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# Internet Access: Government Intervention or Private Innovation?

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by Donald L. Alexander, Ph. D.

**Analysis and Recommendations for Improving  
Telecommunications Service and Lowering Costs**



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**Mackinac Center for Public Policy**  
140 West Main Street  
P.O. Box 568  
Midland, Michigan 48640  
(517) 631-0900 • Fax (517) 631-0964  
[www.mackinac.org](http://www.mackinac.org) • [mcpp@mackinac.org](mailto:mcpp@mackinac.org)

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# Internet Access: Government Intervention or Private Innovation?

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## Executive Summary

During the past decade, the explosive growth in the Internet has transformed the lives of millions of individuals at home and work and has dramatically altered the business landscape in ways that were unimaginable just 20 or even 10 years ago. The proliferation of e-mail addresses, personalized Web pages, and online transactions are only a few of the many exciting changes that have become part of our “cyber-culture” as we approach the new millennium.

The Internet has unquestionably created many benefits for its users; however, there is growing concern among some that the marketplace will be unable to sustain competitive, affordable access to the Internet in many communities around the United States, including Michigan. Some form of government intervention, they argue, will be necessary to guarantee that everyone is “wired” in the future.

Specifically, the concern of the intervention advocates focuses around the emergence of new “broadband” technology that allows high-speed access to the Internet—access which can currently be supplied in the form of cable modems by many major cable companies. Traditional telephone-and-modem dial-up Internet Service Providers (ISPs) including America OnLine have joined with other groups to form a coalition that claims cable companies’ head start in the emerging broadband market constitutes a threat to competition in the Internet access market as a whole. The coalition is seeking to persuade legislators to adopt an “open access” policy with regard to the new cable broadband technology. This policy would force cable companies to make their high-speed broadband lines available for use by all traditional ISPs on equally favorable terms, hence the policy is best referred to as “forced access.”

This report analyzes current market trends and argues that the likely economic consequences of government mandating forced access to the cable companies’ broadband technology is higher costs for consumers and no significant increase in the number of Internet access options.

The report is divided into four sections. The first section provides background material on broadband, narrowband, and other technologies available to consumers who wish to access the Internet.

The second section provides a supply and demand analysis to show that the market for Internet access service is competitive, driving producers of broadband and other technologies to make access available at affordable prices to as many customers as possible. The analysis also shows that no specific type of broadband technology offers advantages that

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***Eliminating local  
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would likely make it the dominant technology in the marketplace. Indeed, the diversity of advantages and disadvantages associated with broadband and narrowband technologies—and with the service providers using these technologies—means that consumers will continue to enjoy many options for accessing the Internet.

In the third section, the report argues that implementing a forced-access policy will likely have both short-term and long-term harmful consequences for consumers in Michigan and in other states as well. The short-term harmful consequences of forced access will likely be similar to the “interconnection” problems currently plaguing local telephone markets as a result of Congress’s 1996 Telecommunications Act. Despite that act’s mandate to make established telephone companies’ network facilities available to potential competitors, those established companies still earned 96 percent of all local service revenues in 1998. This kind of scenario is likely to unfold in the Internet access market under a forced-access policy. The long-term harmful consequence is that cable firms are likely to reduce their commitment to developing and deploying broadband technology if they must share the benefits with firms that do not share the costs and risks in making these investments. The effect will be a decrease in the supply of Internet access and, most likely, a higher price that consumers will then have to pay. Consumers will be penalized because there will be fewer alternatives to choose from in the marketplace.

The final section presents two policy recommendations that follow from the economic analysis presented in the previous sections. These recommendations are as follows: First, policy makers should refrain from imposing a forced-access policy on the Internet access market. Forced access removes the benefits of property rights each cable company enjoys when it makes an investment decision to upgrade its facilities to provide broadband Internet access. Furthermore, this transformation of a private property to a common property resource reduces the incentive to make these types of investments in the future. The preferable policy is to let the free market work. Such a policy will promote the best interests of all Michigan citizens by encouraging competition instead of protecting competitors. Dynamic, competitive markets will best serve consumers, with all ISPs having the opportunity to compete in an unregulated environment.

The second recommendation is that Michigan policy makers lead the way in advocating that it is no longer necessary for cable firms to negotiate franchise agreements with local governments. Local governments have been selling cable firms exclusive franchises within specified geographic areas since the early 1960s. Today nearly all cable firms have exclusive franchises in their respective service areas. Nationwide, only 3 percent of 67 million cable subscribers can select from competing cable companies, and they pay higher prices for the cable monopoly. Policy makers should prohibit municipal franchise authorities from using their legal power to require forced access as a *quid pro quo* for granting franchise agreements, renewals, or transfers to particular firms. Furthermore, eliminating municipal franchise agreements would also remove what many believe is a significant barrier to entry in local cable markets. Eliminating this entry barrier is likely to create additional competition, which would benefit consumers who purchase video programming and Internet access services.

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The essence of the case for competition is the impossibility of predicting most of its consequences. The superiority of the competitive market is the positive stimuli it provides for constantly improving efficiency, innovating, and offering consumers diversity of choice.<sup>1</sup>

## Introduction

During the past decade, the explosive growth in the Internet has transformed the lives of millions of individuals at home and work and has dramatically altered the business landscape in ways that were unimaginable just 20 or even 10 years ago. The proliferation of e-mail addresses, personalized web pages, and online transactions are only a few of the many exciting changes that have become part of our “cyber-culture” as we approach the new millennium.

The Internet has unquestionably created many benefits for its users; however, there is growing concern among some that the marketplace will be unable to sustain competitive, affordable access to the Internet in many communities around the United States, including Michigan. Some form of government intervention, they argue, will be necessary to guarantee that everyone is “wired” in the future.

### BROADBAND INTERNET ACCESS IS REVOLUTIONIZING TELECOMMUNICATIONS

Concerns about the market’s ability to maintain competitive Internet access are fueled in large part by the emergence of new “broadband” technology, which is being widely deployed across the United States by large cable television service providers. Proponents of government intervention argue that cable companies’ head start in the emerging broadband market constitutes a threat to competition in the Internet access market as a whole.

What is this new broadband technology? There are several ways to characterize broadband, but two features are important for understanding why broadband will likely have a significant impact on how the Internet evolves over the next decade. The first feature, according to policy analyst David B. Kopel, is that a single medium can carry multiple channels in a broadband transmission but only one channel in a “narrowband” transmission.<sup>2</sup>

<sup>1</sup> Alfred E. Kahn, “Deregulation and Vested Interests: The Case of Airlines,” in Roger G. Noll and Bruce M. Owen, editors, *The Political Economy of Deregulation* (Washington, D. C.: The American Enterprise Institute, 1983), p. 140.

<sup>2</sup> David B. Kopel, *Access to the Internet: Regulation or Markets?*, Policy Study No. 92, The Heartland Institute, September 24, 1999, p. 3 (hereinafter referred to as Heartland Policy Study).

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For example, a cable line (broadband) can carry multiple video programming channels while an ordinary telephone line (narrowband, or dial-up, technology which many consumers use to connect to the Internet) can carry only one voice channel. The second important feature of broadband is the tremendously faster access speed it offers. In a recent report that evaluates the impact of broadband technology on the market for Internet access, the Federal Communications Commission (FCC) describes broadband as a “technology that will allow users to access the Internet and Internet-related services at speeds significantly higher than traditional narrowband modems allow.”<sup>3</sup>

If one compares broadband’s two features of enhanced bandwidth capacity and speed to those same features associated with the more common narrowband technology, it is clear that broadband is a superior technology and is likely to have a significant impact in the marketplace. *Cable Datacom News*, for example, estimates that more than one million customers have already subscribed to cable broadband service here in the United States and Canada.<sup>4</sup> Indeed, the number of Internet users using cable broadband technology is projected to grow from under 10 percent of the market in 1999 to almost 40 percent by 2005 (see Chart 1, next page). By contrast, the number of Internet users using the traditional narrowband technology is projected to fall from close to 100 percent in 1999 to 50 percent by 2005.<sup>5</sup> If these projections actually materialize, the potential shift in market share could result in a substantial loss in profitability for many independent Internet Service Providers (ISPs), who provide their customers access service using the dial-up narrowband technology. It should be no surprise, then, that it is the independent ISPs who are most concerned with the potential growth in broadband technology.

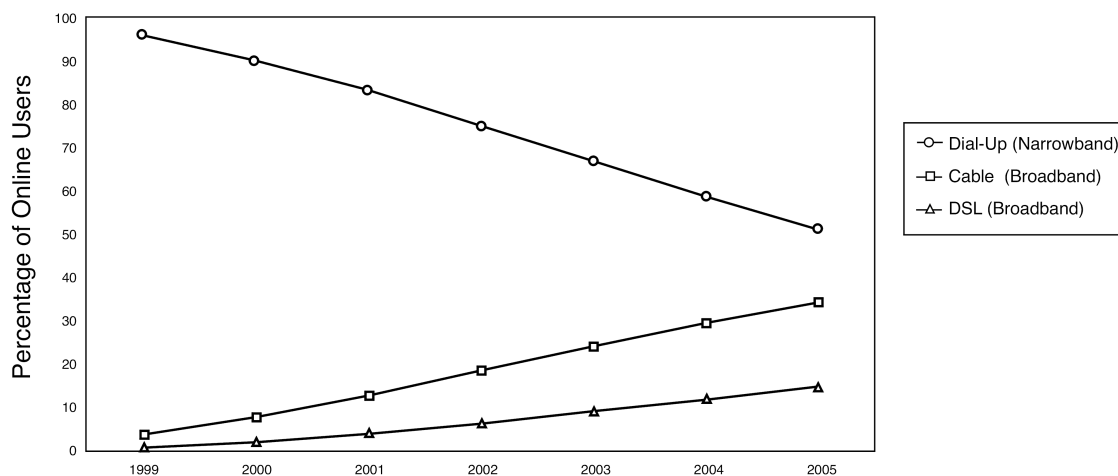
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<sup>3</sup> *Broadband Today*, A Staff Report to William E. Kennard, Chairman, FCC, On Industry Monitoring Sessions convened by Cable Services Bureau, October 1999, p. 9.

<sup>4</sup> “Cable Modem Market Stats & Projections,” *Cable Datacom News*, accessible via Internet at <http://www.cabledatcomnews/cmhc/cmhc16.html>.

<sup>5</sup> These data are estimated from the “Breakdown of Online Universe” chart in the FCC *Broadband Today* report.

**Chart 1 – Estimated Increase in Broadband Internet Users vs. Narrowband Internet Users, 1999-2005**



Source: Donaldson, Lufkin, and Jenrette Estimates, IDC

## BROADBAND TECHNOLOGY THREATENS THE TELEPHONE MONOPOLY

A possible source of the concern over competition in the telecommunications marketplace is the local telephone companies' fear that cable's new broadband technology will allow cable firms to compete in traditional local telephone service markets. In addition to bandwidth capacity and access speed, the other feature associated with cable's broadband technology is that it will accommodate two-way transmission of voice signals. This means that cable firms can offer telephone service along with other services like video programming and Internet access service to their customers and can seriously challenge the telephone companies' monopoly position in the residential segment of many local telephone markets across the United States.<sup>6</sup>

Recognizing the potential for real competition from cable firms, local telephone companies have begun to roll out their own broadband technology as well. Table 1, next page, shows that the Regional Bell Operating Companies (RBOCs) and GTE already doubled their number of lines with broadband capability between 1998 and 1999.

<sup>6</sup> See NetAction, "Broadband Cable: The Open-Access Debate," accessible via Internet at <http://www.netaction.org/broadband/cable/current.html>.

**Table 1 – The Rapid Increase of Broadband Capability  
in the Telephone Industry**

Company	DSL-Ready (Broadband) Lines (Millions)	
	1998	1999
Ameritech	N/A	N/A
Bell Atlantic	2.0	7.0
Bell South	2.0	4.0
SBC	3.3	10.0
US West	3.6	5.2
GTE	5.0	6.0
Total	15.9	32.2

*Source: Donaldson, Lufkin, and Jenrette, Wireline Communications, June 1999*

#### THE OPENNET COALITION ARGUES FOR GOVERNMENT INTERVENTION IN THE INTERNET ACCESS MARKET

Recently, major Internet service companies America OnLine (AOL) and MindSpring Enterprises joined with a number of independent ISPs, telecommunications firms, and “consumer advocacy” groups to form a new lobbying organization called the “OpenNet” coalition. OpenNet wishes to persuade federal, state, and local regulators to force cable companies to provide “open” access to their broadband technology (commonly referred to as the broadband pipe), so that independent (dial-up) ISPs can also offer broadband services to their customers.

The OpenNet coalition’s formal position has not yet been fully disclosed for evaluation, but its argument for “open”—or more properly, forced—access would allow independent ISPs to offer broadband Internet access to any residential and business customers within a cable firm’s service area.<sup>7</sup> OpenNet’s position relies on two claims. First, OpenNet argues that if all ISPs are not permitted access to the cable system’s broadband pipe, cable ISPs will monopolize consumer access to the Internet. Second, the coalition maintains that the cable firms’ potential control over broadband technology threatens the open nature of the Internet and may even allow cable firms to control the content provided to Internet users.

Local cable franchise authorities in Portland, Oregon; Broward County, Florida; and Fairfax, Virginia, have responded to OpenNet’s arguments by requiring cable firms in their respective jurisdictions to provide nondiscriminatory broadband access to all independent ISPs.<sup>8</sup> AT&T, Time Warner, and several other cable firms have contested these

<sup>7</sup> See *Broadband Today* for some background on the OpenNet coalition’s position.

<sup>8</sup> See *Broadband Today*, pp. 14-15, for more details.

requirements on legal grounds and the U. S. Supreme Court is likely to rule on this important legal battle by the end of this year.

In Michigan, the forced-access issue has surfaced with legislation in the state Senate that would require any cable or other firm that offers wireline, broadband Internet access service to “provide any other requesting Internet service provider access to its broadband Internet access transport services, unbundled from the provision of content, on rates, terms, and conditions that are at least as favorable as those on which it provides the access to itself, to its affiliate, or to any other person.”<sup>9</sup>

The sections to follow in this report examine OpenNet’s claims and show that the market for Internet access is competitive today and is likely to remain so in the future and that government intervention in the form of forced access is a counterproductive policy that will only harm consumers in the end.

## A Competitive Analysis of the Market for Internet Access

To properly evaluate the merits of the forced-access debate, it is necessary to define the relevant economic market for Internet service. This conceptual exercise provides a useful short-run perspective of current competitive conditions as firms compete to develop new technologies to better serve consumers. It also provides a prospective of what future competitive trends might unfold, especially in a market shaped by dynamic technological changes such as those in the Internet access market.

### DEMAND EXISTS FOR BOTH NARROWBAND AND BROADBAND INTERNET ACCESS

The typical consumer accesses the Internet through either a wireline or wireless connection from his computer to a “portal” provided by an ISP.<sup>10</sup> Once the consumer makes a connection, he can access millions and millions of different Web sites. According to the FCC, 65 percent of users today still use older, narrowband technology to access the Internet.<sup>11</sup> In this situation, the typical consumer makes a connection to an ISP over a telephone line using an analog modem. Telephone modem speeds generally vary between 28.8 to 56 kilobytes per second (Kbps). By contrast, the new cable broadband technology allows consumers to access the Internet over a hybrid fiber-optic and coaxial cable (HFC) line using a cable modem, which is capable of speeds up to 100 times faster than analog modem connections.<sup>12</sup> The FCC estimates, however, that the percentage of users using

<sup>9</sup> Senate Bill No. 667, June 17, 1999.

<sup>10</sup> A portal is the first page the user sees when a connection is made. This page typically offers users many features like email, news, information organized by specific categories, and so forth.

<sup>11</sup> *Broadband Today*.

<sup>12</sup> This distinction, which is based on access speed, is arbitrary and likely to change as current technologies improve and new and faster technologies emerge in the marketplace.

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narrowband technology will decline over the next several years. Nevertheless, since narrowband and broadband technology both have advantages and disadvantages, it is unlikely that cable broadband will completely displace narrowband in the marketplace.

#### *Advantages and Disadvantages of Narrowband Internet Access*

Narrowband technology has several important advantages over broadband technology. First, it is widely available to consumers who have access to a telephone line and who have a computer equipped with a modem. According to the FCC, 94 percent of all households have telephone service.<sup>13</sup>

Second, consumers do not share the telephone line's bandwidth with other users when accessing the Internet. An ordinary telephone line is a dedicated line, which means it can only be used by one person and for one service at any given time. So, for example, if the user is accessing the Internet, he cannot also make a telephone call at that time. Broadband access is different, as will be explained shortly.

Third, telephone modems are standardized and come installed in many computers sold today. Standardization provides for easy access since no single ISP has proprietary control over modem technology. Moreover, standardization allows ISPs to compete in terms of the other services they offer.

Finally, when compared to cable broadband access prices, narrowband access is relatively inexpensive. Cable broadband access typically costs around \$29.95 to \$62.95 per month, whereas narrowband access costs are generally much lower (not including telephone charge).<sup>14</sup> Nevertheless, in those areas where broadband access competes directly against narrowband, prices for broadband access have fallen to become competitive with narrowband. However, one would not expect prices to be the same since these technologies are not identical and the services provided are not perfect substitutes.

The slow speed of narrowband access is its biggest disadvantage. Table 2, next page, illustrates how long it takes to transfer a 10-megabyte file with different types of Internet connections.<sup>15</sup> For example, it takes 24 minutes using a 56-Kbps modem over a telephone line (narrowband technology) compared to 20 seconds using a 4-megabits per second (Mbps) cable modem over a cable line (broadband technology). For this reason, it is likely that the prices for the two technologies will not be equal and that some consumers will continue to prefer to use narrowband despite its disadvantage in speed. Moreover, since it is

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<sup>13</sup> Federal Communications Commission, *Trends In Telephone Service*, September 1999, "Household Telephone Subscribership in the United States," 17-3 (hereinafter referred to as *Trends In Telephone Service* report).

<sup>14</sup> Heartland Policy Study, p. 22. A brief survey of prices charged in several Michigan cities reveals that the price for broadband access is generally around \$39.95. See *Cable Datacom News* at <http://www.cabledatcomnews.com>.

<sup>15</sup> See *Broadband Today*, p. 19.

likely some users will not need the speed associated with broadband, these two technologies are likely to co-exist in the marketplace with each catering to a niche group of consumers.

**Table 2 – Access Speeds for Various Narrowband and Broadband Internet Connections**

Modem Speed/Type	Average Transfer Time for a 10-Megabyte File
14.4-Kbps* Telephone Modem	1.5 hours
28.8-Kbps Telephone Modem	46 minutes
56-Kbps Telephone Modem	24 minutes
128-Kbps ISDN Modem	10 minutes
1.54-Mbps T-1 Connection	52 seconds
4-Mbps Cable Modem	20 seconds
10-Mbps Cable Modem	8 seconds
*Kbps (kilobits per second) and Mbps (megabits per second).	
Source: <a href="http://www.cablemodems.com/whatis.html">http://www.cablemodems.com/whatis.html</a>	

#### *Advantages and Disadvantages of Cable Broadband Internet Access*

As mentioned, broadband's biggest advantage is its superior access speed. According to policy analyst David Kopel, estimated cable modem speeds range from 1.2 Mbps to 27 Mbps for downstream transmission (i.e., from the Internet to the consumer) and from 28.8 Kbps to 10 Mbps for upstream transmission (i.e., from the consumer to the Internet).<sup>16</sup>

Broadband's other main advantage over narrowband is that its Internet connection is always live. Unlike narrowband technology, it is unnecessary to dial up to make a connection every time you wish to access the Internet. Once consumers subscribe to broadband service and the ISP activates the service, they are always connected. Nonetheless, despite these two very important advantages, broadband has several significant disadvantages.

The first disadvantage of broadband is the cost. Broadband is generally more expensive, although its price is becoming more competitive with narrowband access service. The second is its bandwidth capacity. With the current technology, bandwidth capacity must be shared with other cable broadband users in the same service area.<sup>17</sup> So if there are no other consumers using the bandwidth, then a single user has full access to the broadband's capacity and can enjoy the high speed of transmission. However, if other consumers are connected to the Internet, then all users must share the capacity, and the speed of transmission slows because of congestion. It is for this reason that cable firms and their

***If other consumers are connected to the Internet, then all users must share the broadband capacity, and the speed of transmission slows because of congestion.***

<sup>16</sup> Heartland Policy Study, p. 22.

<sup>17</sup> The bandwidth capacity is also shared with the transmission of video programming.

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***Telephone companies have begun recently to deploy digital subscriber lines (DSLs), which offer consumers a competitive alternative to broadband access provided by cable firms.***

affiliated ISPs limit consumers to 10 minutes of streaming video. Thus, although broadband access currently provided by cable firms is faster and the connection is always “live,” the disadvantage of shared bandwidth capacity and congestion are likely to prevent it from becoming the only technology to survive in the telecommunications marketplace.<sup>18</sup>

#### ISPs, CABLE FIRMS, TELEPHONE COMPANIES, AND OTHERS COMPETE TO SUPPLY INTERNET ACCESS

Two groups of companies form the major suppliers of narrowband and broadband Internet access service. The major suppliers of narrowband access are independent ISPs, who offer service to consumers over ordinary telephone lines. Although it is difficult to determine the exact number of ISPs, Kopel estimates there are over 5,000 ISPs in the United States today.<sup>19</sup> And although a consumer in any given location will not have access to all 5,000 service providers, consumers still choose from a number of service providers.

The major suppliers of broadband access are cable firms, local telephone companies, and, to a lesser extent, large specialized telecommunications firms. The larger cable firms are vertically integrated, which means they offer consumers both a physical connection and access to their affiliated ISP’s portal.<sup>20</sup> A customer in this situation purchases a bundle of services from the cable firm.

Telephone companies have begun recently to deploy digital subscriber lines (DSLs), which offer consumers a competitive alternative to broadband access provided by cable firms. This DSL technology offers consumers many advantages over the broadband access service provided by cable firms. The first advantage is that subscription prices are generally lower than cable broadband access. The second advantage is that consumers can easily install the telephone modem, whereas cable firms must install cable modems for their customers.<sup>21</sup> The third advantage is that DSL technology allows consumers to simultaneously access the Internet and to make telephone calls, which is unlike some cable broadband access services. Many experts predict, however, that new cable broadband technology will eventually offer users Internet access and telephone service, which partly explains why telephone companies were quick to deploy DSL.

Perhaps the most important advantage DSL technology offers is that a consumer does not share its bandwidth with other users. This avoids the congestion problem associated with cable broadband technology and allows the user to enjoy the full benefits of this technology; that is, increased access speed (when compared to the narrowband technology). Nevertheless, with all these advantages, DSL is not likely to dominate the

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<sup>18</sup> Nonetheless, cable firms are likely to address these problems as this technology becomes used more widely to provide access.

<sup>19</sup> Heartland Policy Study, p. 45.

<sup>20</sup> For example, AT&T/TCI’s affiliate ISP is @Home and Time Warner’s affiliate is RoadRunner.

<sup>21</sup> Cable firms are currently developing a new type of modem that can be easily installed by consumers. For more details, see *Broadband Today*.

market because the current technology can be used only within a certain radius of the telephone company's central office.<sup>22</sup> Although this feature limits how widely DSL can be deployed to compete against cable broadband access, it does not eliminate this technology entirely as a competitive alternative in the marketplace.

A third group of broadband access suppliers has emerged in the market and has had success in offering access service to select customers. A recent *Wall Street Journal* article reported that three firms—Covad Communication Group, Inc.; NorthPoint Communications Group, Inc.; and Rhythms NetConnections, Inc.—are selling DSL broadband access to residential and business consumers in select areas.<sup>23</sup> Each company has combined its expertise in other telecommunications markets and in regulatory matters to take advantage of the interconnection requirement of the 1996 Telecommunications Act to offer broadband access service in competition with the local telephone company and cable firm.

One other group of broadband access suppliers is the wireless and terrestrial service providers. The wireless firms offer broadband Internet access service via satellite transmission, while the terrestrial firms offer access service using a series of dishes that are geographically dispersed. Each offers certain advantages over the broadband wireline technologies mentioned above. For example, subscription prices are competitive and satellite modems are easy to install. If the user is interested in only one-way transmission, then it is not necessary to use a telephone or cable line.

Wireless technology, however, has certain disadvantages also. First, bad weather can and does interfere with transmission signals. Second, current technology does not permit unlimited usage because of bandwidth capacity. Third, if the user wants two-way transmission capability, he must use a telephone line. Nevertheless, as this technology develops further it is likely that it, too, will survive in the marketplace.

Many believe electric utilities will be a competitor in the near term and there are plausible reasons for this occurring. First, electric utilities have the infrastructure necessary to compete in this market: Most homes have electricity and thus have a line connected to a distribution grid operated by the local power company. Second, local utilities already have the expertise in operating a business that provides a service to consumers connected to some type of network, and it is quite reasonable that these companies could upgrade their facilities to provide Internet access and electric power to their current customers. Third, given that many states are moving toward making electric power distribution more competitive, these firms may find it profitable to diversify into other markets in which their facilities can also be used to provide Internet access services.

#### CONCLUSION: THE MARKET FOR INTERNET ACCESS IS COMPETITIVE

The competitive market for Internet access is currently comprised of narrowband and broadband technology. This distinction is arbitrarily determined by the technological speed

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***Wireless firms offer broadband Internet access service via satellite transmission, while the terrestrial firms offer access service using a series of dishes that are geographically dispersed.***

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<sup>22</sup> See *Broadband Today* for more detail.

<sup>23</sup> See "In a Race to the Web, Phone Upstarts Grab Turf," *Wall Street Journal*, October 18, 1999, p. B1.

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***The forced-access debate revolves around whether or not market forces are more effective than government regulation in ensuring that the market for Internet access remains competitive.***

of access. The various technologies discussed above and their associated suppliers all have certain advantages and disadvantages that are likely to change over time. Because consumers are diverse and have many reasons for accessing the Internet (e.g., from sending simple e-mail messages to downloading full-length movies), no single technology is likely to dominate the other technologies. Instead, these technologies will continue to improve in terms of speed of access, bandwidth capacity, minimization or elimination of congestion, and so on. Furthermore, since the competitive difference from the consumers' perspective appears to be primarily price and speed of access, the potential for one technology to monopolize the market for access because of network externalities is not an issue. There are different ways a consumer can connect to the Internet and the advantages specific to each technology are in no way affected by the number of users connected by a particular technology.

A second reason why the market for Internet access will remain competitive is the relative ease of new market entry for service providers. Entry is easy since no single provider has proprietary ownership of a specific technology. In this regard, connecting to the Internet has always been a matter of choosing a particular technology, and the choices are increasing every day. Entry, however, does entail some "sunk," or unavoidable, costs and therefore it is relatively risky from a firm's perspective. Consequently, potential investors must anticipate earning at least a competitive return on their investment once they have committed resources to entering a particular market or upgrading their facilities to provide a new service. Even so, new entry is the predicted economic response to potential profit opportunities. It is precisely this potential to earn profits that encourages firms to undertake risky investments in new technologies in the first place. The predicted impact is to increase the supply of Internet access, which will lower the quality-adjusted price for access service and expand service in the marketplace. Moreover, potential profit spurs new innovation which also improves consumer welfare. Thus, it should be no surprise that suppliers of the different access technologies are busy trying to find new ways to improve their technology in order to better serve their customers.

## **An Analysis of the Arguments in Favor of a Forced-Access Policy for Internet Cable Broadband Technology**

The forced-access debate revolves around whether or not market forces are more effective than government regulation in ensuring that the market for Internet access remains competitive and whether or not consumers will continue to have choices among different Internet access service providers in the future. The analysis presented in the previous section shows that the market is indeed competitive and because it is relatively easy for new firms to enter the market, it will likely remain competitive in the future as well.

The OpenNet coalition, however, maintains that since cable firms have had a head start in the technological race to develop and deploy broadband access, and since these same firms have affiliated ISPs, independent ISPs will not have equal access to potential customers and, consequently, are at a competitive disadvantage.

But OpenNet's argument is flawed for three reasons. First, it ignores the opportunities other broadband access suppliers offer to compete for customers. Indeed,

independent ISPs have negotiated access arrangements with telephone companies.<sup>24</sup> Second, the argument is inconsistent with economic incentives that improve the efficiency of the marketplace, and it disregards the limitations of the existing technology. Third, the argument is flawed because it is based on similar policies to promote competition that have already been tried and largely failed in other telecommunications markets. Each of these arguments is examined below.

#### BROADBAND ACCESS IS AN OPTION ALREADY AVAILABLE TO INDEPENDENT ISPs

Any independent ISP today can freely negotiate an agreement with an Internet access provider, such as a cable firm, to provide access service to potential consumers. If such an agreement were reached, then the cable firm would provide the physical connection while the independent ISP would provide related services like first-page features and other proprietary services. A cable firm would refuse to negotiate such an agreement if the independent ISP is likely to provide inferior service relative to that provided by the cable firm's affiliated ISP. Why? The reason is simple. Consumers want the highest quality access to the Internet at the lowest price. If a cable firm negotiates an agreement with an independent ISP and the ISP provides poor service, then the cable firm's customers will buy their access service from other suppliers. By the same logic, if the cable firm's affiliate provides poor service, the cable firm loses its customers to other suppliers as well. In either case, the cable firm has the incentive to provide the best overall service to its customers and consequently must choose the best way to do so. As Sky Dayton, the founder of EarthLink (an independent ISP), predicts, "Consumer demand will eventually force companies like AT&T to give consumers a choice of any ISP."<sup>25</sup>

There is a more subtle yet important reason why cable firms would not allow all independent ISPs to provide access service over their cable lines. Like other technologically sophisticated products consumers purchase today that operate in conjunction with other complementary products (e.g., computer hardware and software), it may be difficult for consumers to discern which firm is to blame in the event there is a problem with the service provided. For example, suppose there is a glitch in the service and consumers are unable to make a good connection to the Internet. Consumers may attribute this problem to the cable firm, which only supplies the physical connection, when in fact the problem lies with the independent ISP. The cable firm's reputation is harmed and potentially its long-term profitability is reduced because current and potential future customers switch to other access suppliers. In these situations, the cable firm may be unable to write a contract that would eliminate or even minimize this type of problem. Moreover, the ISP would have every incentive to shift the blame to the cable firm to avoid the harmful impact on its reputation.<sup>26</sup> Similarly, cable firms would have an incentive to blame their problems on independent ISPs if the physical connection failed to operate in a satisfactory manner. This is one of the

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<sup>24</sup> See United States Internet Council, "The Explosion of High-Speed Internet Competition," for some examples.

<sup>25</sup> Heartland Policy Study, p. 44.

<sup>26</sup> Economists refer to this phenomenon as "opportunistic behavior."

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***In a free market, firms can be expected to negotiate with other firms arrangements that best serve the consumer because their livelihoods depend upon it.***

reasons why firms in the real world often vertically integrate, or write long-term contracts, to avoid problems of this type.<sup>27</sup> Thus, it seems reasonable to expect that cable firms would prefer to have their affiliated ISPs provide the complementary access service.

Does this mean that independent ISPs must vertically integrate in order to survive in the marketplace? Not necessarily. It does mean, however, that these firms will have to provide a service that is of a higher quality and at a lower price than the service provided by cable-affiliated ISPs to convince the various access suppliers to use their service.

#### CABLE BROADBAND PROVIDERS CANNOT DELIVER “OPEN” ACCESS TO ALL ISPs

OpenNet’s argument in favor of a forced-access policy ignores the fact that it is technologically impossible as well as economically unwise for a cable firm to provide access to any ISP wishing to use the cable firm’s broadband pipe. The cable firm’s bandwidth, which is shared capacity, would be spread across the total number of users making an access connection to the Internet. As more users connect, transmission speeds decrease and congestion becomes a real problem. Currently, there is no feasible solution to this limitation short of restricting the number of access providers to avoid the real problem of congestion. A forced-access policy would be an economic disaster for cable firms because the blame could be easily shifted to cable firms when congestion problems arose. What this means is that in the long run, cable firms would likely cut back on investments in broadband technology, which would limit consumers’ access options—the exact opposite result of what forced-access advocates say their policy will achieve.

#### FORCED-ACCESS POLICY HAS ALREADY FAILED TO ENCOURAGE COMPETITION IN THE TELEPHONE SERVICE MARKET

The OpenNet coalition has argued that forced-access policy has been successful in promoting competition in local telephone markets. OpenNet is referring to the Telecommunications Act of 1996, which requires established local telephone companies to make their network facilities available to any competitor that wishes to offer local telephone service.<sup>28</sup>

However, the experience thus far in local telephone markets is a bad example to use to justify forcing cable firms to open their facilities to independent ISPs for two reasons. First, coercion is not a good substitute for voluntary arrangements. In a free market, firms can be expected to negotiate with other firms arrangements that best serve the consumer because their livelihoods depend upon it. Second, forced-access policy has not really worked to promote competition in the telephone market. For example, the Michigan Public Service Commission (MPSC) has reported that by the end of October 1997, 28 competitive local

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<sup>27</sup> Benjamin Klein, Robert A. Crawford, and Armen A. Alchian, “Vertical Integration, Appropriable Rents, and the Competitive Contracting Process,” *Journal of Law and Economics*, 21 (October 1978): pp. 297-326.

<sup>28</sup> Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (1996).

exchange companies (CLECs) were licensed to compete against Ameritech of Michigan in local telephone markets, but only 11 of those CLECs had actually signed “interconnection” agreements with Ameritech.<sup>29</sup> Furthermore, those 11 CLECs were operating only 200,000, or 3.8 percent, of Ameritech’s total access lines in Michigan. The MPSC report also noted that GTE-Michigan did not face any competition from CLECs in its respective service areas. In other words, despite the 1996 Telecommunications Act’s mandate to make established telephone companies’ network facilities available to potential competitors, the established local telephone companies still earned 96 percent of all local service revenues in 1998.<sup>30</sup>

The first lesson to draw from the forced-access experience in the telephone industry is that forcing companies to negotiate contractual arrangements that they would not normally negotiate is a bad idea for promoting competition. The second lesson from this experience is that new entry has emerged in the profitable business segment of the local market. Why? Because there is a private incentive to provide a competitive service, and new firms are willing to take advantage of the opportunity. Similarly, there is a profit opportunity in the Internet access market, and many firms are already responding to this opportunity by developing and implementing new access technologies without any direction from the government. The market is competitive and market participants will continue to compete in the absence of government interference.<sup>31</sup>

#### CONCLUSION: GOVERNMENT REGULATION IS NOT NECESSARY TO LEVEL THE INTERNET ACCESS PLAYING FIELD

The OpenNet coalition and other proponents of government forced-access policy argue that regulating access is necessary to maintain a level playing field, but there are two major problems with this argument. The first is that the playing field is already level. Independent ISPs have access to various narrowband and broadband technologies and, thus, currently do enjoy an equal opportunity to compete. The second problem is that forced-access will most likely lead to a reduction in the number of playing fields available. If cable firms are not able to compete and enjoy the full benefits of their investments, these firms are less likely to undertake the risks to develop these new technologies in the first place. Profits are a necessary incentive to reward investors for assuming the risks inherent in entering a rapidly changing market and to reward firms that develop new technological innovations.

An example from the pharmaceutical market provides a good illustration of why policy makers should avoid making a mistake in the market for Internet access by mandating a forced-access policy. Pharmaceutical product innovation is stimulated through the government’s protection of property rights and shows how the government can play a positive “referee” role in the marketplace. The United States government strictly enforces a

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<sup>29</sup> Report to the Michigan Governor and Legislature on Public Act 1991 as Amended Section 353, *Report on Local Telephone Interconnection*, February 1998.

<sup>30</sup> See *Trends in Telephone Service*, 9-1, for more details.

<sup>31</sup> For an example of how firms can voluntarily cooperate in a market setting similar to the Internet access market, see Paul A. Cunningham and Robert M. Jenkins III, “Railing at ‘Open Access,’” *Regulation*, Spring 1997.

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***The best way to promote competition is to refrain from passing legislation that interferes with the free working of the already-competitive Internet access market.***

set of laws that protect the intellectual property rights of all pharmaceutical firms. This is a major reason why many firms commit millions of dollars to research and development to discover, develop, and market new drugs here in the United States: They consider the United States a safe haven for doing business. By contrast, countries that do not protect intellectual property rights find that firms based in their countries do not commit many resources to developing innovative new drugs. In which country are consumers better off? The answer of course is the United States. The lesson to be taken from this example is that the government's role should be to protect the competitive process by respecting and enforcing property rights. The government's role should not be such that it tilts the playing field to protect competitors that might be harmed by the competitive process.

## **Conclusion and Recommendations**

By all measures, the market for Internet access is a dynamic, competitive market. Consumers wishing to access the Internet can, in many localities, purchase this service from a wide range of suppliers, where each supplier offers a different technology with distinct advantages and disadvantages. In addition, the profit opportunities created by this competitive market are attracting new, upstart firms to compete and spurring established firms to improve their service. The end result is that consumers benefit from the expanded set of choices and competitive prices—all without any government direction or interference. Accordingly, implementing the following recommendations will serve to maintain and even increase competition in the market to ensure that consumers continue to enjoy a wide range of affordable Internet access services.

### **RECOMMENDATION #1: REJECT FORCED-ACCESS POLICIES AND ALLOW THE FREE INTERNET ACCESS MARKET TO WORK FOR CONSUMERS**

Petitioning the government to mandate by law or by a regulatory order broadband access that independent ISPs can already obtain through voluntary arrangements is a classic example of what economists call rent-seeking behavior.<sup>32</sup> As often is the case, if a competitor is unable to make it in the marketplace, that competitor will attempt to make it in the political marketplace. Politicians and regulators should reject these specious claims to “level the playing field,” since the effect will certainly reduce the economic benefits that broadband technology promises to provide to its users.

In any market, there are likely to be winners and losers. Here, a group of potential losers has sounded the clarion call for government assistance because they fear that cable firms will monopolize the market for Internet access. However, market trends and economic analysis underscore that it is unlikely cable firms will dominate the market for Internet access service.

The appropriate response to OpenNet and other forced-access advocates' plea for corporate assistance is to maintain the status quo: In other words, the best way for legislators

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<sup>32</sup> In this context, rent-seeking behavior refers to activities that reduce society's welfare, but improve the chances of the ISPs competing in the marketplace with assistance from the government.

to promote competition is to refrain from passing legislation that interferes with the free working of the already-competitive Internet access market. Market competition is the best policy for serving the consumers' best interests, and the government should avoid the temptation to pick the winners and losers for Internet users.

## RECOMMENDATION #2: END THE SYSTEM OF LOCAL CABLE FRANCHISE AGREEMENTS TO PROMOTE GREATER COMPETITION, IMPROVE SERVICES, AND LOWER COSTS

Local governments have been selling cable firms exclusive franchises within specified geographic areas since the early 1960s. Today nearly all cable firms have exclusive franchises in their respective service areas. Nationwide, only 3 percent of 67 million cable subscribers can select from competing cable companies, and they pay higher prices for the cable monopoly.

Why have local governments sold monopoly rights? A plausible answer is that this is an easy way for public officials to make a few easy bucks without directly taxing their constituents. The temptation is hard to resist: Give a firm a monopoly and then require the monopoly to share its monopoly profits. From 1980 to 1990, the cable industry paid local governments \$3.3 billion in franchise fees. Nine years ago, the figure topped \$715 million.

Local governments may also mandate nonmonetary, or "politically correct" concessions from operators for franchise rights. In Sacramento, California, a cable operator had to plant 20,000 trees to secure his franchise. Another in Miami had to provide \$200,000 in annual funds to the local police department for an anti-drug abuse campaign.

Is the exclusive franchise system in the consumers' best interest? The answer is clearly no. According to the National Telecommunications and Information Administration, "[t]he franchising process eliminates or seriously impedes entry by competitors, imposes substantial costs and delays on franchisees, cable subscribers and the public, which are not offset by countervailing benefits. The public would be better served by municipal efforts to provide a choice of cable service providers rather than extracting costly concessions from a sole cable franchisee."<sup>33</sup>

Michigan policy makers should lead the way for better service and lower costs by advocating that it is no longer necessary for cable firms to negotiate franchise agreements with local governments.<sup>34</sup> This would eliminate municipal franchise authorities' incentive to use their legal power to require forced access as a *quid pro quo* for granting franchise agreements, renewals, or transfers to particular firms and would also remove a significant barrier to entry in local markets for video programming and Internet access service. Other cable firms may then enter the market with this barrier gone, benefiting consumers of those services with better service and lower costs due to the additional competition.

<sup>33</sup> This quote by the NTIA is taken from Thomas W. Hazlett and Matthew L. Spitzer, *Public Policy Toward Cable Television: The Economics of Rate Controls* (The MIT Press: Cambridge, MA, 1997), p. 39.

<sup>34</sup> See Donald L. Alexander, "Laying Cable and Competition," *Michigan Privatization Report*, Summer 1999, Mackinac Center for Public Policy.

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## About the Author

Dr. Donald Alexander is associate professor of economics at Western Michigan University and an adjunct scholar with the Mackinac Center for Public Policy. His expertise includes antitrust law and regulation of the pharmaceutical and telecommunications industries—topics he has explored in articles for *Applied Economics*, *Southern Economic Journal*, *The Review of Industrial Organization*, and other scholarly journals.

Dr. Alexander is the editor of a volume of essays, *Telecommunications Policy: Have Regulators Dialed a Wrong Number?*, and co-editor of another volume, *Networks, Infrastructure, and the New Task for Regulation*. He is also the author of Mackinac Center *Viewpoints* on anti-trust law and telecommunications.

Dr. Alexander has held several professional academic and government positions throughout his career. From 1983 to 1984, he was visiting assistant professor at The College of William & Mary and then assistant professor at Penn State University from 1984 to 1988. In 1988, he joined the Antitrust Division of the Federal Trade Commission. From 1989 to 1991, he served as an economist first with the consulting firm Capital Economics and later with the International Trade Commission. In 1986 and 1988, Dr. Alexander was the recipient of the Philip S. McKenna fellowship for the Study of Market Economics.

He received his bachelor's degree in economics from Bowling Green State University in 1978 and his Ph. D. in economics from Penn State University in 1983. He has been a member of the Mackinac Center Board of Scholars since 1994.

  
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[www.mackinac.org](http://www.mackinac.org) • [mcpp@mackinac.org](mailto:mcpp@mackinac.org)

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