jacksonville, FL	46. Tampa, FL
22. Las Vegas, NV	47. Tucson, AZ
23. Louisville, KY	48. Washington, DC
24. Memphis, TN	49. West Palm Beach, FL
25. Miami, FL	50. Wilmington, DE

Source: Application of Ameritech Corp., Transferor, and SBC Communications, Transferee, 14 FCC Rcd 14712, 15171 (1999).



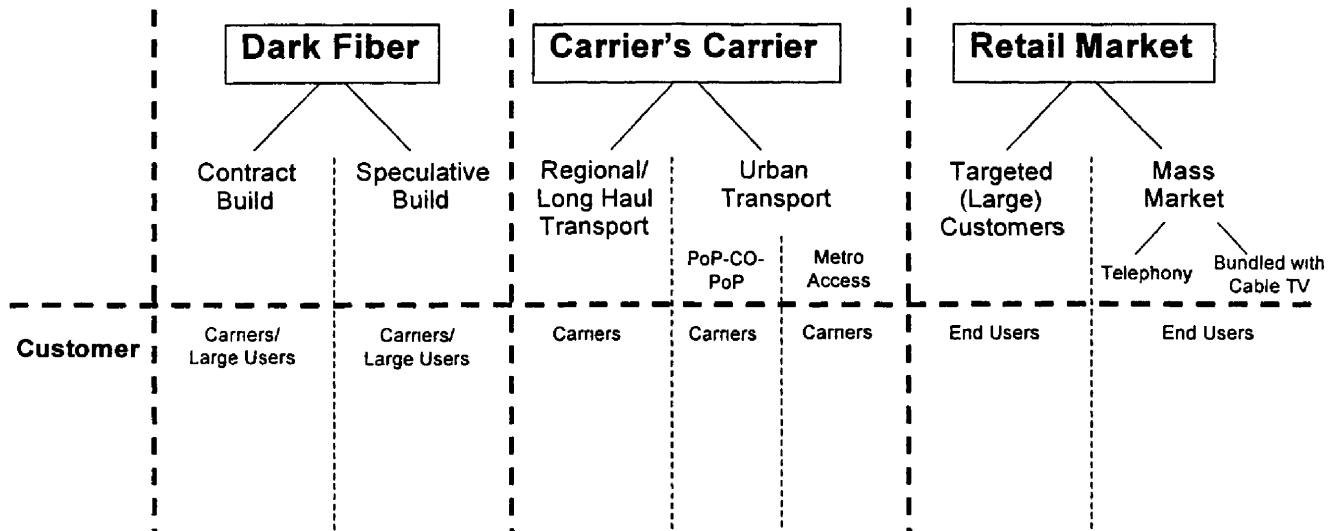
## 6. Energy Companies

In response to impending competition, management in the electric power industry has begun to consider strategies that, among other things, leverage the loyalty of the power companies' customer bases to gain a competitive advantage and new sources of revenue. A key component of this strategic review process is an analysis of the role(s) that electric utilities can play in telecommunications.

Management of the utilities perceives that utilities have leverageable assets that can support direct entry or make them a desirable partner for a telecommunications company. Such assets include: (a) an established brand name; (b) a reputation for quality customer service that may meet or exceed that of some ILECs; (c) control over rights-of-way; (d) penetration of more households than even an ILEC in its service territory; (e) access to capital; (f) an existing billing system that supports usage-based charges; and (g) internal communications assets and expertise that are second only to the LECs themselves.

Figure 4 shows the range of models currently used by energy companies to enter the telecommunications business (with or without one or more partners). Note that all but one of the models focus on competitive entry (i.e., local exchange entry) in more densely populated areas.

Figure 4  
Energy Company Entry Models



Source: J. Kraemer, *The Convergence of Energy and Telecommunications*, published by PHB Hagler Bailly (4<sup>th</sup> Quarter 1999).

In the end, some subset of utilities (particularly those with large service territories, relatively dense populations, aggressive management, and access to capital) will commit to entering the local exchange business. Most of these will partner with CLECs, so such entry will be adverse to ILEC interests. Examples include PECO and Allegheny Power's joint ventures with Adelphia Business Solutions (a subsidiary of Adelphia communications corporation based in Coudersport, Pennsylvania).

In summary, ILECs confront numerous different types of companies acting as CLECs. The competitors use one or more technologies, usually in multiple geographic areas, to penetrate specific market segments. Furthermore, multiple CLECs often combine or are consolidated into a larger and more effective competitor to the ILECs.

In the next section, we will address the competitive situation in Pennsylvania.

### **III. LOCAL EXCHANGE COMPETITION: NEW ENTRANTS SECURE Foothold IN PENNSYLVANIA**

Pennsylvania is a large state with ten major population centers, namely Philadelphia, Pittsburgh, Erie, Allentown, Reading, Scranton, Bethlehem, Lancaster, Harrisburg, and Altoona. The key industries are manufacturing, chemicals, agriculture, and tourism. The combination of urban density, population, and a solid economy creates an attractive target market for CLECs.

#### **A. Data Sources**

We relied upon publicly available data as the basis for this report. In particular, we utilized the following sources: (1) records, filings and orders of the Pennsylvania Public Utilities Commission; (2) *CLEC Report 2000 (12<sup>th</sup> Edition)*, the leading industry source on CLECs; (3) the web sites and marketing materials of the CLECs themselves; and (4) filings and data released by Verizon in the pursuit of meeting the prerequisites for long distance market entry.

There is no doubt that CLECs, like all businesses, adjust their plans on a real time basis based on current market and financial conditions. Furthermore, business strategies are proprietary. Therefore, public information on a *specific* company is usually incomplete, especially with respect to planned future actions. Notwithstanding these caveats, publicly available information is adequate to establish the current nature and extent of the local exchange *industry* competition in Pennsylvania, as well as facilitate forecasts of likely trends.

#### **B. CLECs in Pennsylvania: Quantity**

The Pennsylvania Public Utilities Commission (PUC) certifies local exchange carriers before such carriers can provide service in the state. As of October 9, 2000, 215 companies had "been certified or granted provisional authority to provide telecommunication services as a competitive local exchange carrier (CLEC) to the public in the Commonwealth."<sup>31</sup>

Five years ago, the PUC granted the first CLEC operating authority to Teleport,<sup>32</sup> MCI Metro, and Metropolitan Fiber Systems,<sup>33</sup> all of which began as CAPs providing dedicated access and then expanded their business model to supply switched services.

Trend analysis shows that CLECs are applying for local exchange operating

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<sup>31</sup> PUC web site (October 9, 2000).

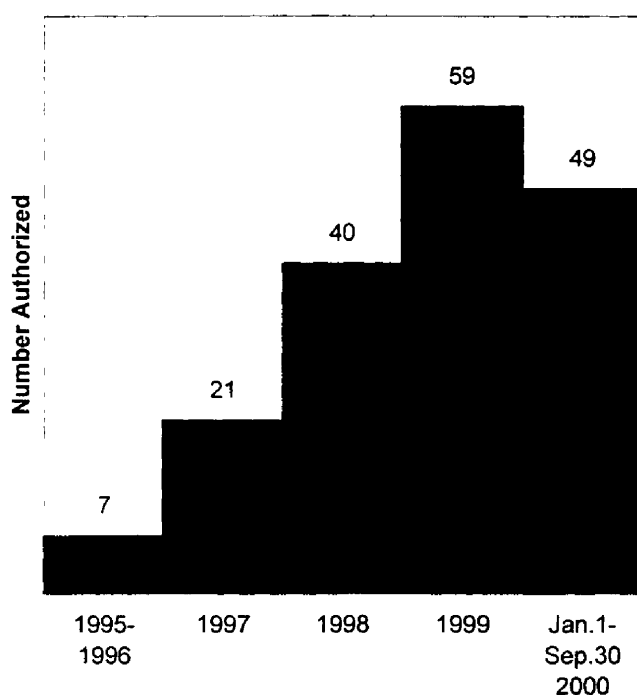
<sup>32</sup> Now owned by AT&T.

<sup>33</sup> Now owned by MCI-WorldCom.

authority at an increasing rate. Figure 5 shows the number of CLECs granted final certification by the Pennsylvania PUC to provide local exchange services in the 1995-2000 period. Note that the year 2000 total is for nine months only and that, on an annualized basis, the number of approvals in 2000 will approximate 65 which will continue the trend of year-to-year increases.

Figure 5

**CLEC Operating Authority Approvals in Pennsylvania**



The Federal Communications Commission (FCC) issues an annual local exchange competition report. The 1999 report gave CLECs a 5% share of the local exchange lines in Pennsylvania and the sixth highest state penetration based on the number of CLEC lines.<sup>34</sup> The CLEC average nationally was 4% per state, so in terms of penetration Pennsylvania is somewhat more competitive than the national average. The totals reported by the FCC for Pennsylvania as of year end 1999 were 8.5 million ILEC end-user

<sup>34</sup> *Local Telephone Competition at the New Millennium*, FCC (August 2000). The report summarizes ILEC and CLEC data as of December 31, 1999.

lines and 413 thousand CLEC lines.<sup>35</sup>

In terms of the number of CLECs submitting reports to the FCC, Pennsylvania ranks among the top seven states in the nation at the end of 1999. The only states ahead of Pennsylvania are New York and Texas (which already have received long distance authority based on determinations that their local exchange markets are irreversibly open to competition) and California and Florida.<sup>36</sup>

In terms of revenues, the FCC reported that the local services revenues claimed by competitors nationally increased to \$6.3 billion (1999) from \$3.5 billion (1998).<sup>37</sup> The CLEC share of local exchange revenue (approximately 6%) is larger than the CLEC national line share (4%) which implies that CLECs focus on customers that generate higher-than-average revenue per line. The FCC concluded that "while competitors claim only a small share of the local telephone service market, large firms with substantial resources are entering the market."<sup>38</sup>

Local exchange competition in Pennsylvania appears to be geographically dispersed based on the following:

1. PUC information shows that CLECs have been authorized to operate across the state, especially in the service territories of Verizon and Verizon-North (formerly GTE).
2. The Federal Communications Commission (FCC) has identified CLECs that have received telephone numbering codes in five of six Pennsylvania LATAs (i.e., Altoona, Harrisburg, Philadelphia, Pittsburgh and Scranton).<sup>39</sup> As of October 1999, the CLECs identified over 1.6 million active telephone numbers (not including wireless phones or pagers) being used by their own customers.<sup>40</sup>
3. The *CLEC Report 2000 (12<sup>th</sup> Edition)*<sup>41</sup> lists 44 CLECs that operate in

<sup>35</sup> The state with the highest CLEC penetration was New York (9%) where the first CAP service ever was launched in 1987. See Table 4 of the FCC's *New Millennium* Report.

<sup>36</sup> This information is from Table 1 (Number of Reporting Local Exchange Carriers: Year-End 1999) in Local Telephone Competition at the New Millennium, FCC, August 2000. Only local exchange carriers with more than 10,000 lines in service were required to report.

<sup>37</sup> New Millennium, FCC, p.3.

<sup>38</sup> New Millennium FCC, p.3.

<sup>39</sup> *Local Competition: August 1999*, Federal Communications Commission, Table 4-2, p.60-61. Note that the FCC's 1999 report summarizes the competitive situation as of December 31, 1998; current PUC information shows that some CLECs have been authorized to provide service in Erie, the sixth LATA.

<sup>40</sup> Letter from June M. Perry, Director, Office of Legislative Affairs, Pennsylvania PUC, to Honorable Thomas A. Michlovic, Pennsylvania House of Representatives, June 2, 2000 (12.68% of 13,180,000 numbers assigned to CLECs are being used).

<sup>41</sup> Published by New Paradigm Resources Group, Chicago, IL.

Pennsylvania.<sup>42</sup> This report indicates that the 44 Pennsylvania CLECs operate in one or more of 67 Pennsylvania counties.

### C. CLECs in Pennsylvania: Types of Companies

As discussed previously, "CLEC" is an umbrella term that covers a diverse range of companies that have chosen to enter the local exchange market in Pennsylvania. Figure 6 presents illustrative examples of Pennsylvania CLECs organized by the six categories of CLEC described in Section D of Chapter II of this report.

Figure 6

#### Pennsylvania CLECs by Company Type

Type of CLEC	Illustrative Examples*
<b>1. Integrated Communications Providers (ICPs)</b>	<p>1a. <b>Adelphia Business Solutions:</b> (formerly Hyperion Telecommunications): originated as a CAP subsidiary of Adelphia Cable</p> <p>1b. <b>Metromedia Fiber Network:</b> deployed a fiber network in Philadelphia; emphasizes sophisticated communications services for 'smart buildings' and e-commerce applications.</p>
<b>2. Cable Television</b>	<p>2a. <b>RCN:</b> secures cable franchise and offers package of video, telephony, and Internet access services</p> <p>2b. <b>AT&amp;T Broadband:</b> expected to migrate from resale to cable facilities in Pittsburgh</p> <p>2c. <b>Comcast:</b> provides Internet access; has identified cable telephony as potential growth area</p> <p>2d. <b>Charter:</b> announced plans to offer IP telephony in the future</p>
<b>3. Wireless Companies (Fixed)</b>	<p>3a. <b>XO (formerly Nextlink):</b> has expanded beyond wireless to include fiber facilities and DSL resale</p>

<sup>42</sup> This is only a subset of the CLECs authorized to operate in Pennsylvania as of October, 2000.

Figure 6

**Pennsylvania CLECs by Company Type**

	<p>3b. <b>WinStar</b>: uses point-to-point microwave to access business customers and has introduced point-to-multipoint technology</p> <p>3c. <b>Baker Creek</b>: subsidiary of Adelphia; bid for and won LMDS licenses for 18 Pennsylvania urban markets [future]</p>
<b>4. Interexchange Carriers (IXCs)</b>	<p>4a. <b>AT&amp;T</b>: provides local voice and/or data services in several Pennsylvania cities</p> <p>4b. <b>Global Crossing</b>: offers DSL service in Philadelphia and Pittsburgh</p> <p>4c. <b>MCI WorldCom</b>: began local service in Pennsylvania on August 15, 2000</p>
<b>5. Out-of-Territory Local Exchange Carriers</b>	<p>5a. <b>Alltel Communications, Inc.</b>: authorized ILEC in Pennsylvania offering services as a CLEC outside its service area</p> <p>5b. <b>Commonwealth Telephone</b>: a Pennsylvania-based ILEC that edges out of its service territory to capture customers and traffic in geographically proximate areas through its CTSI affiliate</p>
<b>6. Energy Companies</b>	<p>6a. <b>PECO Hyperion Communications</b>: Joint Venture of Peco's Excelon subsidiary and Adelphia Business Solutions</p> <p>6b. <b>Allegheny Communications Connect, Inc.</b>: an Allegheny Power and Adelphia Business Solutions venture</p>

- To be included as an example the CLEC must have: (1) been authorized to operate in Pennsylvania by the PUC; and (2) offer service in Pennsylvania. Sources: *CLEC Report 2000* and the web site of each provider.

#### D. CLECs in Pennsylvania: Networks

As a group, CLECs utilize some combination of the three entry strategies available to them after the passage of the Act (i.e., facilities-based, total service resale [TSR], and/or unbundled network elements [UNEs]). TSR was the most utilized CLEC strategy in the 1996-1998 period. Since that time, hybrid strategies that mix owned-and-operated CLEC facilities with resale of some ILEC network elements (e.g., loops) have become prevalent and favored over pure TSR. That is certainly the situation with 33 Pennsylvania CLECs for which detailed information is available.<sup>43</sup> Of those 33, the type of networks used (or planned) in Pennsylvania were as follows:

Figure 7

##### Illustrative Pennsylvania CLEC Networks

<u>Categories</u>	<u>Voice</u>	<u>Data</u>
1. Operational: In-state facilities	15	18
2. Planned: In-state facilities	5	5
3. Pure Resale	2	0
4. On Net: Switches outside state; in-state resale	3	2
	<hr/>	<hr/>
Total	<u>25</u>	<u>25</u>

Source: The CLEC Report 2000 (12<sup>th</sup> edition)

The key conclusions from Figure 7 respect to Pennsylvania CLECs include: (1) facilities-based is the preferred strategy (usually combined with loop resale); (2) data is at least as important as voice to CLECs; and (3) substantial investment in CLEC facilities has, is, and will be made in Pennsylvania.

#### E. CLECs in Pennsylvania: Services and Marketing

The Pennsylvania CLECs are diverse in terms of origins, size, partnerships, and revenues. However, there is a similarity in terms of what they sell and how it is sold.

<sup>43</sup> See Volumes 1 and 2 of *The CLEC Report 2000 (12<sup>th</sup> Edition)*; also see the web sites of the Pennsylvania CLECs.



The CLECs sell a service package composed of switched voice and data communications combined with Internet access. If the market of choice is residential and the CLEC's network has the bandwidth (e.g., a cable TV operator), then the CLEC will include a video component in the service package.

CLECs emphasize the advantage of buying a service package from a single supplier. Regardless of the type or origin of the CLEC, or the particular technology employed, the CLEC marketing themes often revolve around the concept of "one" – one source of supply, one bill, one network, and one customer support structure.<sup>44</sup> Based on the growth of CLEC revenues and lines, the "one" theme, in combination with prices for packages that are lower than buying services individually, seem to be effective with both business and residential customers.

For example, MCI WorldCom proclaims that:

On August 15, 2000, MCI WorldCom began offering the same competitive advantage of Local phone service to our friends in New York and Texas—One company, one bill, one customer service for all your service needs. Customers in New York, Texas and now Pennsylvania can experience the simplicity and convenience of MCI WorldCom's brand new product, One Company Advantage when they make MCI WorldCom their one company for Local, Regional Toll and long Distance phone service.<sup>45</sup>

CTSI, Inc., a unit of Commonwealth Telephone Enterprises, Inc., states that since 1997 it has been "an integrated communications provider (ICP) that offers an alternative to Verizon Communications (formerly Bell Atlantic) for telecommunications services in eight regional markets which include: Wilkes-Barre/Scranton/Hazleton, PA; Harrisburg, PA; Lancaster/Reading/York, PA; [and] Bucks/Chester/Montgomery counties in southeastern Pennsylvania." On August 8, 2000, CTSI announced that it was expanding its service to include Nanticoke, PA "[d]ue to the overwhelming success of its previous residential offerings."<sup>46</sup>

Market research supports the CLEC penetration strategy. Residential customers prefer a bundle of services (i.e., local, long distance, Internet access, and video) so long as there is a price discount for buying the package as opposed to individual services. Small and medium-sized businesses also prefer a package but are somewhat less price sensitive than consumers, emphasizing service quality and the convenience of a single

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<sup>44</sup> See the CLEC web sites; the "one" theme consistently recurs across the full range of CLECs. See, for example, the RCN web site where RCN claims it is the "largest single-source, facilities-based provider of telecommunications services to the residential market" and is "currently providing local and long distance phone, cable television and Internet services in markets from Boston to Washington, D.C." [http://www.rcn.com/about\\_rcn/index.html](http://www.rcn.com/about_rcn/index.html) (visited November 2, 2000).

<sup>45</sup> See <http://www.mci.com/aboutus/products/local/service.shtml> (visited November 6, 2000).

<sup>46</sup> See <http://www.ctco.net/pressreleases.html> (visited November 6, 2000).

supplier as well as price.

## **F. Future Technologies Affecting Local Competition (2001-2003)**

In the near future, changes in deployed technology will affect local exchange competition. New deployable technology supports entry by new CLECs and/or increased penetration by existing CLECs. Examples include the use of fiber in urban areas by CAPs (starting in 1987), and the rollout of digital cable TV networks allowing two way voice and data services (in process). The technologies below are likely to: (1) be available in the 2001-2003 period; and (2) accelerate CLEC penetration.

### **1. Wireless Technologies**

Historically, last mile links could be provided by fixed microwave facilities that were authorized by the FCC on a point-to-point basis. These links generally required large antennas and expensive installations, making fixed access services available primarily to only customers with substantial telecommunications traffic between locations within a metropolitan area or linking a business location to long distance carriers. Technical and regulatory developments are enabling greater use of wireless in "last mile" applications.

- a. High Frequency Spectrum.** Technological and regulatory developments since the mid-1990s have set the stage for greater use of wireless links to meet the "last mile" telecommunications needs of smaller businesses and of residential customers. In particular, the FCC has authorized spectrum blocks in the 24 GHz, and 38 GHz bands on a metropolitan area basis and auctioned large blocks for Local Multipoint Distribution Service (LMDS) operations at frequencies around 29 and 31 GHz. Because of their higher frequency, only smaller (less than 12 inches) antennas are required, and area wide FCC-authorization permits operators to engineer service locations without the need for "frequency coordination" with other licensees having potentially conflicting allocations at the same frequency within a metropolitan area.

"New" local carriers, such as Teligent (24 GHz), Winstar (38 GHz), and XO47 (LMDS), have begun providing a broad range of services to business customers. Because of the current economics of these systems, services are currently provided only to businesses located in larger buildings in which tenants can effectively share the cost of a premises radio terminal. However, it is expected that the economics of fixed wireless equipment will improve so

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47 Formerly Nextlink

that smaller businesses and multiple dwelling unit buildings (e.g., apartments) can be served on a cost-effective basis.<sup>48</sup> In Pennsylvania, Adelphia Business Solutions has announced plans to use the LMDS spectrum it has acquired across the state to provide services to locations not directly served by its fiber optic network.

- b. Video and cellular spectrum.** In the late 1990s, the FCC adopted regulations that allowed licensees of "wireless cable" spectrum (also called multipoint, multichannel distribution service, or MMDS) to convert that spectrum to two-way use. Unlike higher frequency spectrum, such as LMDS, which can only travel a few miles, MMDS spectrum can provide service in a radius of up to 35 miles from a central tower. Over the past few years, WorldCom and Sprint have obtained much MMDS spectrum. For example, WorldCom purchased CAI Wireless Systems in 1999. CAI operated an MMDS system in Philadelphia, and WorldCom has recently filed to operate an MMDS service in Pittsburgh. WorldCom has indicated that it intends to provide high-speed data access to smaller businesses using its MMDS spectrum while Sprint has indicated an interest in serving residential customers as well.

AT&T has also indicated that it has developed technology that could use portions of its cellular and PCS spectrum to provide voice services and high speed Internet access to residential customers. It currently has a trial of its "Digital Broadband" service underway in the Fort Worth, Texas area, and expects to offer the service to 15 million customers in 40 markets by the end of 2002.

## **2. Packetized Voice**

Local competition will also be affected by the increasing use of packetized voice services. Traditionally, voice services have been provided over "circuits," usually of 64 kbps bandwidth, that are established by switches and connect end users for the duration of their conversation. Recent improvements in packetization technology allow voice traffic to be packetized and use bandwidth only when necessary to transmit information from the conversation.

Most significantly, efforts are underway to transmit voice calls via Internet Protocol or other packet networks with a grade of service appropriate to transmit the elements of a voice conversation. In particular, vendors are developing technology that would permit the transmission of packetized voice traffic over the

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<sup>48</sup> Particularly as true "multipoint" equipment is deployed that permits multiple buildings to share spectrum on a demand-assigned basis.

local access network even though it may be reassembled into a traditional circuit call at a carrier's central office for hand-off to traditional voice networks. The result would be to provide low cost local access, without jeopardizing the end-to-end transmission reliability that is today obtainable primarily from the existing inter-city voice networks.<sup>49</sup>

Up to this time, cable operators that have offered voice service have done so on a circuit switched basis. However, cable operators, such as AT&T, serving the Pittsburgh area, and Charter, serving several franchises in southwestern Pennsylvania, plan to deploy IP-based telephony capabilities in their upgraded fiber-coax systems. More specifically, Charter has indicated that it plans to use the cable modem IP technology going into its network to support voice services, by deploying an IP modem on the side of a customer's home that would interface with the subscriber's existing home wiring.<sup>50</sup>

In another example, at the end of 1999 Comcast announced that "a cable telephony over Internet technical trial that is delivering high-quality, feature-rich telephony service to selected trial participants on Comcast's cable network in Union, NJ." In a November 16, 1999 press release, addressing the question of whether IP-based voice services could deliver the quality and reliability to satisfy customers "right now", Comcast said that its experience shows "cable telephony over IP is already up and working on our network."<sup>51</sup>

Competitive DSL providers also plan to install "integrated access devices" (IADs) at users' premises to combine several voice circuits and a high speed data circuit on a DSL loop. The IAD packetizes the voice circuit (e.g., IP or another protocol called ATM or asynchronous transfer mode) for interconnection to a traditional circuit-switched voice network or an IP voice network. The implication of this development is that *the availability from an ILEC of even one unbundled loop to a business or residence could permit a competitive carrier to replace all voice and data services to that customer.*

Indeed, packetized voice over DSL may prove to be a very efficient access mechanism by which smaller incumbent telephone companies may "edge out" from their historical Pennsylvania franchises to territory served by larger ILECs, and by which major out-of-region ILECS, such as SBC, enter the Pennsylvania local exchange marketplace.

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<sup>49</sup> For example, see "Carrier VOIP Gateways: Sounds of Success," *BCR Voice* 2000 (September 2000).

<sup>50</sup> See presentation of Larry Schwartz, VP Engineering, Charter Communications, at the KMI Fiber Optics Conference (October 18, 2000).

<sup>51</sup> See [http://www.comcast.com/press\\_room/press\\_releases/pr991116-3.asp](http://www.comcast.com/press_room/press_releases/pr991116-3.asp)

## IV. OBSERVATIONS AND CONCLUSIONS

Based on the available information, the following observations and conclusions are justified with respect to competition in Pennsylvania.

**1. Competition exists in Pennsylvania and has become embedded in the fabric of the state's telecommunications industry.**

The support for this conclusion consists of:

- a. The certifications issued by the Pennsylvania PUC to CLECs in the 1995-2000 period.<sup>52</sup>
- b. The volume of pending CLEC applications (39 as of September 30, 2000) – all of which had provisional authority to operate in Pennsylvania.
- c. The number of CLEC authorizations nearly doubled between 1997 and 1998, increased by 50% in 1999, and is forecasted to increase again in 2000 by 30% over 1999.
- d. Pennsylvania ranks among the top seven states in the nation for the number of CLECs submitting information for the FCC's most recent Local Telephone Competition Report.
- e. The percentage of CLEC lines (5%) in Pennsylvania exceeds the average state level penetration (4%) by CLECs across the United States.
- f. As of October 1999, the CLECs identified over 1.6 million active telephone numbers being used by their own customers. This figure represents CLEC wireline customer use, and it does not include wireless use by phones, pagers, or other wireless devices.<sup>53</sup>

**2. Local exchange competition will intensify in Pennsylvania with collateral benefits to consumers of lower prices, higher service levels and more innovative products and services.**

Based on experience, the action-reaction cycle of CLECs competing with ILECs and each other will benefit customers across all three major market

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<sup>52</sup> Through September 30, 2000; see Pennsylvania PUC web site <http://www.puc.paonline.com> sixty-five are forecast for year 2000.

<sup>53</sup> Letter from June M. Perry, Director, Office of Legislative Affairs, Pennsylvania PUC, to Honorable Thomas A. Michlovic, Pennsylvania House of Representatives, June 2, 2000 (12.68% of 13,180,000 numbers assigned to CLECs are being used).

segments (i.e., large business, small/medium business, and residential). There is evidence, for example, that consumers in New York already have realized substantial cost savings as a result of the new competition in long distance and local markets brought about by Verizon's entry into the long distance market.<sup>54</sup>

The core issues for CLECs will be: (1) how to gain customers; and (2) how to retain customers. In order to do so, CLEC and ILECs will seek to select among four core strategies, each of which benefits customers.<sup>55</sup> The four are:

- a. **Superior Customer Relationship** – The CLEC focuses on managing every aspect of the customer relationship, thereby reducing churn and retaining customers who value a relationship; probably assumes brand can be leveraged from telecommunications into content and/or application and/or transaction services.
- b. **Focused Service Superiority** – The CLEC attracts subscribers by means of innovative product and service offerings that offer noticeable superior value; may not be lowest price because of high levels of customer service; requires a continuing series of new product and service developments and roll outs; emphasis increasingly on data and video.
- c. **Horizontal Service Integration** – The CLEC attempts to achieve competitive advantage by bundling multiple communications, video and Internet services; requires aggressive acquisition/partnering to build the full range of required capabilities.
- d. **Lowest Price Service** – The CLEC engineers its enterprise to offer an acceptable service to the general consumer market at the lowest price in a given market; goals market share; sustainable advantage goes to very efficient firms.

These strategies are not mutually exclusive; sometimes they overlap. Obviously, these strategies are available to ILECs as well. However, given their size and

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<sup>54</sup> For an example of consumer benefits, see "Telephone Competition Rings up Big Savings for New York Consumers," Telecommunications Research and Action Center (September 6, 2000). The TRAC study concludes: "Residential customers will save up to \$120 million dollars a year after switching long distance companies, and up to \$97 million dollars a year after switching from Verizon to another local telephone company. The average consumer changing long distance service saved up to \$10.04 a month, and the average customer changing local service saved up to \$8.08 a month."

<sup>55</sup> See Kraemer presentation at *The Strategies for the 21<sup>st</sup> Century Conference*; also see Carl Aron, *An Ice Age is Coming to the Wireless World* (1985).

scale, ILECs will respond more slowly to market conditions than CLECs. Moreover, regulatory constraints on ILEC pricing for local services and requirements that various services be offered only through structurally separate affiliates make it difficult for them to respond effectively to today's dynamic competitive markets.

### **3. Competition in Pennsylvania is geographically dispersed.**

PUC and other third party sources show that CLEC:<sup>56</sup>

- a. Are authorized to operate throughout the state;
- b. Have received numbering codes for five Pennsylvania LATAs; and
- c. Operate across the full range of Pennsylvania cities.

Given the geographical dispersion, the benefits of competition, namely lower prices, higher service, and more innovation, should also be dispersed geographically across the state.

### **4. The emphasis in the future will be on data and video services.**

Voice service is increasingly a commodity, purchased based on the lowest price available from a credible supplier. This is valid for both local and long distance voice service.

The emphasis of the CLECs is transitioning from voice to data. A review of CLEC web sites to assess marketing themes, product/service announcements, and partnering activities leads to the conclusion that data services, especially Internet access and web hosting, are how the CLECs intend to gain customers and penetrate selected markets. Voice (usually low priced) tends to be treated as necessary but not sufficient, to be successful. Integrated access devices (IADs) on customer premises, with the associated packet technology, will enable CLECs to replace the traditional ILEC services (voice and data) by means of a single leased loop, addressing both markets simultaneously.

Video services are cited less frequently than data services but are emphasized increasingly by CLECs. CLECs that focus on business customers usually provide "business video" capabilities (i.e., video conferencing). Cable TV

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<sup>56</sup> See the following sources: (1) Pennsylvania PUC service authorizations; (2) the FCC's *Local Competition Report*; and (3) New Paradigm's *CLEC Report 2000*.

companies (including the new overbuilders like RCN) emphasize entertainment video for residential customers but include Internet access (usually) and cable telephony (increasingly) as part of a service package with a price that reflects a discount for buying the package.

**5. Local exchange competition is occurring in Pennsylvania across the three major customer segments (i.e., large business, small/medium business, and residential).**

Support for this conclusion can be obtained from a review of:

- a. Pennsylvania PUC CLEC authorizations;
- b. PUC tariff filings;
- c. CLEC marketing initiatives;
- d. CLEC product offerings; and
- e. CLEC collocation patterns in Verizon wire centers.

CLECs like XO (formerly Nextlink) offer service across the major segments but offer service packages tailored to specific segments (e.g., "corporate," "business," or "home"). Other CLECs (like RCN) offer services primarily to residential or home office customers while others (like Teligent) offer services only to businesses. However, all major segments are addressed by multiple CLECs competing with each other and the ILECs.

ILEC price and service level responses to CLEC initiatives also occur. This competitive action-reaction cycle creates a dynamic from which all major customer segments benefit. However, undue regulatory constraints on ILEC responsiveness, may lessen the potential benefit for consumers.



## SOURCES

### References & Presentations

"IAD Roundup," *BCR Access*, published by *Business Communications Review* (March 2000).

*Cable Television Industry Overview 2000*, National Cable Television Association (NCTA), p.10.

"Carrier VOIP Gateways: Sounds of Success," *BCR Voice 2000* (September 2000).

*CLECs: A New Paradigm*, Morgan Stanley (July 15, 1998).

*The CLEC Report 2000 (12<sup>th</sup> Edition)*, Volumes 1 and 2; New Paradigm Resources Group, Chicago, IL.

*Local Competition: The War of Many Against One (1997-2001)*, J. Kraemer, published by EDS/A.T. Kearney (1997), p.20-23.

Presentation of Dr. Joseph Kraemer, Director, LECG, at the *Strategies for the 21<sup>st</sup> Century Conference* sponsored by the Richard Ivey School of Business, University of Western Ontario (proceedings to be published).

Presentation of Mr. Larry Schwartz, VP Engineering, Charter Communications, at the KMI Fiber Optics Conference (October 18, 2000).

### Press Releases & Articles

"AT&T 'Cuts the Cord' to Provide Services into Homes; Debuts Nation's First Wireless Communications Company," AT&T press release (March 21, 2000).

"AT&T Wireless Improves the Nation's Most Popular Pricing Plan," AT&T Wireless press release (August 31, 2000).

"Goodbye, Cable Guy: Comcast Enters the Digital Era," *Barron's* (September 25, 2000), p.24.

"Industry Celebrates 100 Million Wireless Customers," Cellular Telephone Industry Association (CTIA) press release (July 26, 2000).

"RCN introduces its bundled communications services to residents of Eddystone, Pennsylvania," RCN press release (August 17, 2000).

"SBC Communications Names Lucent Technologies Primary Supplier for SBC's Advanced National Network," Lucent press release (October 5, 2000).

"Telephone Competition Rings Up Big Savings for New York Consumers," Telecommunications Research and Action Center (TRAC), (September 6, 2000).

"Verizon and North Point to Merge DSL Business," Verizon press release (August 9, 2000); See also SBC press release, "COVAD and SBC to Deliver Broadband Nation Wide," (September 11, 2000).

### **Government Documents**

*Application by Bell Atlantic New York for Authorization under Section 271 of the Communications Act to Provide In-region, InterLATA Service in the State of New York*, 15 FCC Rcd 3953, 3960 (1999).

*Application of Ameritech Corp., Transferor, and SBC Communications, Transferee*, 14 FCC Rcd 14712 (1999).

*Application of GTE Corp., Transferor, and Bell Atlantic Corp., Transferee*, FCC 00-221, June 16, 2000.

*Deployment of Wireline Services Offering Advanced Telecommunications Capability*, 14 FCC Rcd 20912 (1999).

*Implementation of Local Competition Provisions of the Telecommunications Act of 1996*, 11 FCC Record 15499 (1996).

*Local Competition: August 1999*, FCC, Table 4-2, p.60-61. Note that the FCC's 1999 report summarizes the competitive situation as of December 31, 1998; current PUC information shows that some CLECs have been authorized to provide service in Erie, the sixth LATA.

*Local Telephone Competition at the New Millennium*, FCC (August 2000). The report summarizes ILEC and CLEC data as of December 31, 1999.

Pennsylvania Public Utility Commission (PUC), "PUC Passes Rules to Jumpstart Local Phone Competition," (August 26, 1999).

### **Web Sites**

CTIA Semi-annual Wireless Industry Survey results, available on the CTIA web site at [www.wow-com.com](http://www.wow-com.com).

Pennsylvania PUC web site [www.puc.paonline.com](http://www.puc.paonline.com)

Web sites of CLECs active in, or with plans to enter, Pennsylvania markets.

## **Publications on Related Topics**

---

### **PROGRESS ON POINT SERIES**

George A. Keyworth II and Jeffrey A. Eisenach, "The FCC and the Telecommunications Act of 1996: Putting Competition on Hold?" PROGRESS ON POINT 2.1, October 1996.

Donald W. McClellan, Jr., Esq., "The FCC's \$13 Billion Tax Hike," PROGRESS ON POINT 4.1, June 1997.

Jeffrey A. Eisenach, "Time to Walk the Walk on Telecom Policy," PROGRESS ON POINT 4.3, July 1997.

Donald W. McClellan, Jr., Esq., "A Containment Policy for Protecting the Internet from Regulation: The Bandwidth Imperative," PROGRESS ON POINT 4.5, August 1997.

Jeffrey A. Eisenach, "Into the Fray: The Computer Industry Flexes Its Muscles on Bandwidth," PROGRESS ON POINT 5.9, December 1998.

Jeffrey A. Eisenach, "Creating the Digital State: A Four Point Program," PROGRESS ON POINT 6.4, August 1999.

Randolph J. May, "Is There Light At The End Of The Regulatory Tunnel? Not In Pennsylvania," PROGRESS ON POINT 6.8, November 1999.

Robert P. Frommer, "Pennsylvania: A Digital Economy Fact Sheet," PROGRESS ON POINT 6.10, December 1999.

Randolph J. May, "On Unequal Playing Fields: The FCC's Broadband Schizophrenia," PROGRESS ON POINT 6.11, December 1999.

Randolph J. May, "Give Competition a Chance," PROGRESS ON POINT 6.11, December 1999.

### **FUTURE INSIGHT SERIES**

George Gilder, George A. Keyworth II, Alvin Toffler, "A Magna Carta for the Knowledge Age," FUTURE INSIGHT 1.2, August 1994.

George A. Keyworth II, "Telecommunications: More Computing Than Communications," FUTURE INSIGHT 2.1, February 1995.

George A. Keyworth II and David E. Colton, "The Computer Revolution, Encryption and True Threats to National Security," FUTURE INSIGHT 3.5, June 1996.

Senator Orrin G. Hatch, "Antitrust in the Digital Age," FUTURE INSIGHT 5.1, February 1998.

Ira C. Magaziner, "Creating a Framework for Electronic Commerce," FUTURE INSIGHT 6.1, July 1999.

### **MONOGRAPHS, STUDIES, BOOKS, ETC.**

George A. Keyworth II, Jeffrey A. Eisenach, Thomas M. Lenard, David E. Colton, The Telecom Revolution: An American Opportunity (Washington, DC: The Progress & Freedom Foundation, May 1995).

Alvin and Heidi Toffler, Creating a New Civilization (Washington DC: The Progress & Freedom Foundation and Turner Publishing, Inc. Atlanta, GA, 1996).

George Gilder, The Meaning of the Microcosm (Washington, DC: The Progress & Freedom Foundation, August 1997).

George A. Keyworth II, Ph.D., Testimony before the Subcommittee on Telecommunications, Trade and Consumer Protection of the Committee on Commerce, U.S. House of Representatives, 105th Congress, on H.R. 695, the Security and Freedom through Encryption (SAFE) Act, September 1997.

Jeffrey A. Eisenach, Ph.D., Testimony on Section 706 of the Telecommunications Act of 1996 and related bandwidth issues, before the Subcommittee on Communications of the Committee on Commerce, Science, and Transportation, United States Senate, 105th Congress, April 22, 1998.

Jeffrey A. Eisenach and Charles A. Eldering, Comments to the Federal Communications Commission concerning deployment of advanced telecommunications capability, September 14, 1998.

Jeffrey A. Eisenach, Comments to the Federal Communications Commission concerning the Bell Atlantic/GTE merger, similar mergers, and bandwidth growth, December 23, 1998.

Erran Carmel, Jeffrey A. Eisenach, Thomas M. Lenard, The Digital Economy Fact Book, First Edition (Washington, DC: The Progress & Freedom Foundation, 1999).

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## **REGULATORY OVERKILL: PENNSYLVANIA'S PROPOSAL TO BREAKUP BELL ATLANTIC**

by

**Jeffrey A. Eisenach,  
Randolph J. May, and  
Charles A. Eldering\***

### **EXECUTIVE SUMMARY**

In the context of what began as a voluntary "global" settlement negotiation to resolve a number of outstanding independent telecommunications regulatory proceedings, the Pennsylvania Public Utility Commission ordered that Bell Atlantic-Pennsylvania establish separate corporate entities for its "wholesale" and "retail" local exchange operations. Apart from the chilling effects on future settlement negotiations which may result from the process used by the commission in this instance, the decision to require a breakup of Bell Atlantic's wholesale and retail operations is unsound as a matter of policy and should be reversed.

In order to facilitate the transition to a competitive telecommunications environment, particularly one in which broadband services become widely available, regulators should impose on the incumbent telephone companies only the least costly regulatory requirements consistent with pro-competitive objectives. And, as importantly, regulators must not impose regulatory obligations on the incumbents which, in effect, remove the incentives for competitors to build-out their own facilities.

For true competition will not develop, or be sustained, if competitors can obtain every network component they wish at regulatory-controlled prices, even when such

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components in no way remain "essential facilities." In other words, the incumbent should not be required to make available to competitors inputs at regulatory-controlled prices unless the competitors have no feasible alternatives because such inputs are natural monopolies. As Justice Stephen Breyer said in his concurrence in the *AT&T v. Iowa Utilities Board* case, "[a] totally unbundled world...is a world in which competitors would not have anything left to compete about."

Specifically, the commission's requirement for a wholesale/retail breakup is unwise for the following reasons:

- At this time in the transition to a competitive environment, the costs of the imposition of a novel form of structural separation far outweigh the benefits. In the *Competitive Safeguards* proceeding in 1996, the Pennsylvania commission found, after weighing the costs and benefits, that non-structural safeguards were sufficient to protect competitors from access discrimination and cross-subsidization concerns. It determined then that if it ordered structural separation, Bell Atlantic unnecessarily "would have been deprived of the economies of scale and scope that commonly characterize a unified telecommunications enterprise." With the further safeguards which are now in place as a result of the passage of the Telecommunications Act of 1996 and the Pennsylvania commission's own actions, there is even less justification today than there may have been three and a half years ago to impose more costly structural safeguards. While we have not attempted independently to verify Bell Atlantic's claim that it will incur expenditures in the range of \$1 billion to implement the PUC's breakup order, there is no doubt that the costs indeed would be very substantial.
- The unique form of separation imposed by the Pennsylvania commission necessarily is based on the backwards-looking assumption that the incumbent's local exchange network will remain a monopoly and, therefore, will need to be subject to traditional regulatory oversight for the indefinite future. Hence, the commission says that "[w]hen true competition develops, BA-PA's **retail** operations will no longer require a heightened degree of oversight." In other words, the PUC envisions competition developing – and regulatory controls being reduced – only at the retail level. This is contrary to the goal of the 1996 Telecommunications Act that facilities-based competition develop for local services. (Somewhat curiously, at the same time that the commission contemplates continued regulatory oversight of Bell's wholesale operations into the indefinite future, it says it anticipates that the local exchange will be irreversibly open to competition within approximately one year.)

- The wholesale/retail structural split is broader than the separate subsidiary requirement contained in the 1996 Telecommunications Act and that apparently authorized by the Pennsylvania code. The 1996 Act requires structural separation, subject to sunset requirements, for some of the Bell Companies' **non-local exchange** "competitive" services, such as information services and long distance. It specifically contemplates that the incumbents will continue to offer wholesale and retail local exchange services through the same entity. And the Pennsylvania statute specifies that the PUC may only authorize structural separation for services it designates as "competitive." In this case, the commission has done no such thing.
- Bell Atlantic's competitors, such as MCI, Sprint (perhaps to be one MCI/Sprint) and AT&T/TCI have very strong positions in the long distance market and have entered the local marketplace with substantial resources. At the time Bell Atlantic-PA is allowed to enter the long distance market, it will have no market share. It is unfair – and ultimately harmful to consumers – for regulators to impose the substantial extra costs and inefficiencies on the incumbent alone if less costly regulatory alternatives will protect competition. Regulators have an obligation not to increase the incumbent's costs unnecessarily.
- Asymmetrical regulation such as that proposed by the Pennsylvania commission particularly will discourage the large investment by the incumbent telephone companies necessary for the transition from a narrowband infrastructure to one supporting a wide array of high-speed integrated voice, data, and video digital services.

There are other aspects of the commission's order that might be questioned as well, such as whether a new "tax" needs to be imposed on carriers (which they are ordered **not** to recover from their customers) to establish a new Consumer Education Fund. The fund will expend money educating consumers "about their new choices" in the local exchange marketplace so they will not be confused by "a very dynamic environment."

Whatever else one may think of the wisdom of this type of new program supported by a new mandatory tax on carriers, the fact that the commission believes it necessary belies the notion that the local exchange marketplace is not likely to become competitive in the near-term. In and of itself, the Commission's recognition that we are all faced with a dynamic new local telecommunications environment should cause it to reconsider the imposition of a novel form of structural separation which assumes just the opposite.

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## INTRODUCTION

The promise of unfettered competition and meaningful deregulation, so widely and loudly heralded when President Clinton signed the Telecommunications Act of 1996,<sup>1</sup> has turned into what some have called a “regulatory Vietnam,” a quagmire in which every step towards deregulation is matched by a step backwards. Many of the Federal Communications Commission’s recent actions illustrate this phenomenon of imposing more detailed and cumbersome regulatory requirements on the incumbent local telephone companies (“ILECs”), including on their provision of new broadband services. This is so even at the same time the Commission acknowledges the opportunity costs imposed by unnecessary regulation with regard to the ILECs’ competitors.

For example, FCC Chairman Kennard recently spoke eloquently about the costs of regulation in explaining why the Commission has refused to require cable television operators to provide unaffiliated ISPs such as AOL nondiscriminatory access to their cable modem service:

It is easy to say that government should write a regulation, to say that as a broad statement of principle that a cable operator shall not discriminate against unaffiliated Internet service providers on the cable platform. It is quite another to write that rule, to make it real and then to enforce it. You have to define what discrimination means. You have to define the terms and conditions of access. You have issues of pricing that inevitably get drawn into these issues of nondiscrimination. You have to coalesce around a pricing model that makes sense so you can ensure nondiscrimination. And then once you write all these rules you have to have a means to enforce them in a meaningful way.”<sup>2</sup>

Chairman Kennard continued, knowingly, “I have been there on the telephone side,” and it would be wrong to “just pick up this whole morass of [telephone] regulation and dump it wholesale on the cable pipe.”<sup>3</sup>

At the same time the Commission is refusing – correctly – to regulate the cable industry’s modem service, it issues ever more intricate orders setting forth ever more detailed requirements that the ILECs must follow in unbundling and sharing their networks.<sup>4</sup> The latest requirement mandates that the ILECs share the bandwidth

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<sup>1</sup> Telecommunications Act of 1996, Pub. L. No. 104-104.

<sup>2</sup> “Consumer Choice Through Competition,” Remarks by William E. Kennard, Chairman, FCC, at the National Association of Telecommunications Officers and Advisors, 19<sup>th</sup> Annual Conference, Atlanta, GA, September 17, 1999, at 5.

<sup>3</sup> *Id.*

<sup>4</sup> For the most recent action in the *Local Competition* proceeding concerning the unbundling of the ILECs’ local networks, see the Third Report and Order and Fourth Notice of Proposed Rulemaking, Implementation of the Local



capacity in their local loops.<sup>5</sup> Not only is the Commission imposing myriad unbundling, interconnection, and resale requirements, but it also exercises close regulatory oversight with regard to the pricing of the services that it requires to be made available to competitors pursuant to these access mandates.

Unfortunately, some states are taking actions that are more unsound than those of the FCC in regulating the ILECs. A recent order of the Pennsylvania Public Utility Commission ("the PUC" or "Commission") falls into this category.<sup>6</sup> If it is not modified, it will have the effect of inhibiting the further development of local and long distance competition in Pennsylvania and stifling the incentives to invest that are necessary to the build-out of competing modern telecommunications infrastructures, particularly the upgrade of infrastructures supporting the transition to widespread delivery of broadband services.<sup>7</sup> And, if not modified, the Pennsylvania action also may establish a precedent which, however unsound, other regulators may be tempted to follow.

#### **A. A "VOLUNTARY" SETTLEMENT PROCEEDING GONE AWRY**

In the context of a so-called voluntary "global settlement" proceeding initiated in an effort to resolve a number of outstanding telecommunications regulatory proceedings, the Pennsylvania PUC proposed in a September 30, 1999 order that Bell Atlantic-Pennsylvania, Inc. be broken up into two separate companies for purposes of offering local exchange services. One entity would offer only "wholesale" services and the separate corporate entity would offer only "retail" services.<sup>8</sup> This proposal by the Pennsylvania commission is noteworthy because it appears to assume – wrongly – that the incumbent telephone company's local exchange network infrastructure will not become subject to effective competition and, therefore, for the foreseeable future, that the incumbent's local exchange facilities must be subject to continued heavy regulatory oversight.

If the Pennsylvania commission's views concerning structural separation along "wholesale/retail" lines were to gain sway with other state regulators, or with the FCC,

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Competition Provisions of the Telecommunications Act of 1996, CC Docket No. 96-98, FCC 99-238, released November 5, 1999.

<sup>5</sup> Deployment of Wireline Services Offering Advanced Telecommunications Capability, CC Docket No. 98-147, FCC 99-355, released December 9, 1999.

<sup>6</sup> Joint Petition of Nextlink Pennsylvania, et al., Opinion and Order, Docket Nos. P-0091648 and P-00991649, September 30, 1999 (hereinafter "*September 30 Order*").

<sup>7</sup> For a discussion of the need for a "containment policy" in which, at a minimum, broadband services are left unregulated even while narrowband services continue to be subject to traditional regulation, see Comments of the Progress and Freedom Foundation, Inquiry concerning the Deployment of Advanced Telecommunications Capability, CC Docket No. 98-146, filed with the FCC on September 14, 1998; also see Donald W. McClellan, "A Containment Policy for Protecting the Internet from Regulation: The Bandwidth Imperative," *Progress on Point*, August 1, 1997.

<sup>8</sup> *September 30 Order*, at 215-235.

consumers of telecommunications services throughout the nation would be harmed. The incumbent local carriers' incentives to invest in network modernization efforts would be reduced and the continued development of sustainable local and long distance competition would be undermined. Additionally, reduced incentives for network upgrades will limit the ability of the incumbent telephone companies to participate in the broadband revolution and will deprive consumers the benefits of having of competitive providers of broadband services, such as high speed data and digital video.

At the same time that it ordered this unique form of structural separation,<sup>9</sup> the Pennsylvania PUC required BA to reduce its intrastate access charges, reduce the rates for interconnection and unbundled network element services, enhance collocation opportunities for new entrants, extend the rate caps for certain of its own local exchange services beyond the previously-agreed upon expiration date, and embark on other new programs. For example, the commission required BA to fund, along with other carriers, a Consumer Education Fund to engage in efforts to educate consumers "about their new choices" in the local exchange marketplace so that they will not be confused by "a very dynamic environment."<sup>10</sup>

There are several aspects of the PUC's September 30 decision that might be questioned in and of themselves, such as whether the required reductions in the prices for UNEs are cost-justified or whether the new interconnection and unbundling requirements are reasonable or whether the new Consumer Education Fund represents sound policy. (It is worthwhile observing at this point that the impetus behind the establishment of the new fund is a recognition that consumers will be confronted with new choices in the local marketplace. It is questionable whether another new "tax" needs to be extracted from the telephone companies to fund various select individuals and groups to "educate" consumers about their new telecommunications alternatives. The competitors will have every incentive to perform this function. In any event, the acknowledgment that consumers will face new choices in a dynamic marketplace undermines the fundamental premise of the structural separation requirement—that the local exchange is likely to remain a natural monopoly.)

Any "settlement" process involves some "give and take." Certainly there are benefits from a public policy viewpoint in reaching a fair and comprehensive settlement of the outstanding issues before a regulatory body because such a settlement allows the contending parties to know with a greater degree of certainty what the shape of the regulatory landscape will be. Thus, it is to be expected that individual pieces of the total package, standing alone, might not be the preferred outcome from a public policy perspective.

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<sup>9</sup> Apparently, no other state commission has ordered an involuntary breakup on this wholesale/retail basis, although the Massachusetts commission is presently considering this option.

<sup>10</sup> September 30 Order, at 186.

In this instance, however, the Pennsylvania PUC's decision to require separate corporate entities for the carrier's "wholesale" and "retail" local exchange operations is sufficiently problematic that it is worthy of highlighting on its own merits. Because the structural separation requirement mandated by the PUC is the feature of the Commission's decision that, on a forward-looking basis, is most out of step with the realities of today's telecommunications environment, this paper will focus principally on that requirement.<sup>11</sup>

## **B. IN TODAY'S TRANSITION TO A COMPETITIVE ENVIRONMENT, THE COSTS OF IMPOSING A NOVEL FORM OF STRUCTURAL SEPARATION OUTWEIGH THE BENEFITS**

The fundamental purpose of both structural and non-structural safeguards in the context of regulation of incumbent local exchange carriers is to prevent the ILECs from using their present dominant market position to favor their own unregulated affiliates over their competitors and to prevent them from cross-subsidizing more competitive services with revenues from less competitive services. But the transactional costs imposed by structural separation are even greater than those imposed by non-structural safeguards, which, of course, are substantial in any event.<sup>12</sup> In an increasingly competitive environment, any increase in the costs imposed by unnecessary regulation unfairly benefits the competitors, not competition.

As Alfred Kahn, one of the country's foremost experts on regulatory economics, puts it:

The reasons businesses conduct a number of operations under the umbrella of a single financially affiliated entity, rather than through market transactions, is, in a fundamental sense, the belief that subjection of these several operations to unitary managerial control permits the achievement of savings of transaction costs, as well as avoiding the uncertainties of trying to achieve the requisite purchase and coordination by purchases

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<sup>11</sup> Apart from the merits of the PUC's decision, the way in which the settlement process was handled may have a chilling effect on the prospects for settlement negotiations in the future. In this instance, it appears that parties were invited to engage in voluntary settlement negotiations in an attempt to resolve on a global basis specifically-identified outstanding proceedings. The issue of the breakup of Bell Atlantic along wholesale/retail lines was not specifically at issue in any of the underlying proceedings. By imposing such a drastic remedy in the context of what began as voluntary settlement negotiations, the commission makes it less likely that parties will be willing in good faith to enter into such voluntary negotiations in the future.

<sup>12</sup> Bell Atlantic claims that its preliminary estimates show that it will incur expenditures in the range of \$1 billion to complete the tasks necessary to comply with the PUC's structural separation requirement. See Affidavit of Daniel J. Whelan, President and CEO of Bell Atlantic of Pennsylvania, Inc., p 4., attached to Bell Atlantic's Application for Extraordinary Relief, filed in the Supreme Court of Pennsylvania, October 21, 1999. While the authors of this report have not attempted to verify the accuracy of that claim, it is clear that the costs imposed on Bell Atlantic will be substantial.

and sales in the market. In these circumstances, the very notion of requiring a firm to share those economies 'equally' with outsiders contradicts the very notion of a firm.<sup>13</sup>

Prior to the implementation of policies at the federal and state level designed to foster competition in the local exchange marketplace – and the emergence of actual competition as a result of these policies – the imposition of some form of structural separation may have made more sense.<sup>14</sup> Even though structural separation imposes substantially greater costs on the incumbent than reliance on non-structural safeguards in terms of the required duplication of facilities, personnel, and systems,<sup>15</sup> if the prospects for the development of competition in the heretofore non-competitive market are sufficiently bleak because it is thought to be a natural monopoly, it is easier perhaps to justify such greater costs under some type of cost/benefit analysis.

The Pennsylvania PUC itself previously has recognized that structural separation imposes greater costs than nonstructural safeguards. In 1996, when the emergence of local competition was in a much earlier stage of development than today, the commission refused to impose a separate subsidiary requirement with regard to Bell of Pennsylvania's offering of competitive services.<sup>16</sup> In the *Competitive Safeguards* proceeding, the commission found, after weighing the costs and benefits, that non-structural safeguards were sufficient to protect competitors from access discrimination and cross-subsidization concerns. It pointed out that if it ordered structural separation, Bell unnecessarily "would have been deprived of the economies of scale and scope that commonly characterize a unified telecommunications enterprise."<sup>17</sup> The competitive separate subsidiary "would have had to absorb the full range of joint and common costs that otherwise share within the boundaries of the unified service operation, with a direct and consequent effect on the prices of the associated competitive services."<sup>18</sup>

<sup>13</sup> Alfred E. Kahn, *Letting go: Deregulating the Process of Deregulation*, MSU Public Utilities Papers (1998), p. 45. See also Ronald Coase, "The Nature of the Firm," *Economica*, Vol. 4 (1937), pp. 386-405.

<sup>14</sup> In the early days of the development of competition in the telecommunications marketplace, the FCC imposed a separate subsidiary requirement on the provision of competitive services by AT&T, and post-divestiture, on the Bell Companies. Amendment of Section 64.702 of the Commission's rules and Regulations (Computer II), 77 F.C.C. 2d 384 (1980), recon., 84 F.C.C. 2d 50 (1981), further recon., 88 F.C.C. 2d 512 (1981), aff'd sub nom. *Computer and communications Industry Ass'n v. FCC*, 693 F. 2d 198 (D.C. Cir. 1982).

<sup>15</sup> For an extended discussion of the costs and efficiency losses attributable to structural separation, see the FCC's discussion in its Third Computer Inquiry. Amendment of section 64.702 of the Commission's Rules and Regulations (Computer III), 104 F.C.C. 2d 958 (1986), at paras. 46-99. In that order, the Commission decided to eliminate the structural separation requirement on AT&T and the BOCs that it had imposed in Computer II because "the record strongly supports a finding that the inefficiencies and other costs to the public associated with structural separation significantly outweigh the corresponding benefits." *Id.*, at para. 46.

<sup>16</sup> Investigation to Establish Standards and Safeguards for Competitive Services, with Particular Emphasis in the Areas of Cost Allocations, Cost Studies, Unbundling, and Imputation; and to Consider Generic Issues for Future Rulemaking, Opinion and Order, docket No. M- 00940587, released July 18, 1996 (hereinafter "*Competitive Safeguards*").

<sup>17</sup> *Id.*, at 186.

<sup>18</sup> *Id.*

Now, however, over three and one half years later, the PUC proposes to require the incumbent telephone company to initiate a process to place its "wholesale" and "retail" operations into separate corporate entities. This proposal is unsound and backwards-looking because it assumes that there will not be competing alternatives to the ILECs' basic network infrastructure and that, therefore, regulators will continue to regulate the "wholesale" infrastructure indefinitely. Hence, the Pennsylvania commission says that "[w]hen true competition develops, BA-PA's *retail* operations will no longer require a heightened degree of oversight."<sup>19</sup> In other words, the PUC envisions competition developing – and regulatory controls ultimately being reduced – only at the retail level and only for the retail entity.

But policy frameworks are now in place at the federal level, as a result of the passage of the Telecommunications Act of 1996, and at the state level, as a result of the various state commissions' decisions, that are fostering competition in the local exchange marketplace. The interconnection, unbundling, and resale requirements applicable to the ILECs – in other words, the imposing array of non-structural safeguards guaranteeing that ILEC competitors will have cost-based access to the ILEC's own network infrastructure and will not be disfavored vis-à-vis the incumbent's own service offerings<sup>20</sup> – ensure that the local exchange marketplace is in the process of being opened to competition. (This assumes that these requirements are not carried so far that they remove all incentives for the ILECs' competitors to build-out their own facilities infrastructure.)

In fact, in New York, Pennsylvania's neighbor, the Public Service Commission already has determined that the local exchange marketplace is open to competition.<sup>21</sup> There are differences in each state, of course, but it is unlikely that the conditions in New York and Pennsylvania are so different that the Pennsylvania commission would assume that local competition on a facilities basis will never develop. Indeed, Bell Atlantic apparently has made at least some progress in Pennsylvania because the PUC says that it anticipates that BA can obtain "Section 271 approval" from the FCC to offer interLATA services within approximately one year.<sup>22</sup> As the PUC acknowledges, in order to recommend such approval to the FCC, the Department of Justice must

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<sup>19</sup> September 30 Order, at 231. (Emphasis supplied.)

<sup>20</sup> As pointed out earlier, if these non-structural safeguards are carried too far, their costs may exceed their benefits as well. For an instructive commentary on the costs of imposing excessive unbundling obligations, see Justice Breyer's concurring opinion in *AT&T V. Iowa Utilities Board*, 119 S. Ct. 721, 753-754 (1999). After explaining that the costs of excessive unbundling will discourage the incumbent from undertaking the investment necessary produce technological innovation, he summed up: "A totally unbundled world – a world in which competitors share every part of an incumbent's existing system, including, say, billing, advertising, sales staff, and work force (and in which regulators set all unbundling charges) – is a world in which competitors would have little, if anything, to compete about." *Id.*, at 754.

<sup>21</sup> Application of New York Telephone Company (d/b/a Bell Atlantic-New York) for Authorization to Provide In-Region, InterLATA Services in New York, CC Docket No. 99-225, October 19, 1999.

<sup>22</sup> September 30 Order, at 226.

conclude that the local market is "irreversibly open to competition" and the FCC must find that BA has satisfied the TA's "14-point competitive checklist."<sup>23</sup>

The PUC also states that it does not anticipate it can complete a follow-on proceeding necessary to develop a structural separation plan before the FCC is ready to grant Bell Atlantic's request for Section 271 approval.<sup>24</sup> Thus, the PUC proposes to implement a novel form of structural separation at the very time that the pro-competitive measures required by the 1996 Act and by the PUC itself will have succeeded in "irreversibly" opening the local exchange to competition.<sup>25</sup>

In fact, the PUC may be unduly optimistic that it can complete the structural separation implementation proceeding within a one-year time frame. The proceeding commences with the requirement that Bell file a plan "of sufficient detail to identify **each component or element** of retail service needed to be structurally separate and to allow a **current and verifiable cost analysis** of **each component or element**, and to provide the Commission with such cost analysis."<sup>26</sup> In other words, the proceeding will not only involve disputes among the interested parties concerning the delineation of the individual "components" or "elements" of services to be placed in the separate entities, but it almost certainly will turn into a full-blown rate proceeding regarding these components and elements, with contending cost-of-service witnesses.<sup>27</sup>

Whatever the merits a structural separation approach may have had in the past, it is counter-productive at this time for regulators to impose such a remedy, especially in the form of a wholesale/retail split that assumes that the local exchange will remain non-competitive. Compliance with the non-structural safeguards and the more limited form of separate subsidiary requirements of the 1996 Act will accomplish the Commission's pro-competitive objectives.

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<sup>23</sup> Even a casual perusal of the merger application filed recently by MCI and Sprint makes clear that these parties now believe that local competition is near. They say: "With the advent of facilities-based competition for the provision of local telephone service, the separation of the provision of local and long distance services mandated by the Bell System divestiture will be erased. Competitors will be able to choose from a competitive array of local telecommunication products from a variety of suppliers, including and end-to-end voice and data service." Application of Sprint Corporation and MCI Worldcom, Inc. for Consent to Transfer Control, November 17, 1999, at 9.  
<sup>24</sup> *Id.*

<sup>25</sup> If Bell Atlantic does not, in fact, meet the competitive checklist requirements, then the PUC would not recommend, nor would the FCC approve, a request by Bell Atlantic pursuant to Section 271, 47 U.S.C. §271, to obtain long distance authority.

<sup>26</sup> September 30 order, at 234. (Emphasis supplied.) The Commission also refers to the need to conduct "operations studies" as part of the implementation proceeding. *Id.*, at 233.

<sup>27</sup> The Commission's earlier *Competitive Safeguards* proceeding is instructive with regard to the likely length of such a proceeding. Even though structural separation was not ordered in that proceeding, so that the Commission did not have to deal with the separation implementation issues it is now proposing to decide, the proceeding still took two years to complete. See *Competitive Safeguards*, at 2-11, for a description of the history of the proceeding.

### C. A "WHOLESALE/RETAIL" STRUCTURAL SEPARATION IS INHERENTLY UNSOUND AND BROADER THAN THAT REQUIRED BY THE 1996 TELECOMMUNICATIONS ACT

It is true that the 1996 Telecommunications Act requires separate subsidiaries – subject to varying sunset requirements<sup>28</sup> – for some of the BOC's **non-local exchange** "competitive" services, such as information services and long-distance. But the Telecommunications Act does not require a structural separation of the incumbents' local exchange facilities on a "wholesale" and "retail" basis. Indeed, it contemplates exactly the opposite: that the incumbent will continue to offer wholesale and retail services through the same entity. Thus, Section 251(c)(4) provides that ILECs have a duty "to offer at **wholesale** rates any telecommunications service that the **carrier** provides at **retail** to subscribers who are not telecommunications carriers."<sup>29</sup>

While the Pennsylvania statute authorizes the PUC to order structural separation, it specifies that it may do so only for "competitive" services."<sup>30</sup> This demarcation between competitive and non-competitive services in the Telecommunications Act and the Pennsylvania statute – dependent on an identification of specific services as "competitive" – is a more limited and workable form of structural separation than a regime that attempts to implement separation of all "wholesale" and "retail" local exchange operations.

Most fundamentally, apart from the practical difficulties associated with implementation of a wholesale/retail dichotomy,<sup>31</sup> this type of novel structural separation is unsound policy. It is based on the assumption that the incumbents' local network infrastructure will remain a "bottleneck" facility for the indefinite future, subject to traditional regulatory controls, including rate regulation. As discussed above, this premise is incorrect, except to the extent it becomes a self-fulfilling prophecy by virtue of imposition of ill-conceived regulatory schemes.

By signaling that traditional rate regulation and other close regulatory oversight of the incumbents' basic local exchange network infrastructure will remain in place indefinitely, regulators will reduce the incentives of the incumbents to upgrade their own facilities in the hope of gaining a competitive edge. And they simultaneously will reduce

<sup>28</sup> 47 U.S.C. §272 (f).

<sup>29</sup> 47 U.S.C §251(c)(4). (Emphasis supplied).

<sup>30</sup> 66 Pa. C. S. § 3005(h).

<sup>31</sup> A separation based on "wholesale" versus "retail," as a practical matter, seems to place control over the characterization of the services in the hands of the customer based on the customer's self-identification as either a "carrier" or "end user." Of course, major telecommunications "end users" such as large corporations often resell services, thereby putting themselves in the same position as "carriers," whether or not they are officially denominated as such. Therefore, this type of dichotomy, subject to regulatory gamesmanship by customers who may also be competitors even though not classified as "carriers," is not as workable as a regime in which the legislator or regulator designates certain specific services as "competitive."

the incentives of competitors to build out their own infrastructures. The action of the Pennsylvania commission will "in a very real sense discourage competition itself, in the name of encouraging it: if competitors can obtain from incumbents, at regulatory-prescribed prices, not just facilities and services that are naturally monopolistic but any and all others – present and future – that could feasibly be supplied independently, the incentive of incumbents to innovate and of competitors to provide their own will be attenuated."<sup>32</sup>

Moreover, there are some local exchange services that the Commission would require incumbents to "wholesale" to their CLEC competitors that already are or will become competitive (for example, interoffice trunks and switching facilities) more quickly than others (for example, local loops). But, conceptually, the "wholesale/retail" split doesn't distinguish among specific elements of local exchange services based upon the degree of competitiveness of the service, or even the near-term likelihood of a change in the competitive status. That's almost certainly why the 1996 Telecommunications Act assumes that BOCs will continue to offer "wholesale" and "retail" services through the same corporate entity,<sup>33</sup> and why the Pennsylvania statute grants the PUC the authority only to require that services it designates as competitive be provided through a separate subsidiary. In contrast, the approach taken by the PUC essentially assumes, on a static basis, that any element or component of local service which a competitor wishes to acquire from Bell must remain subject to indefinite regulation.

#### **D. STRUCTURAL SEPARATION REQUIREMENTS THAT TREAT INCUMBENTS UNEQUALLY VIS-À-VIS THEIR COMPETITORS WILL IMPAIR COMPETITION**

Under the Pennsylvania commission's proposal, Bell Atlantic alone would be required to incur the extra costs and inefficiencies imposed by structural separation. This is so even though companies like MCI and Sprint (perhaps to be MCI/Sprint) and AT&T/TCI have very strong positions in the long distance market and have already entered the local exchange marketplace with substantial resources. Recall that at the time when the separation of BA's operations is to be implemented – no earlier than a year from now – these major Bell Atlantic competitors and others (for example SBC) presumably will be able to compete in the local exchange marketplace because the PUC predicts that the local market will be irreversibly opened to competition.

But also note that at that time BA will have no presence in the long distance marketplace because it will just be at the starting gate. Of course, if Bell of

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<sup>32</sup> Alfred Kahn, *supra* note 11, at 48.

<sup>33</sup> 47 U.S.C. §251(c)(4).



Pennsylvania has not opened up its local exchange in accordance with the 1996 Act's requirements and the Pennsylvania commission's requirements, then presumably the PUC would not recommend, and the FCC would not grant, Bell's Section 271 application, and we are not here suggesting otherwise.

At a time when all service providers acknowledge that consumers are looking for one-stop shopping to satisfy their various communications needs and providers are rushing to respond by offering a cost-efficient bundled package of services,<sup>34</sup> it is inappropriate to require that the incumbent alone be handicapped by requiring it to offer its services through separate corporate entities. And it is inappropriate to impose the substantial extra costs and inefficiencies of structural separation in terms of duplication of facilities, personnel, and systems on the incumbent alone if less costly alternatives will protect competition.

The solution, of course, is not to impose structural separation – or even non-structural safeguards – on the ILECs' major competitors for the sake of achieving regulatory symmetry. The appropriate course is for regulators to choose the least-costly regulatory alternative for the ILECs that will accomplish the pro-competitive objectives.

#### **E. ASYMETRICAL REGULATION PARTICULARLY WILL DISCOURAGE DEPLOYMENT OF BROADBAND FACILITIES**

When the Pennsylvania legislature enacted new Chapter 30 of the Public Utility Code in 1993, a principal purpose was to provide a regulatory regime that would encourage the accelerated deployment of broadband facilities which will enable transmission of high-speed, high-capacity services encompassing data, voice, graphics, and video communications.<sup>35</sup> The Telecommunications Act of 1996 had the same goal, of course.<sup>36</sup>

<sup>34</sup> For example, in recent testimony before the Senate Judiciary Committee in support of MCI's proposed merger with Sprint, Sprint Chairman and CEO William T. Esrey stated that the merger better positions the companies "to compete in the bundled services marketplace." *TR Daily*, November 4, 1999. The merger application itself states that "[t]he familiar categories of local and long distance services are fading, as carriers offer local and long distance packages (soon to be joined by the BOCs) to meet customer demand, as long distance costs and prices continue to fall, and as wireless telephony growth explodes." Application of Sprint Corporation and MCI Worldcom, Inc. for Consent to Transfer Control, November 17, 1999, at 2. And AT&T just announced on December 1 that it plans to use Bell Atlantic's platform of unbundled network elements to expand its rollout of local exchange services throughout New York. It is offering a "Local One Rate New York" plan which bundles local and long distance service. *TR Daily*, December 1, 1999.

<sup>35</sup> 66 Pa. C.S. §§ 3001-3009. The statute defines "broadband" as a "communication channel using any technology and having bandwidth equal to or greater than 1.544 megabits per second." 66 Pa. C.S. §3002.

<sup>36</sup> See Section 706(a)(1) of the Telecommunications Act of 1996, codified at 47 U.S.C 157 nt, which provides that the FCC and each state commission shall encourage the deployment of "advanced telecommunications capability" to all Americans. Section 706 (c) (1) defines advanced telecommunications services, without regard to the transmission media or technology, as "high-speed, switched, broadband telecommunications capability that enables users to

Proposals such as the Pennsylvania commission's, apart from all of the reasons discussed above, are especially unsound with regard to the inhibiting effects they are likely to have on the deployment of ILEC broadband services.<sup>37</sup> Competitive safeguards which treat incumbents so differentially vis-à-vis their competitors will discourage ILECs from investing in the facilities necessary to lead to widespread deployment of broadband services envisioned by the 1996 Act and the Pennsylvania legislature. An examination of such disparate treatment in the context of the competition between cable operators and incumbent telephone companies to offer broadband services, including Internet access services over their own infrastructures, illustrates this point. It should be noted, however, despite the focus here on the cable/ILEC rivalry, that the competition to deliver broadband services extends to several other delivery modes.<sup>38</sup>

Cable operators' entry into the broadband telecommunications field is due in no small part to the regulatory flexibility they are afforded under Title VI of the federal Communications Act in sharp contrast to the complex and somewhat uncertain situation faced by the incumbent telephone companies under Title II. Proposals to divide the incumbent into structurally separate wholesale and retail companies as a means to ensure fair access to the narrowband twisted wire pair infrastructure only will serve to ensure that incentives for broadband infrastructures operated by telephone companies are severely reduced. Consumers will be forced to wait until cable companies provide Internet access and other new services without the benefits of competition from the incumbent telephone company.

Deployment of broadband infrastructure by telephone companies, particularly in the form of Digital Subscriber Line (DSL) technologies, requires significant investments. Although the present discussion revolves around Asymmetric Digital Subscriber Line operating at data rates in the 128 kb/s to 1.5 Mb/s range, other technologies including High Speed Digital Subscriber Line, Rate Adaptive Digital Subscriber Line and Very High Speed Digital Subscriber Line (HDSL, RADSL and VDSL respectively) are commercially available. These technologies, generically referred to as xDSL, will allow subscribers to receive a multitude of new Internet based high bandwidth services over

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originate and receive high-quality voice, data, graphics, and video telecommunications using any technology." 47 U.S.C. 157 nt.

37 See also Comments of the Progress and Freedom Foundation, Inquiry Concerning the Deployment of Advanced Telecommunications Capability, FCC Docket No. 98-146, filed with the FCC on September 14, 1998, for a full discussion concerning how, at a minimum, broadband services should be protected from regulation.

38 There are other broadband services that already do compete, or are capable fairly soon of competing, with cable modems and DSL services. The FCC recently stated that: "Actual or potential providers of broadband services may include: LECs (incumbent and competitive, both resale and facilities-based, regardless of the technology used), cable television companies, utilities, MMDS/MDS/wireless cable' carriers, mobile wireless carriers (both terrestrial and satellite-based), fixed wireless providers, and others." Local Competition Broadband Reporting, Notice of Proposed Rulemaking, CC Docket No. 99-301, released October 22, 1999, at para. 32. Indeed, the FCC recently reaffirmed that, in light of the deployment of cable modems and other broadband technologies, "the incumbent LEC does not retain a monopoly position in the advanced services market." Local Competition Provisions of the

twisted wire pairs; but only if incumbent carriers have the incentives to upgrade their networks and deploy such equipment.

The existing twisted wire pair infrastructure was built to provide analog voice and limited circuit switched data services, with the majority of subscribers being served directly from the telephone company central office. In fact, the FCC estimates that over two-thirds of local loops employ copper wire pairs from the central office to the customer.<sup>39</sup> Given that average loop lengths in the US exceed 7,000 ft, with well over 20% of the loops being longer than 10,000 ft and over 50% being longer than 5,000 ft, delivery of high speed data and other broadband services to the majority of Americans requires extensive conditioning of the existing twisted wire pair plant at best, but is more likely to require a massive build-out of fiber optic facilities.<sup>40</sup>

Deployment of xDSL services, even at relatively low data rates, requires additional equipment and build-out of the plant with fiber optics and new terminals to reduce the distance between the transmitting equipment and the residence or small business. Because of the heavy additional costs imposed by structural separation and continued regulation of the rates and other terms and conditions of the wholesale services, the wholesale company's incentives to upgrade the network and evolve the narrowband infrastructure into a broadband infrastructure are significantly lessened. Timely deployment of broadband services requires that the investment community remain convinced that investments in infrastructure can be recovered through the exponentially growing revenues from new Internet-related services.

AT&T's acquisition of TCI and the subsequent investments in infrastructure to provide high-speed Internet access and telephone services indicates that competition in broadband telecommunications is beginning to occur. The promise of competition is arising most strongly from cable operators entering the broadband field by providing high-speed data services over cable networks. These services, provided on a bundled basis which include cable modems and Internet access through an affiliated Internet Service Provider (ISP), are an attractive source of revenue for cable operators, and a welcome source of high-speed Internet access to consumers.

To some extent competition is beginning to occur on the telephone side of the fence as entrants gain access to twisted wire pairs to provide data services to businesses and residences. However, the existing twisted wire pair infrastructure is in no way adequate to carry broadband services at high penetration rates, and it will

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Telecommunications Act of 1996, Third Report and Order and Fourth Further Notice of Proposed Rulemaking, CC Docket No. 96-98, released November 5, 1999, at para. 308.

<sup>39</sup> Fiber Deployment Update, End of Year 1998, Jonathan M. Kraushaar, Common Carrier Bureau, Federal Communications Commission (<http://www.fcc.gov/ccb/stats>).

<sup>40</sup> S. Ahmed et al., "Digital Subscriber Line (HDSL and ADSL) Capacity of the Outside Loop Plant," *IEEE Journal on Selected Areas in Communications*, vol. 11, no. 9, pp. 1540-1549 (December 1995).

certainly not allow telephone companies to compete with cable operators in the provisioning of video services.

The vision of a competitive environment for telecommunications services – one in which competition occurs in the areas of traditional telephone services, Internet access, and video services – will only be realized if there are alternate infrastructures capable of carrying the full range of broadband services. Cable operators, able to provide broadband services without price regulation, unbundling, interconnection, or customer premises equipment concerns, are upgrading their networks. In contrast, incumbent telephone companies, subject to the complex and ever-changing Title II unbundling, interconnection, and resale requirements, have much less incentive to upgrade networks in order to enter into new businesses for which the prospects are uncertain. Proposals such as those of the Pennsylvania commission's, which impose costs even greater than those which already are imposed by the existing safeguards regime, have even more deleterious effects.

#### **1. Deployment of advanced telecommunications services such as xDSL requires significant investment**

There are two requirements for deploying advanced data and video services over twisted wire pairs: i) additional equipment needs to be deployed to support the new services, because the existing Public Switched Telecommunications Network (PSTN) infrastructure was not designed to support multi-megabit Internet access or video services; and ii) loop lengths need to be reduced to achieve multi-megabit transmission rates over twisted wire pairs.

The telephone industry in general and manufacturers of modems in particular have made tremendous progress in developing devices and systems which can achieve high data transmission rates over twisted wire pairs. The technological progress in this field appears somewhat akin to "Moore's Law," which correctly predicted the evolution in the density of semiconductor devices as doubling approximately every 2 years. Modem technology appears to have made similar progress, with the data rates supported over twisted wire pairs doubling every 1.9 years.<sup>41</sup> Nevertheless, increases in the bandwidth supplied to residential customers and small businesses are not being obtained merely by advances in signal processing algorithms and integrated circuit design. They are being achieved due to the build-out of the plant, typically by the laying of fiber optic cables and deployment of data service terminals in the serving area between the central office and the residence.

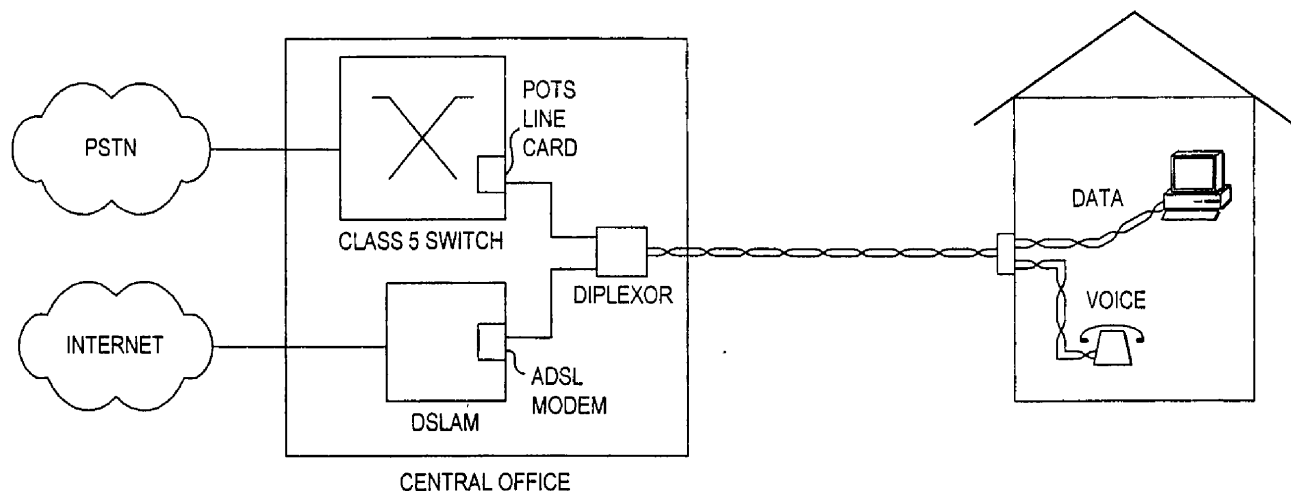
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<sup>41</sup> C. Eldering, J. Eisenach, L. Sylla, "Is There a Moore's Law for Bandwidth," *IEEE Communications Magazine*, pp. 117 – 121 (October 1999).

The relatively low data rates supported by today's DSL – frequently limited to ISDN type rates for long loops – pales in comparison to the 25-50 Mb/s which can be supported using presently available VDSL technology on loops not exceeding 3,000 ft. Given that twisted wire pair has a limited – and very length dependent – data-carrying capacity, reducing the distance between the central office and the subscriber is critical in enabling the plant for broadband services.

Figure 1 illustrates how ADSL can be deployed from the telephone central office. Additional equipment, in the form of a Digital Subscriber Line Access Multiplexer (DSLAM) with appropriate ADSL modems, is required to modulate the data signal onto the twisted wire pairs. A diplexer is also required to combine the voice signal with the data signal. A POTS separation filter is used at the subscriber side to separate the voice signal from the data signal.

Providing data services over twisted wire pairs clearly requires additional equipment beyond what is in place today for narrowband services. More importantly, the number of subscribers that can be served by ADSL equipment directly from the central office is limited due to the loop length. Additionally, loops which do not exceed the maximum length for DSL service may have bridged taps or other impediments to digital data services. Achieving high penetration rates and providing data at above 1.5 Mb/s can only be accomplished by upgrading the telephone infrastructure and reducing the mean distance between the modems and the residence.

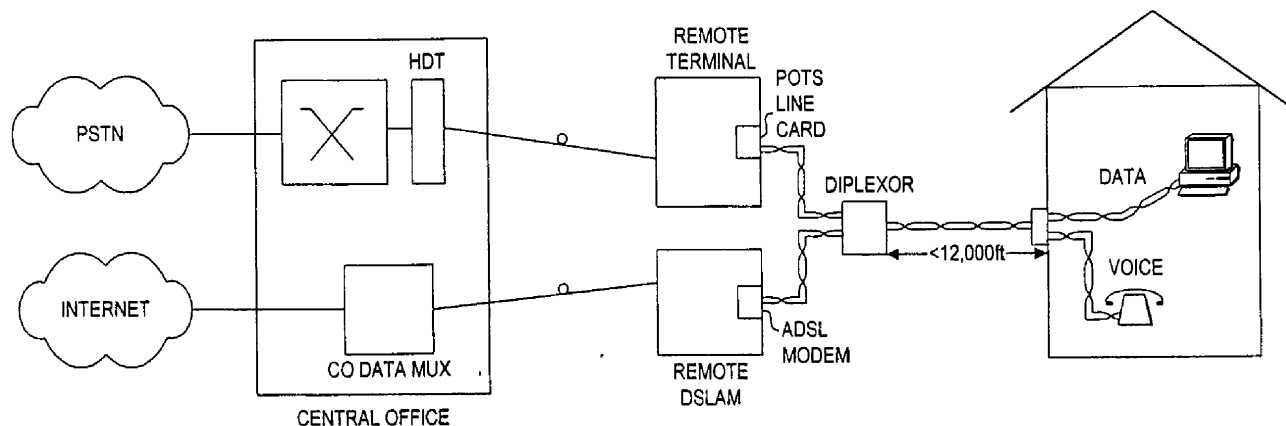


**Figure 1. Deployment of ADSL from the central office**

Figure 2 illustrates the deployment of DSL services from a location remote from the central office. In this example, voice services are provided from a remote terminal, which places the POTS cards closer to the subscribers, eliminating the need for large bundles of twisted wire pairs from the central office. This architecture, entitled Digital Loop Carrier (DLC), has been in place for narrowband services for many years, and in many scenarios is a cost-effective solution for providing voice services. Nevertheless,

today's DLC equipment does not support high-speed data services, and as illustrated in Figure 2, additional equipment including a remote DSLAM with ADSL modems needs to be deployed. At the central office, packet multiplexing equipment is required, and fiber must be utilized to interconnect the data multiplexer with the remote DSLAM. Clearly, the infrastructure in place for narrowband services, even when equipment is remotely located from the central office, does not support advanced data services without additional investment.

In addition to the fact that the amount of fiber used in the local loop is small, as evidenced by the fact that the vast majority of subscribers are served directly from the central office, fiber is only utilized in situations when the loop length is so long that it is a burden for traditional telecommunications services. As a result, local loop deployments of fiber reduce excessive loop lengths, but do not necessarily provide the basis for DSL services. In the case of Bell Atlantic, data from the FCC on Fiber to the Pedestal deployments<sup>42</sup> indicates that the average loop length (fiber and copper) where fiber is deployed in Bell Atlantic territory is over 15,000 ft. As one would expect, Bell Atlantic deploys fiber not to reduce the average copper loop length to be able to support advanced DSL services, but rather because it is cost-effective for narrowband services. The fiber technology used may support a range of analog voice services, but there is no guarantee that any types of DSL services can be supported based on the existing equipment, or that the loop lengths have been reduced to the extent that multi-megabit per second data rates can be supported.



**Figure 2. Deployment of ADSL from a remote terminal/DSLAM.**

Figure 3 illustrates the deployment of an integrated Next Generation Digital Loop Carrier (NGDLC) narrowband/broadband infrastructure, based on combining packet-based Internet and video services with narrowband services. In this architecture,

<sup>42</sup> Fiber Deployment Update, End of Year 1998, Jonathan M. Kraushaar, Common Carrier Bureau, Federal Communications Commission (<http://www.fcc.gov/ccb/stats>).

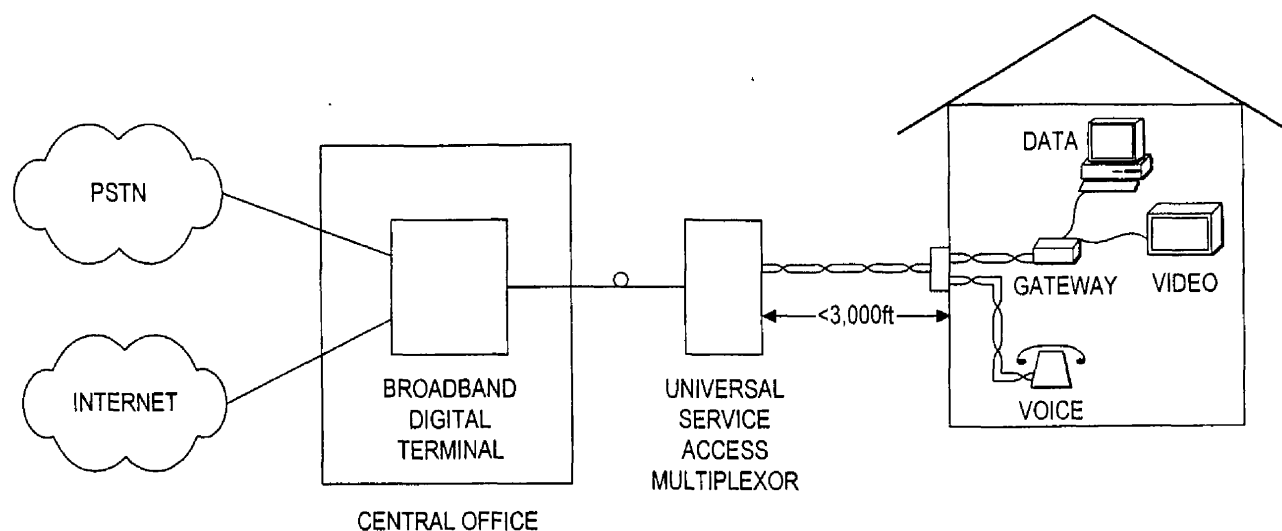
services are combined at the central office at a Broadband Digital Terminal (BDT) and transmitted over a fiber optic cable to a Universal Service Access Multiplexer (USAM) which is located within 3,000 ft. of the residence or business. Such equipment is commercially available, but the decision to deploy an advanced infrastructure is wholly dependent on the ability to recover the investment by providing new services. It is important to note that on the cable side, integrated architectures form the basis for new services, and cable operators are actively upgrading the HFC network to support both data and telephony services in addition to video.

Previous cost studies have demonstrated that all architectures: Fiber-to-the-Curb, Hybrid Fiber Coax, and Digital Loop Carrier, require significant investments to achieve high data rates at high penetrations.<sup>43</sup> As an example, simple twisted wire pair loops have first installed costs on the order of \$600 per subscriber, while Digital Loop Carrier and Fiber-to-the-Curb infrastructures can cost several hundred dollars more. The decision to deploy advanced infrastructure clearly depends on the business case that can be written for the use of the infrastructure.

In addition, the HFC networks owned by cable operators can be upgraded incrementally, while investments in switched infrastructures are more lumpy in nature. Cable operators, while unable to escape the fact that high bandwidth services at high penetration rates will require extensive infrastructure build-out, can enter the broadband telecommunications market gradually and relatively unhindered by regulation, choosing to serve the areas most likely to provide solid revenue streams. Telephone companies, faced with the decision to invest in fiber build-outs for future services, logically cannot choose to move forward on broadband services when regulation prohibits recovery of the investment on new services. Excessive regulation – such as the mandating of structural separation for infrastructure and services – only serves to deter the investments in the switched infrastructure which will be required to increase the data-carrying capability of the network.

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<sup>43</sup> N. Omoigui, M. Sirbu, C. Eldering, and N. Himayat, "Comparing Integrated Broadband Architectures from an Economic and Public Policy Perspective," in *The Internet and Telecommunications Policy Research*, G.W. Brock and G.L. Rosston, eds. (Lawrence Erlbaum Associates, Mahwah, NJ, 1996)



**Figure 3. Deployment of an integrated voice/video/data platform.**

## **2. Separation of wholesale/retail operations will only serve to decrease investments in broadband infrastructures**

Plans to create wholesale/retail operations for telephone infrastructure and retail services likely will have a chilling effect on the deployment of infrastructure for broadband services. Given the migration which will occur from narrowband circuit switched services to broadband services in the coming years, a phenomena already clearly taking place in today's transitional marketplace,<sup>44</sup> steps which create barriers to the deployment of infrastructure will only serve to decrease competition in telecommunications in the future and will prevent consumers from receiving new services at competitive prices.

In Pennsylvania, as elsewhere, delivery of xDSL services will require substantial investment on the part of Bell Atlantic. In order to compete in the video arena, very large investments would be required to reduce the loop lengths to under 3,000 feet, a length which would provide consumers with a source of switched digital services at video carrying rates. In an appropriately deregulated environment, Bell would make investment decisions based on the ability to provide new services free from unbundling requirements and pricing controls.

<sup>44</sup> See Deployment of Wireline Services Offering Advanced Telecommunications Capability, CC Docket No. 98-147, FCC-147, released December 9, 1999, at para. 8, whereC states: "In the near future, xDSL-based technology and packet-switched networker may account for a large portion of the telecommunications facility."



The Commission takes a different view of the investment decision, stating:

In contrast, BA-PA indicated that its DSL service offering is limited to customers served by relatively short loops that require no conditioning. This testimony indicates that BA-PA has no intention of serving a significant portion of the Pennsylvania market – the portion that is not presently served by an “ideal” loop, including loops over 12,000 feet. We cannot permit BA-PA to deny these customers the substantial benefits of DSL from CLECs simply because BA-PA has made the strategic decision to ignore this substantial market segment.<sup>45</sup>

The Commission fails to recognize that this “strategic decision” is related to Bell’s ability (or not) to recover its investment in the tremendous infrastructure build-out required to support services like ADSL. If there is insufficient incentive for the incumbent to roll out services like ADSL to a majority of customers, the situation for services like VDSL will be substantially worse.

The PUC’s structural separation proposal will only achieve further erosion of Bell’s incentives to deploy broadband-ready platforms. It indicates that not only do state regulators intend to continue regulating the narrowband infrastructure, but also that they intend to micromanage the transition to a broadband environment, determining specifically what upgrades are appropriate and when. Given the view widely that has been accepted in recent years that regulation should be reduced commensurate with the introduction of competition, certainly this would be a backwards step.

## **F. CONCLUSION**

The Pennsylvania PUC proposal to require Bell Atlantic to establish separate corporate entities for its “wholesale” and “retail” local exchange operations is ill-conceived, even if well-intentioned. A decision to impose any new form of structural separation at this late date is questionable from a cost/benefit perspective. Before concrete steps were taken by federal and state policymakers to foster the development of a competitive local services environment, the costs imposed by structural separation may have weighed in the balance differently. But in an increasingly competitive local services environment, the Pennsylvania commission’s approach requiring the incumbent to incur the substantial extra costs associated with structural separation over and above the costs which would be imposed by nonstructural separation is harmful to consumers and, ultimately, to competition.

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<sup>45</sup> Opinion and Order of the Pennsylvania Public Utility Commission on Dockets P-00991648 and P-00991649, August 26, 1999, p.112.

Most importantly of all, the Pennsylvania approach is unsound because it assumes, incorrectly, that competition in the local exchange is unlikely to develop in the foreseeable future. In fact, the Pennsylvania approach may become self-fulfilling because it will diminish the incentives for competitors, whether they be cable operators, CLECs, wireless operators, satellite services providers or others, to not build-out competing local network exchange infrastructures. By subjecting the incumbent telephone company's local infrastructure to traditional regulatory controls for the indefinite future, the transition to a world of competing broadband facilities-based infrastructures will be slowed. This was not the vision of Congress in 1996 when it enacted the Telecommunications Act and it should not be the vision of Pennsylvania as we enter the next millennium.

## Publications on Related Topics

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### PROGRESS ON POINT SERIES

George A. Keyworth II and Jeffrey A. Eisenach, "The FCC and the Telecommunications Act of 1996: Putting Competition on Hold?" Progress on Point 2.1, October 1996.

Donald W. McClellan, Jr., Esq., "The FCC's \$13 Billion Tax Hike," Progress on Point 4.1, June 1997.

Jeffrey A. Eisenach, "Time to Walk the Walk on Telecom Policy," Progress on Point 4.3, July 1997.

Randolph J. May, "Is There Light at the End of the Regulatory Tunnel? Not In Pennsylvania," Progress on Point 6.8, November 1999.

### FUTURE INSIGHT SERIES

George A. Keyworth II, "Telecommunications: More Computing Than Communications," Future Insight 2.1, February 1995.

### MONOGRAPHS, STUDIES, BOOKS, ETC.

George A. Keyworth II, Jeffrey A. Eisenach, Thomas M. Lenard, David E. Colton, The Telecom Revolution: An American Opportunity (Washington, DC: The Progress & Freedom Foundation, May 1995).

George A. Keyworth II, Ph.D., Testimony before the Subcommittee on Telecommunications, Trade and Consumer Protection of the Committee on Commerce, U.S. House of Representatives, 105th Congress, on H.R. 695, the Security and Freedom through Encryption (SAFE) Act, September 1997.

Jeffrey A. Eisenach, Ph.D., Testimony on Section 706 of the Telecommunications Act of 1996 and related bandwidth issues, before the Subcommittee on Communications of the Committee on Commerce, Science, and Transportation, United States Senate, 105th Congress, April 22, 1998.

Jeffrey A. Eisenach and Charles A. Eldering, Comments to the Federal Communications Commission concerning deployment of advanced telecommunications capability, September 14, 1998.

Jeffrey A. Eisenach, Comments to the Federal Communications Commission concerning the Bell Atlantic/GTE merger, similar mergers, and bandwidth growth, December 23, 1998.

Jeffrey A. Eisenach and Thomas M. Lenard, editors, Competition, Innovation and the Microsoft Monopoly: Antitrust in the Digital Marketplace (Washington, DC: Kluwer Academic Publishers and The Progress & Freedom Foundation, February 1999).

Erran Carmel, Jeffrey A. Eisenach, Thomas M. Lenard, The Digital Economy Fact Book, First Edition (Washington, DC: The Progress & Freedom Foundation, 1999).

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# Local Loop: NASDAQ Noose

Al Gore's Internet socialism is choking the technology sector

BY JEFFREY A. EISENACH

**T**he tech sector's problems lie largely inside the Beltway, but neither the Bush tax cut nor more rate cuts by the Fed will by themselves revive the NASDAQ. When Nortel and Lucent cancel orders, Cisco trims revenue projections, and the optical and semi-conductor components makers slow down their lines, they are not reacting primarily to the dot.com crash—since most of the departed never generated much network traffic anyway—nor to the general slowdown in the economy.

Far more critical is the government-induced failure of the telecom networks to supply the most critical missing link to the broadband future: the local loop, the "last mile" of connection between hugely capacious optical networks promising a terabyte transformation of the world economy, and the pathetic trickle of bits that can actually reach most American desktops, at home or office. Not until the last mile can deliver on the promises of no-delay data downloads, video on demand, and teleconferencing as cheap as 10-10-221 will the Net fulfill its promise.

Adequately upgrading the local loop, even with high-speed copper DSL lines or broadband-capable coax cable rather than optical fiber, will under any circumstances take years and require investments measured in hundreds of billions, in a process governed by the physical realities of trenches, truck rolls, and central offices of brick and mortar. It's going to take longer and cost more because the Clinton Administration, the guys who were supposed to get the Net, arranged matters so the cable and local phone companies best positioned to do the job can't make money at it. No DSL or Internet cable yet? That's why.

The Telecommunications Act of 1996, passed just as the Web was becoming a reality, was intended to create the same sort of competition for local telephony as in long distance. Under the act, the local phone companies, essentially the Baby Bells, but known by the impossible acronym ILECs (for incumbent local exchange carriers), were required to lease their facilities to competitors at FCC-determined prices. Set the prices low enough, went the theory, and lots of upstarts would get into the telephone business as resellers, jump-starting a competitive industry by giving new entrants a fair chance against the "entrenched monopolists." This also meant, of course, that you could become a phone company without making much in the way of useful additions to the local infrastructure.

Nevertheless, the Clinton Federal Communications Commission, under Gore friend Reed Hundt and his successor Bill Kennard, plunged ahead. With some cooperation from state regulators, they set the prices at which new entrants (known as "Competitive Local Exchange Carriers," CLECs, or just "The Good Guys") could lease facilities from the incumbent ILECs at levels significantly below actual costs. Then they created other advantages for the new entrants, including an arbitrage scheme known as reciprocal compensation that allowed the newcomer CLECs to reap billions in payments from the incumbent phone companies and imposed new costs on the incumbents, requiring them, for example, to segregate broadband services like DSL into separate subsidiaries. Cable companies were also subjected to regulation, described euphemistically as "open access" requirements.

Not surprisingly, CLECs proliferated. Financed by regulatory largesse and many of the same venture capitalists who funded the Internet retailers, the CLEC newcomers joined the likes of DrKoop.com as darlings of the 5000 NASDAQ. Telecommunications equipment makers contributed easy financing. Show up at Cisco or Lucent and you'd be provided with a line of credit good for millions of dollars in new switches and other equipment. Experience in the telecommunications business? Strictly optional.

Last summer reality began to set in. Investors, spooked by the collapse of the dot.coms, began asking the CLECs some tough questions about business models and prospects of profitability, just as the courts, responding to ILEC lawsuits, were telling the FCC to reconsider key elements of its CLEC-friendly policies.

It was a one-two punch the CLECs could ill afford. On the business end, the messy physicality of the business—construction costs, permit delays and balky new technologies—proved more than most of them could handle. Only a few—most notably Allegiance, NextLink (now XO) and MacLeod—had robust plans and the ability to execute them, usually including real infrastructure improvements and important alliances.

As break-even dates receded and regulatory advantages eroded, investors began jumping ship. Between September 1, 2000, and the end of the year, the market valuation of publicly traded CLECs fell by nearly \$100 billion, a 75 percent drop. Access to new capital dried up, and companies like ICG (November) and Northpoint (January) declared bankruptcy. Most of

**The Clinton Administration, the guys who were supposed to get the Net, made it impossible for the phone companies to bring it on home.**

the rest are on life support, laying off workers, canceling expansion plans and conserving cash in hopes of a brighter tomorrow. But as Alex Mandl, CEO of Teligent, said last month, "Those that cannot get more financing will fall away," and for now the money window is closed.

Along with the CLECs collapsed the Clinton Administration's strategy for deploying local broadband, depressing both the near-term order sheets and the mid-term prospects of the rest of the information technology sector. In February the members of TechNet, the Silicon Valley lobbying group that includes companies like Cisco, Hewlett-Packard, Intel, Microsoft, and Sun Microsystems, met to decide on priorities for the year. For the first time ever the staff proposed adding local broadband deployment as an issue, albeit on the "second-tier." The board overruled them, making it a top priority.

In the political battle looming in the wake of the Clinton policy collapse, the ILECs, most of the cable companies, and some of the stronger, facilities-based CLECs all favor loosening regulations that limit their ability to profit from new facilities. That would make it harder for the weaker CLECs to compete. But it would also restore the incentives

for everyone to invest.

On the other side are the weaker CLECs who want even cheaper access to the ILECs lines, and the long distance companies, led by AT&T, who favor just about anything that hurts the ILECs, their sworn Baby Bell enemies. They propose to declare the last mile once and for all a natural monopoly, seize the local infrastructure from the Baby Bells, and place it in the hands of a board of "stakeholders" charged with running the whole thing in "the public interest."

Laid out in a February speech by AT&T CEO Michael Armstrong, this blueprint for local loop socialism—Armstrong calls it "structural separation"—appears to have originated in the office of Vice President Al Gore back in 1997. It derived from a similar plan for "Independent System Operators" (ISOs) to manage the electric transmission grid. The Clinton White House thought the ISO idea was great, and California had already adopted it. (California's ISO was soon helping to bring on the energy crisis and bankrupting utilities.)

Calling the telecom version a "LoopCo," Gore's team started promoting the idea in the Fall of 1997. In March 1998, LoopCo surfaced in public

in an FCC filing by Level 3, a company with especially close ties to Gore's staff. Referring specifically to the California ISO, it proposed separating the local loop from the rest of the phone company, to be managed by a LoopCo whose board would have a "minimum number of outside public directors." Since then, the idea has spread to the states, and a version is actually close to being adopted in Pennsylvania. If AT&T has its way, other states will soon follow.

For AT&T and the failing CLECs, LoopCos would be a dream come true. Not needing to invest in new facilities to reach local customers, they could lease access from the LoopCo's at prices likely to be far below replacement costs. And their enemies the ILECs would be—well, dismembered.

Of course, the Telecommunications Act's vision of a competitive market for local telecom services would be dismembered as well. With LoopCos leasing out facilities at below-cost prices, no one would have an incentive to invest in the new facilities, broadband or otherwise, that define meaningful competition. That would include the cable companies and wireless and satellite companies. Left to their own devices they would presently render the notion of natural monopoly absurd by providing multiple broadband alternatives in the same neighborhood.

One thing is certain: Putting LoopCos in charge of the broadband won't rejuvenate the economy or revive the NASDAQ. To do that, we should try an idea seldom seen in telecom recently: the profit motive. ♪

**This blueprint for local loop socialism seems to have originated within Al Gore's office in 1997.**

# The Washington Times

SUNDAY, FEBRUARY 4, 2001 ★

JEFFREY EISENACH

**T**he Bush administration deserves great credit for quickly recognizing and reacting to the nascent economic downturn. Its commitments to reducing taxes and restoring balance to our energy policies are commendable and correct.

With the appointment of Michael Powell to chair the Federal Communications Commission, it now appears the administration is prepared to take on another cause of the current economic problems: Over-regulation of the information technology sector.

The problems in the IT sector are the direct result of a failed attempt by the FCC to manufacture competition in the market for local telephone service. By forcing incumbent providers to lease out their facilities below actual costs, the FCC hoped to "jump start" competition by a new generation of telephone resellers — known as "competitive local exchange carriers" or CLECs.

These new companies would lease telephone lines from the incumbents (ILECs) and resell them to customers. Someday, the commission hoped, they would also invest in new facilities.

To achieve this goal, the commission put in place one of the most arcane and complex regulatory schemes ever devised. This approach significantly reduced the incentives of both incumbents and entrants to invest in new facilities.

As Justice Stephen Breyer said in a key 1999 Supreme Court decision, such rules "may diminish the original owner's incentive to keep up or to improve the property by depriving the owner of the fruits of value-creating investment, research, or labor. . . . Nor can one guarantee that firms will undertake the investment necessary to produce complex technological innovations, knowing that any competitive advantage deriving from those innovations will be dissipated by the sharing requirement."

In short, why would anyone build new facilities when you can lease existing facilities for less? To make matters worse, the commission has now allowed this complex regime to spill over into the market for broadband. Thus, rules originally intended to inject competition into the traditionally monopolized market for plain old telephone service have ended up being imposed on the new, inherently competitive market for

## Rescue opportunity at the FCC

data — i.e., on the Internet.

To compound the problem still further, the FCC dragged its feet in reforming the antiquated system of cross subsidies and price controls commonly known as "universal service" rules. As a result, phone companies are still required to service residential customers at rates far below costs. In New Jersey, for example, the incumbent phone company is required to sell residential telephone service for \$8.25 per month. Not surprisingly, new entrants have shown little interest in competing for such customers.

At the end of the day, the FCC's effort to create a competitive telecom sector yielded only the illusion of competition. Indeed, the collapse of the CLECs is at the very core of the Nasdaq meltdown that began in August. Investors, smarting from the collapse of the "dot.com" stocks this spring, started taking a hard look at the CLEC sector this summer — and they did not like what they saw.

Few of any of these companies were making money, and virtually all had business plans that depended on the regulatory largess of the FCC. Like the dot.coms, they had made promises about growth and profitability they simply could not

*At the end of the day, the FCC's effort to create a competitive telecom sector yielded only the illusion of competition.*

keep. High-flyers like Covad, Northpoint, RCN, Teligent and Winstar saw their market valuations virtually disappear in a matter of a few weeks. Unable to compete in the residential market, even big companies like AT&T and MCI had to scale back their promises — and their plans for building out competitive networks.

By December 2000, the rout was complete. The CEO of one major CLEC was quoted as predicting that "out of the 45 or so publicly traded CLECs . . . half of them probably won't be here next year."

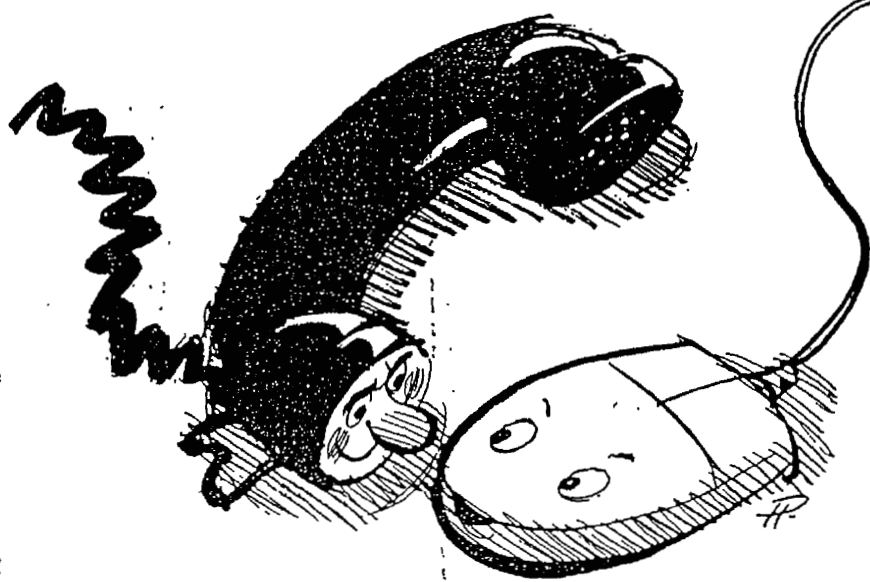
Last week, Northpoint declared bankruptcy, becoming the first major casualty of a policy that was doomed from the beginning. The

collapse of the CLECs has already had broad consequences for the IT sector. At companies like Cisco, Lucent, Nortel and Motorola, the collapse of the CLECs showed up first in the form of late payments and ultimately bad debt. Reduced sales projections and predictions of lower profits — and even losses — were close behind.

But this is only the beginning. Thanks to convergence, what happens in telecom directly affects the entire computer and Internet sector of the economy. The next generation of Internet content and applications depends on ubiquitous, affordable broadband services. And the next generation of personal computer and software sales depends on the next generation of applications. No broadband means no applications, and that means no need for new computers, new chips and new software.

The new chairman of the FCC, Michael Powell, understands all this quite well. He was among the first to see, and to warn of, the CLEC's tendency to rely too heavily on regulatory largess, and even told a CLEC convention in 1998 that, "Relying too heavily on current regulatory distortions can provide short-term benefits, but it also perpetuates these and other distortions that will not necessarily benefit you over time." Mr. Powell's words were not heeded then, either by the CLECs or by the commission. Now, as in so many areas, it falls to the new administration to clean up the mess its predecessors left behind. At the FCC, President Bush has the right man for the job.

Jeffrey A. Eisenach is president of the Progress & Freedom Foundation and an author of "The Digital Economy Fact Book." The views expressed here are his own.



# Animal Advice

*The new FCC chair is correctly telling the communications industry that success requires cows and capitalism.*

By Randolph J. May

The new chairman of the Federal Communications Commission, Michael Powell, has good advice to the industry he helps to regulate. In a speech in 1999, he proclaimed that "a fundamental premise of competition and markets is that the general rule is that you are supposed to 'Get your own cow.'" The advice is not only sage, but is biblical, based as it is on the Tenth Commandment's injunction against coveting thy neighbor's ox.

## Fourth Branch

As I mentioned in my last column, Powell also warned in a recent speech that the agency's "bureaucratic process is too slow to respond to the challenges of Internet time." His two statements are not unrelated. In Internet time it's been eons since the passage of the Telecommunications Act of 1996, signed into law five years ago last month. With a new chairman at the helm of the agency responsible for the act's implementation, the agency needs to reorient its policies in a way that will encourage new market entrants to get their own cows. Let me explain.

The 1996 legislation was spurred by the increase in competition that had been taking root for a decade or so in various telecommunications markets and by the budding convergence of the markets themselves. This new competition and convergence were attributable to many factors, but especially to rapid technological advancements, the positive effects of the 1984 break-up of the old Bell system, and some key pre-1996 FCC decisions that wisely had begun to relax regulatory requirements on new entrants and incumbents alike.

So in 1996, Congress faced an environment radically different than the monopoly environment that prevailed when the original Communications Act of 1934 was passed. Congress's vision for the new statute was made clear in the very first paragraph of the Conference Committee report accompanying the statute. The report declared that the act was intended "to provide a pro-competitive, deregulatory national policy framework."

Amid the celebratory hoopla surrounding passage of the statute, there was much anticipation that the old regulatory paradigm—one in which the FCC closely controlled entry and service provider rates—was dead. Indeed, some observers were fond of saying that the old model was as "as dead as Elvis."

### HARD TO KILL

Well, not quite. Like Elvis, the old public utility regulatory paradigm has proved rather hard to bury. And because the old model has resisted burial, the full promise of the 1996 act has yet to be



realized. Although there have been gains, progress in one of the most important markets has been disappointing.

One of the primary goals of the 1996 Act was to bring competition to the local telephone marketplace. As of the end of last year, about 7 percent of the local lines nationwide were served by the new competitive local exchange carriers (which I'll call the "new carriers," for short). While this is evidence of progress, Congress must have hoped that there would be more competition in the local marketplace five years after the act's passage.

What went wrong is subject to much debate. In my opinion, both Congress and the FCC share the blame. First, the statutory provisions relating to local telephone competition are sufficiently ambiguous that the FCC's attempts to implement them have led to protracted litigation that continues to this day. The continuing uncertainty regarding the rules of the road for local competition has been a disincentive for investment in new facilities by local service participants, both new carriers and incumbent local exchange carriers ("incumbent carriers," for short) alike.

Second, left with so much discretion to fill in the blanks, the FCC has exhibited an irrational exuberance for retaining excessive regulatory control over the process of transitioning to a competitive environment. This penchant for holding tight the regulatory reins was evident in the commission's August 1996 order establishing regulations to implement the act's local competition provisions.

While Congress envisioned that the new carriers would build out their own network infrastructures, it also provided a means to give the new carriers a jumpstart by requiring the incumbents to unbundle and lease piece parts of their networks to the new carriers. But the statute mandates such unbundling only if access to network elements is "necessary" and the failure to provide access would "impair" the ability of the new carriers to provide service.

The agency's local competition rules implementing the statute finally were reviewed by the Supreme Court in *AT&T v. Iowa Utilities Board* in January 1999. Even given the statute's ambiguity, and the normal deference afforded an agency's construction of ambiguous statutory provisions, the Court invalidated the network unbundling rules. It determined that the commission had interpreted the "necessary and impair" statutory standard so loosely that, in effect, the new carriers had available "blanket access" to the incumbent carriers' networks. Therefore, it remanded so the agency could adopt some meaningful limitation on the unbundling obligation in light of the "necessary and impair" prerequisite, one that takes into account the availability to new carriers of facilities outside the incumbent carriers' networks.

Justice Breyer in a separate opinion emphasized the ultimate harm to competition caused by the FCC's tilt toward excessive unbundling. He wrote:

Increased sharing by itself does not automatically mean increased competi-

tion. It is in the unshared, not the shared, portions of the enterprise that meaningful competition would likely emerge. Rules that force firms to share every resource or element of a business would create not competition, but pervasive regulation, for the regulators, not the marketplace, would set the relevant terms.

### WRESTLING WITH REGULATIONS

So here we are in early 2001, and the commission is still wrestling with the unbundling rules in its remand proceeding. Under the new chairman's leadership, the commission should seize the opportunity presented by the remand to articulate an interpretation of the "necessary and impair" standard that is much less tilted toward unrestricted access by the new carriers to the incumbent carriers' networks.

The commission is scheduled shortly to reconsider the unbundling requirement for one of the network piece parts, local switching equipment. Significantly, a few of the more far-sighted new carriers who have begun to invest in their own facilities have joined with some of the incumbent carriers to urge that, in light of the ability of the new carriers to self-provision switches, the FCC should relax the incumbents' obligation to make available switches.

The commission often has paid lip service in recent years to the view that new entrants need to own their own facilities if they are to have an incentive to offer innovative technologies and services, particularly new high-speed broadband services, and if competition is to be sustainable. But in formulating its local competition policies, the agency's policies thus far have not matched its rhetoric.

But maybe this will now change, especially with the emergence of some future-oriented new carriers willing to support moving away from regulations that mandate unrestricted access to all incumbent carriers' facilities. In speaking to one of the new carriers' trade associations in December 1998, then-commissioner Powell said, "There is no upside, in the long run, being dependent on your primary competitor for your key assets, or in relying on the Government to protect or subsidize your service." It was in this vein that Powell urged the new carriers to get their own cows.

It's time for the agency to embrace Justice Breyer's insight that meaningful competition is likely to emerge in the unshared, not the shared, portions of the enterprise. We almost certainly would be further down the road to a competitive local marketplace if Congress had given the commission more specific deregulatory direction in 1996. Nevertheless, the FCC now has the opportunity to employ the same discretion that it so far has employed to over-regulate the transition to local competition to give the marketplace some real breathing room.

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

In the Matter of	)	
	)	
	)	
Inquiry Concerning High-Speed	)	GN Docket No. 00-185
Access to the Internet Over Cable	)	
and Other Facilities	)	

**COMMENTS OF  
THE PROGRESS & FREEDOM FOUNDATION**

**I. INTRODUCTION**

The Progress & Freedom Foundation ("PFF" or "Foundation"), a private, non-profit, non-partisan research institution established in 1993 to study the digital revolution and its implications for public policy, hereby submits these comments in response to the Notice of Inquiry in this proceeding.<sup>1</sup>

PFF's research and analysis have focused and continue to focus heavily on issues related to the deployment of broadband digital communications and the consumer benefits which will flow from widespread broadband deployment and the resulting emergence of a digital economy.<sup>2</sup>

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<sup>1</sup> Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities, FCC 00-355, GN Docket No. 00-185, September 28, 2000.

<sup>2</sup> See, for example, Comments of The Progress & Freedom Foundation, CC Docket 98-146, September 14, 1998; Comments of The Progress and Freedom Foundation, CC Docket No. 98-184, February 15, 2000; see also Jeffrey A. Eisenach, Testimony Before the Subcommittee on Communications, Committee on Commerce, Science, and Transportation, United States Senate, (April 22, 1998); Randolph J. May, "Putting Consumers First: Turning the Corner on Long-Distance Competition," *Progress on Point 7.1*, (February

A pertinent example of the Foundation's recent work is the publication of the second edition of *The Digital Economy Fact Book*,<sup>3</sup> released in August 2000. Like the ground-breaking first edition, this new book contains a wealth of information concerning the growth of the telecommunications and information technology sector, including, especially the Internet and computer sectors. In essence, the book presents—in text as well as graphically—a range of information that confirms the continuing rapid growth of the Internet, including the fact that there are now over 100 million U.S. households online.<sup>4</sup> It also confirms the extent to which the digital economy is now a crucial component of the nation's overall economic health.

In our view, this inquiry offers the Commission another opportunity to reaffirm that it does not intend, and is not required, to regulate Internet access under traditional telephone-type public utility regimes. For the Commission to do otherwise would be to put in jeopardy the continued growth of the digital economy chronicled by PFF and many others.

## **II. BACKGROUND**

In the fashion of inquiries, or “NOIs”, which by definition do not propose binding rules in accordance with Administrative Procedure Act requirements,<sup>5</sup> the Commission asks literally hundreds of discrete questions in the NOI. Using the popular terminology, of course, the fundamental question raised by this inquiry is whether or not the

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2000); Randolph J. May, “On Unlevel Playing fields: The FCC’s Broadband Schizophrenia,” *Progress on Point 6.11* (December 1999); Jeffrey A. Eisenach, “Into the Fray: The Computer Industry Flexes Its Muscle on Bandwidth,” *Progress on Point 5.9* (December 1998); and, Donald W. McClellan, Jr., “A Containment Policy for Protecting the Internet from Regulation: The Bandwidth Imperative,” *Progress on Point 4.5* (August 1997).

<sup>3</sup> See Jeffrey A. Eisenach, Thomas M. Lenard, and Stephen McGonegal, *The Digital Economy Fact Book, Second Edition* (Washington, DC: The Progress & Freedom Foundation, 2000).

<sup>4</sup> Id. at 9.

<sup>5</sup> 5 U.S.C. § 553.



Commission, by regulatory fiat, should impose some form of mandatory “open access”<sup>6</sup> regime on cable modem service.

Putting aside loaded labels, most fundamentally what the Commission seeks to determine, as it asserts at the outset, is “what regulatory treatment, if any, should be accorded to cable modem service and the cable modem platform used in providing this service.”<sup>7</sup> It further asserts at the outset that it seeks “to create a legal and policy framework for cable modem service and the cable modem platform that will foster competitive development of new technologies and services by all entities, including cable operators and Internet service providers (ISPs) alike.”<sup>8</sup> Finally, the Commission invites comment on the competitiveness of the market for broadband communications in light of “the full range of high-speed services, including providers that use cable, wireline, wireless, satellite, broadcast, and unlicensed spectrum technologies.”<sup>9</sup>

The Commission observes correctly that, thus far and despite pleas to the contrary, it has taken a “hands-off” policy with respect to Internet services provided by cable operators. According to the Commission, this refusal so far to adopt a mandatory “open access” regime “has been premised, in part, on the belief that ‘multiple methods of increasing bandwidth are or soon will be made available to a broad range of customers.’”<sup>10</sup> While it eschewed the need to impose a regulatory regime on cable modem service when it issued its *First 706 Report* in January 1999, the Commission said

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<sup>6</sup> Those opposed to adoption of a regulatory regime requiring some form of mandatory access prefer “forced access” to “open access.”

<sup>7</sup> Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities, GN Docket No. 00-185, FCC 00-355, released September 28, 2000, at para. 1 (sometimes hereinafter “NOI” or “the Inquiry”).

<sup>8</sup> NOI, at para. 2.

<sup>9</sup> NOI, at para. 3.

then it would continue to monitor the broadband deployment situation to determine if any future action were needed.

The Commission acknowledges, of course, that the inquiry takes place against the backdrop of the Ninth Circuit's decision in *AT&T v. City of Portland*.<sup>11</sup> There, the court ruled that Portland could not require a cable operator to give unaffiliated Internet service providers (ISPs) unrestricted access to its cable system. In doing so, however, it seemed to hold that, to the extent a cable operator's affiliated ISP provides subscribers with Internet transmission over the cable system, it is providing a "telecommunications service" under the Communications Act.<sup>12</sup> In doing so, the court purported to distinguish between this transmission element of the ISP's service and what it referred to as the more "conventional" ISP activities which the FCC historically had characterized as "information services."<sup>13</sup>

The Ninth Circuit did point out that "the FCC has broad authority to forbear from enforcing the telecommunications provisions if it determines that such action is unnecessary to prevent discrimination and to protect consumers, and is consistent with the public interest."<sup>14</sup> So, among the hundreds of other questions it poses, the Commission asks whether it should exercise its forbearance authority if it agrees with the

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<sup>10</sup> NOI, at para. 4, quoting from, Inquiry Concerning the Deployment of Advanced Telecommunications Capability to all Americans in a Reasonable and Timely Fashion, CC Docket No. 98-146, 14 FCC Rcd 2398, 2448 (1999) ("First 706 Report").

<sup>11</sup> *AT&T v. City of Portland*, 216 F. 3d 871 (9<sup>th</sup> Cir. 2000).

<sup>12</sup> 216 F. 3d at 878.

<sup>13</sup> *Id.*

<sup>14</sup> 216 F. 3d at 879.

Ninth Circuit that some part of a cable operator's Internet access service is appropriately classified as "telecommunications."<sup>15</sup>

### III. DISCUSSION

#### A. *"Containment Policy" Is Working To Spur Broadband Growth*

In the Telecommunications Act of 1996, Congress declared that it is the policy of the United States "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."<sup>16</sup> And in Section 706 of the 1996 Act, Congress mandated that the Commission "shall encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans...."<sup>17</sup> To comply with this requirement, the Commission is authorized to utilize, among other methods, "regulatory forbearance...or other regulating methods that remove barriers to infrastructure investment."<sup>18</sup>

To have the best opportunity of realizing the congressional objective of maintaining an Internet free from regulation while, at the same time, creating an environment that fosters widespread broadband deployment, PFF authors have long advocated what has been referred to as a "containment policy." In a paper published in

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<sup>15</sup> See, e.g., NOI, at para. 53. The Commission points to judicial decisions which reach conclusions contrary to the Ninth Circuit's concerning the classification of Internet service under the communications Act provisions. See cases cited in para. 13.

<sup>16</sup> 47 U.S.C. § 230 (b)(2).

<sup>17</sup> 47 U.S.C. § 157nt (a). The term "advanced telecommunications capability" is defined in Section 706 to mean "without regard to any transmission media or technology, as high-speed, switched, broadband telecommunications capability that enables users to originate and receive high-quality voice, data, graphics, and video telecommunications using any technology." 47 U.S.C. § 157nt (c).

<sup>18</sup> 47 U.S.C. § 157nt (a).

August 1997 entitled “A Containment Policy for Protecting the Internet from Regulation: The Bandwidth Imperative,” PFF Senior Fellow Donald W. McClellan, Jr. stated: “Policymakers are faced with a choice. Should the Internet be regulated like the telephone business, or should the market be allowed to function, as has been the case with computers?”<sup>19</sup> His answer was clear: While it might be necessary on a transitional basis to continue to regulate markets in which competition previously had been excluded (such as the local telephone market), “regulation should not be allowed to spill over onto the Internet and technologies needed to provide broader bandwidth access to the Internet, where it could retard innovation, investment and progress.”<sup>20</sup>

Similarly, in PFF’s September 14, 1998 comments in the Commission’s initial Section 706 advanced services proceeding, the authors also called for adoption of a “containment model.” The comments urged that “the threat of regulatory spillover from the traditional telecommunications world into the digital broadband world represents a clear and present danger to investment in and deployment of digital broadband services.”<sup>21</sup> Recognizing the need for some continuing transitional regulation of narrowband services, the comments urged that digital broadband services be “left wholly unregulated.”<sup>22</sup> The comments argued that the broadband marketplace likely would develop on a competitive basis if the Commission continued to guard against adopting a regulatory regime that has the effect of raising entry barriers for some broadband providers.<sup>23</sup>

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<sup>19</sup> Donald W. McClellan, Jr., Esq., “A Containment Policy for Protecting the Internet from Regulation: The Bandwidth Imperative,” *Progress on Point* 4.5, p. 1 (August 1997).

<sup>20</sup> *Id.*

<sup>21</sup> Comments of The Progress & Freedom Foundation, CC Docket No. 98-146, p. 1, September 14, 1998.

<sup>22</sup> *Id.*, at 2.

<sup>23</sup> *Id.*, at 3.

Consistent with PFF's analysis, and relying in part on PFF's comments, the Commission in its *First 706 Report*, released in February 1999, determined that increasing investment in facilities and services, the existence of a large number of new providers (using diverse technologies), and burgeoning demand, including from residential consumers, augured well for the competitiveness of the broadband marketplace.<sup>24</sup> The report contained extensive data in support of its conclusion that "as the demand for broadband capability increases, methods for delivering the digital information at high speeds to consumers are emerging in virtually all segments of the communications industry—wireline telephone, land-based ("terrestrial") and satellite wireless, and cable, to name a few."<sup>25</sup>

The Commission has now issued a *Second 706 Report*<sup>26</sup>, and this report confirms that the broadband marketplace is continuing to develop on a competitive basis. In the present NOI, the Commission sums up the key findings in the *Second 706 Report* as follows:

[I]n our recent *Second 706 Report*, we found significant growth in advanced services provided to residential and small business customers by LECs between 1998 and 1999. In recent years, industry investment in infrastructure to support high-speed services has increased dramatically, driven in part by the rapidly rising demand for such services. Service providers are deploying a variety of networks that rely on different network architectures and transmission paths, including copper wire, cable, terrestrial wireless radio spectrum, satellite radio spectrum, or a combination of these and other media, to provide high-speed services. In the coming years, analysts predict rapid growth in subscribership of high-speed services provided using each of these technologies.<sup>27</sup>

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<sup>24</sup> See generally Inquiry Concerning the Deployment of Advanced Telecommunications Services to All Americans, 14 FCC Rcd 2398 (1999).

<sup>25</sup> 14 FCC Rcd at 2401.

<sup>26</sup> Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, Second Report, CC Docket No. 98-146, released August 21, 2000 ("Second 706 Report").

<sup>27</sup> NOI, at paras. 6 and 7.

Further confirmation that the marketplace for high-speed Internet access (including the residential and small business segment) is growing rapidly is found in the information released by the Commission on October 31, 2000.<sup>28</sup> Using data submitted as of June 30, 2000, the Commission reported that “high-speed lines connecting homes and small businesses to the Internet increased by 57% during the first half of 2000, to a total of 4.3 million lines (or wireless channels) in service from 2.8 million at the end of 1999.”

While all modes of high-speed transmission showed significant growth for the first six months of this year, DSL was the leader. The number of DSL lines in service increased by 157% to almost 1 million lines, compared to about 370,000 lines at the end of 1999. The number of high-speed cable lines in service grew from 1.4 to 2.2 million lines, an increase of 59%. Even high-speed services delivered by other technologies, such as fixed wireless or satellite, increased by 18%.<sup>29</sup>

***B. The Commission Should Continue To Rely On The Marketplace, Rather Than Regulation, To Meet Consumer Needs***

It is difficult to argue that broadband services are not rapidly being made available to broad segments of our population. In other words, the Commission’s prediction in the *First 706 Report* that “multiple methods of increasing bandwidth are or soon will be made available to a broad range of customers” has thus far been proven correct.<sup>30</sup>

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<sup>28</sup> News Release, “Federal Communications Commission Releases Data On High-Speed Services for Internet Access,” October 31, 2000.

<sup>29</sup> The figures are all contained in “High-Speed Services for Internet Access: Subscribership as of June 30, 2000,” released October 2000, attached to News Release, “Federal Communications Commission Releases Data On High-Speed Services for Internet Access,” October 31, 2000.

<sup>30</sup> See “Technological and Regulatory Factors Affecting Consumer Choice of Internet Providers, GAO-01-93, p. 6, October 2000 (hereinafter “GAO Report”), where the General Accounting Office stated: “The adoption of these high-speed transport technologies by Internet users has grown rapidly over the past few

In light of the marketplace evidence, as a matter of sound policy, there is no need for the Commission to intervene to impose mandatory “open access” requirements. The costs of doing so now almost certainly would outweigh the benefits. The benefits are said to be preventing independent ISPs from being “shut out” of the marketplace or discriminated against by a cable operator that would favor its affiliated ISP. If the market is developing so that there are available or soon to be available multiple broadband pathways to subscribers—as the Commission has found to be the case—then the marketplace will ensure the degree of openness which maximizes consumer needs.

In a competitive marketplace, the providers themselves, whether cable operators, telephone companies, or whatever, will have a strong interest in meeting the demand for the services desired by their subscribers. Indeed, there are strong indications that the marketplace is working to produce arrangements that are mutually beneficial to the cable operators and ISPs.<sup>31</sup>

As Chairman Kennard previously has stated in the context of discussing the cable access issue: “[W]e should resist the urge to regulate because I think it is likely the market will sort this out... there are market incentives that will drive openness in the

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years, as evidenced by our finding (based on our survey) that, as of May 2000, 12 percent of Internet users had a broadband connection.”

<sup>31</sup> See the developments concerning negotiations described in the NOI at para. 37 and associated notes. More recently, it appears that Comcast, the nation’s third largest cable operator, and Juno, a leading ISP, have reached a mutually satisfactory arrangement under which Juno will receive cable modem access. See “Comcast, Juno Make Deal to Sell Net Access,” Washington Post, November 29, 2000, p. E4. Within the past two weeks, Time Warner apparently has reached a voluntary access agreement with EarthLink, the second largest ISP. See “Time Warner Reaches Out To EarthLink,” The Wall Street Journal, p. A3, November 21, 2000. See also “AOL Seeks Cable Pact With MSN,” Washington Post, p. E1, November 18, 2000. This article also speculates concerning possibly imminent agreements between AOL/Time Warner and Juno.

broadband world.”<sup>32</sup> If consumers want a choice of ISPs from their cable operator, presumably the operators will respond in the marketplace to the consumers’ desires.

On the other hand, the costs incurred by imposition of a mandatory open access regime would be substantial. They would be the familiar costs associated with traditional “telephone-style” regulation that prompted PFF to call for a “containment policy” back in 1997. In general, this public utility model, with its key components of regulated rates and non-discrimination obligations, has the effect of retarding investment by both the regulated entity and its putative competitors and, by virtue of the transactional costs imposed, raising the ultimate price charged to the consumer.

The Commission has recognized, of course, that competition is most effective when there are multiple competing infrastructures, not when it is based on mandated resale. Indeed, it recently reaffirmed that: “[I]t is only through owning and operating their own facilities that competitors have control over the competitive and operational characteristics of their service, and have the incentive to invest and innovate in new technologies that will distinguish their services from those of the incumbent.”<sup>33</sup> So putting aside for the moment the technical and operational difficulties associated with devising a “reasonable” regime for sharing a limited amount of bandwidth, it is clear that

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<sup>32</sup> “Consumer Choice through Competition,” Remarks by William E. Kennard, Chairman, FCC, at the National Association of Telecommunications Officers and Advisors 19<sup>th</sup> Annual Conference, Atlanta, GA, September 17, 1999, at 6.

<sup>33</sup> See Implementation of the Telecommunications Act of 1996, Third Report and Order and Further Notice of Proposed Rulemaking, CC Docket No. 96-98, FCC 99-238, released November 5, 1999, at para. 219. And the Commission stated recently that, “in the long term, the most substantial benefits to consumers will be achieved through facilities-based competition, because only facilities-based competitors can break down the incumbent LECs’ bottleneck control over local networks and provide services without having to rely on their rivals for critical components of their offerings.” Promotion of Competitive Networks in Local Telecommunications Markets, Notice of Proposed Rulemaking and Notice of Inquiry in WT Docket No. 99-217 and Third Further Notice of Proposed Rulemaking in CC Docket No. 96-98, FCC 99-141, released July 7, 1999, at para. 4.



a mandatory sharing regime is likely to retard the very investment upon which the continuing development of competing infrastructures depend.

Justice Breyer's concurring opinion in *AT&T v. Iowa Utilities Board*, 119 S. Ct. 721, 753-754 (1999), provides useful instruction regarding the costs imposed by mandated unbundling obligations which are excessive. After explaining that the costs of excessive unbundling will discourage the facilities-based operator from undertaking the investment necessary produce technological innovation, he summed up: "A totally unbundled world...is a world in which competitors would have little, if anything, to compete about." *Id.*, at 754. While there are different degrees of mandated sharing, of course, it must be acknowledged that an "open access" regime is, in effect, nothing more than a mandatory sharing regime. The entity subject to the government-mandated sharing obligation at government-mandated rates, terms, and conditions has less incentive to invest in more bandwidth-creating facilities. And the intended beneficiaries of such mandates have less incentive to invest, either by themselves or as partners, in new facilities.

Apart from the negative impacts of mandatory "open access" regime described above, as a practical matter, such a regime imposes very substantial transactional costs as the regulator attempts to determine the "right" rates, terms, and conditions under which access will be mandated. Last year, in explaining why the FCC thus far had refused to require cable operators to provide unaffiliated ISPs with nondiscriminatory access to their systems, Chairman Kennard explained the nature of these costs about as well as anyone could:

It is easy to say that government should write a regulation, to say that as a broad statement of principle that a cable operator shall not discriminate against

unaffiliated Internet service providers on the cable platform. It is quite another to write that rule, to make it real and then to enforce it. You have to define what discrimination means. You have to define the terms and conditions of access. You have issues of pricing that inevitably get drawn into these issues of nondiscrimination. You have to coalesce around a pricing model that makes sense so you can ensure nondiscrimination. And then once you write all these rules you have to have a means to enforce them in a meaningful way.<sup>34</sup>

For emphasis, he went on to add, "I have been there on the telephone side," and it would be wrong to "just pick up this whole morass of [telephone] regulation and dump it wholesale on the cable pipe."<sup>35</sup>

As Chairman Kennard's remarks suggest, the Commission should have no illusions about its ability to impose a "simple" open access requirement. Such a process, involving the determination of the rates, terms, and conditions under which bandwidth would be made available, would be lengthy, complex and subject to interminable litigation. First, rules would have to be developed for cost allocation methodologies, for technical and operational feasibility standards, and for determining "unreasonable" discrimination. Then, of course, having developed "generic" rules, the regulations would have to be applied to the inevitable stream of disputes sure to attend their actual implementation. It would be a morass indeed.<sup>36</sup>

### ***C. The Commission Should Rely On Section 706 To Refrain From Regulating Competitive Broadband Services***

The Commission's discussion in Section III.A of the NOI inquiring about the legal framework that should apply to the "cable modem platform" indicates the difficulty

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<sup>34</sup> "Consumer Choice Through Competition," Remarks by William E. Kennard, Chairman, FCC, at the National Association of Telecommunications Officers and Advisors, 19<sup>th</sup> Annual Conference, Atlanta, GA, September 17, 1999, at 5.

<sup>35</sup> *Id.*

of applying definitions originally devised in the pre-1996 Act world to the post-1996 Act world of converging telemedia. Simply put, the definitions of “cable service,” “information service,” and “telecommunications,” all of which remain essentially unchanged from their pre-1996 Act origins,<sup>37</sup> perhaps were serviceable enough when we could more easily place “cable television,” “telephone,” and “data” services into different boxes.

But now, in a world of convergence of the broadband telemedia, the pre-1996 definitional constructs are no longer serviceable. As Barbara Esbin put it in her study, *Internet Over Cable: Defining the Future in Terms of the Past*, “[t]he communications and communications services made possible by the Internet are fundamentally unlike those provided in the past over the technologically separate public switched telephone network, data networks, broadcast networks, and cable television systems in that a single medium is capable of delivering nearly any type of communications service on an integrated basis.”<sup>38</sup>

The traditional “smokestack” definitions may be fodder for lawyers and judges—compare the conflicting conclusions of the Ninth Circuit in the *Portland* case, the Eastern District of Virginia in the *County of Henrico* case, and the Eleventh Circuit in the *Gulf Power* case.<sup>39</sup> And, they may be fodder as well for metaphysicists with time on their

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<sup>36</sup> It is not an overstatement to suggest that when the Commission engages—or even contemplates engaging—in this type of regulatory overkill that such conduct at least contributes to uncertainty in the financial markets currently plaguing the high-tech sector.

<sup>37</sup> These familiar definitions are all set out in the NOI at paras. 17-23 and will not be repeated here.

<sup>38</sup> OPP Working Paper Series, No. 30, p. 112, August 1998.

<sup>39</sup> Compare *AT&T Corp. v. City of Portland*, 216 F. 3d 871, 877 (9<sup>th</sup> Cir. 2000) (holding that cable modem service comprises both a telecommunications and information service) with *Gulf Power Co. v. FCC*, 208 F. 3d 1263, 1275-78 (11<sup>th</sup> Cir. 2000) (holding that Internet service is neither a cable service nor a telecommunications service) and *Media One Group, Inc. v. County of Henrico*, 97 F. Supp. 2d 712, 714 (E.D. Va. 2000), *appeal pending*, 4<sup>th</sup> Cir. No. 00-1680 (cable modem service is a cable service).

hands to try to sort out “information” riding on top of “telecommunications” delivered by a “cable service.”

But it is not necessary that these definitional constructs be employed to prevent the implementation of sound policy for the competitive broadband world that the Commission envisions. There is another and better way, and it is for the Commission to employ the authority it was given by Section 706 to encourage the deployment of “advanced telecommunications capability.”<sup>40</sup> According to the Commission, advanced telecommunications capability is “high-speed, switched, broadband telecommunications capability that enables users to originate and receive high-quality voice, data, graphics and video telecommunications using any technology” which offers 200 kbps of bandwidth to and from a subscriber.<sup>41</sup>

The high-speed service provided over a cable modem platform—with its integrated elements of data, graphics, voice, and video—should be considered an “advanced telecommunications capability” within the meaning of Section 706 of the Act. Indeed, the Commission notes in the NOI that in its *Second 706 Report* it considered the deployment of cable modem services as an indicator of broadband deployment.<sup>42</sup> Because the Section 706 reports are directed by Congress for the purpose of determining whether the Commission is meeting its responsibilities to encourage the widespread deployment of advanced broadband services, the Commission’s inclusion of data for cable modem services in those reports is a strong indication the agency believes such services fit within the Section 706 definition.

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<sup>40</sup> Section 706, 47 U.S.C. 157nt (c) (1), provides that advanced telecommunications capability “is defined, without regard to any transmission media or technology, as high-speed, switched, broadband telecommunications capability that enables users to originate and receive high-quality voice, data, graphics, and video telecommunications using any technology.”

The Commission thus far has chosen to read Section 706 principally as a hortatory provision. Thus, it previously has held that Section 706 does not constitute an independent grant of forbearance authority or of authority to use other regulatory methods.<sup>43</sup> That Section 706 is not purely hortatory is demonstrated by the usually overlooked mandatory injunction in Section 706 (b) that, were the Commission to find that “advanced telecommunications capability” is not being deployed in a timely fashion, “it shall take immediate action to accelerate the deployment of such capability by removing barriers to infrastructure investment and promoting competition in the telecommunications market.”<sup>44</sup>

We urge the Commission to reexamine its heretofore constrained position concerning its Section 706 authority in light of what now should be a better understanding concerning how a unified [de]regulatory regime for comparable broadband services is consistent with congressional intent as expressed in Section 706.<sup>45</sup> Having in mind the congressional intent articulated in Section 230 to the effect that the Internet should remain “unfettered by Federal or State regulation,”<sup>46</sup> the agency should hold that Internet services delivered via cable modem are advanced telecommunications capabilities within the meaning of Section 706 and exercise its authority to forbear from regulating these services.

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<sup>41</sup> Second 706 Report at paras.10-11.

<sup>42</sup> Second 706 Report at para. 29.

<sup>43</sup> Section 706 Report, at paras. 69-78.

<sup>44</sup> 47 U.S.C. § 157nt (b).

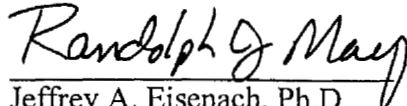
<sup>45</sup> The Commission has latitude to change a previously announced position, of course, if it does so on a reasoned basis. See, e.g., *Chevron USA Inc. v. Natural Resources Defense Council*, 467 U.S. 837 (1984). In any event, the Commission’s holding is merely *dicta* concerning whether Section 706 constitutes an independent grant of forbearance authority because the issue before the Commission was whether Section 706 forbearance authority may override the Section 10(d) proviso that Section 10 forbearance is inapplicable to the Sections 251 (c) and 271 requirements. With regard to forbearance for a cable operator’s cable modem service, those requirements for incumbent local exchange carriers and incumbent telephone companies would appear to be inapplicable.

The broadband Internet services of today, whether delivered over cable systems or competing infrastructures, no longer respect the traditional "smokestack" boundaries or traditional regulatory models. If the Commission determines upon reexamination that it lacks the authority to develop sound deregulatory policy in this area, it should seek such authority promptly from Congress.

#### IV. CONCLUSION

For the foregoing reasons, the Commission should act in a manner consistent with the views stated herein.

Respectfully submitted,

  
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December 1, 2000

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<sup>46</sup> 47 U.S.C. §230 (b)(2).

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

In the Matter of

Inquiry Concerning High-Speed  
Access to the Internet Over Cable  
and Other Facilities

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GN Docket No. 00-185

**COMMENTS OF  
THE PROGRESS & FREEDOM FOUNDATION**

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## SUMMARY

While the Telecommunications Act of 1996 is plagued with a considerable number of ambiguities, two things are pretty clear. First, Congress wanted 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.” And it directed the Commission to “encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans.” As explained in these comments, the “advanced telecommunications capability” which the Congress had in mind encompasses the broadband Internet services at issue in this proceeding.

Not long after passage of the 1996 Act, The Progress & Freedom Foundation (“PFF”) authors argued that, at a minimum, the Commission should pursue a “containment policy” designed to prevent traditional telephone-style regulation applicable to narrowband services from spilling over into the emerging broadband world. They explained that failure to adopt such a containment policy would retard innovation and investment in broadband services.

Thus far, the Commission wisely has refrained from imposing mandatory “open access” obligations on cable operators’ cable modem Internet service, and it should continue to do so. The Commission’s own reports show that competition among various types of broadband providers—terrestrial wireline, cable, satellite, and wireless—is developing and is expected to continue to develop. Consumer demand for broadband services, including cable modem service and DSL, is also growing rapidly. In other words, the Commission’s “hands off” policy towards the broadband Internet services provided via the cable modem platform is working and should not be changed.

In light of the competitive environment for broadband services that exists today, the Commission should rely on the marketplace, rather than the imposition of costly, unwieldy, and difficult-to-implement regulatory solutions, to meet consumers’ needs for access to services they want. In our view, the Commission has the authority under Section 706 to forbear from regulating competitive broadband services, regardless of their purported classification under the traditional “stovepipe” service distinctions that no longer make sense in the converging world of broadband telemedia and the Internet. As one of the papers in the OPP Working Paper series put it: “The communications and communications services made possible by the Internet are fundamentally unlike those provided in the past over the technologically separate public switched telephone network, data networks, broadcast networks, and cable television systems in that a single medium is capable of delivering nearly any type of communications service on an integrated basis.”

Having in mind the expressed congressional intent to the effect that “the Internet should remain unfettered by Federal or State regulation,” the agency should determine that Internet services delivered via cable modem and other broadband technologies are advanced telecommunications capabilities within the meaning of Section 706, and that it has authority to forbear from regulating these services. If the Commission determines it lacks such authority, it should promptly seek it from Congress.