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No. 1317 September 2, 1999

BROADBAND TELECOMMUNICATIONS IN THE 21ST CENTURY: FIVE PRINCIPLES FOR REFORM

ADAM D. THIERER

"Broadband telecommunications"— technology and services that spur access to the Internet and high-speed telecommunications networks—is quickly becoming the hottest topic in the communications lexicon. This evolving industry promises to offer Americans increased online capabilities of higher quality and at more reasonable prices than they now enjoy. The demand for broadband services is skyrocketing, as Peter Huber, a Senior Fellow at the Manhattan Institute for Policy Research, explained to Congress last March: "Demand for digital bandwidth is increasing at annual rates in the range of 50 to 200 percent," and "[b]y every plausible projection, it will continue growing at those rates for the foreseeable future. It will increase at least five-fold over the next few years." Unfortunately, Huber also pointed out,

> existing phone, cable, broadcast, wireless, and satellite networks still rely, in significant part, on yesterday's analog technology, and they are already stretched to capacity. Systems deployed a decade ago cannot begin to accommodate five-fold increases in traffic. So new networks must be built…. Which means, in turn, that 80 percent or more of the wires, trunks, cables, transmitters, receivers, switches, and routers that we will be using for digital transport five years from now will be built and put into commission between now and then. Nobody owns them yet. Hardware manufacturers have to build them. Phone, cable, broadcast, wireless, and satellite companies have to deploy them. Fast.

This growing "broadband crisis" is generating concern among policymakers, regulators, corporate officials, academics, and industry watchers who want to ensure that broadband services are rolled out in a timely fashion to as many Americans as possible. But not all of their proposals will help solve the problems Huber describes or spur investment in telecommunications. Indeed, several policymakers advocate continuing today's outdated and unworkable regulatory regime with its price controls, entry

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barriers, line-of-business controls, geographically divided markets, and restricted choice—practices that, to a large extent, created the very problems they seek to solve. (Note: A companion paper, "Broadband Telecommunications in the 21st Century: A Legislative Report Card," discusses the five bills introduced in Congress in 1999 that deal with broadband deployment).

Instead of following the traditional regulatory model, policymakers should consider adopting the model of legal governance that allowed the computer industry to become so lucrative and successful in less than two decades. The government's "hands-off" approach incorporated simple, uniform, and time-tested standards for operating in a free market, such as strict contract enforcement, patent and trademark protection, property rights, voluntary common-law resolution of disputes, voluntary standard-setting, and open national markets for goods and services. The result has been stunning. The computer industry has grown—in just 15 to 20 years—into one of America's leading exporting and job-creating industrial sectors. Competition is vigorous, choices are plentiful, prices are low, and entrepreneurialism remains vibrant.

If Congress were to apply the lessons learned from the computer industry's experience to telecommunications policy, it would encounter great success with encouraging investment in and deployment of broadband services across America. To do so, Members of Congress should ensure that any bill proposing to reform the telecommunications sector embodies the following principles that were so evident in the development of the computer industry:

1. **Deregulation and free markets.** Voluntary market-based applications should govern the development of this complex industry, not new forms of regulation or managed markets.

2. **Legal simplicity and stability.** Complex, contradictory, and changing regulatory regimes deter innovation and entrepreneurship. Current rules and standards governing the telecommunications sector must be simplified.

3. **Uniformity and regulatory parity.** The same rules must apply to all players, and archaic regulatory distinctions should be wiped off the books.

4. **A single open market system.** Consumers must be free to purchase the services they want from any national provider. State and local regulations that interfere with interstate communications commerce must be prohibited.

5. **Agency constraint and downsizing.** A free market should not be encumbered by constant micromanagement by federal bureaucrats. Regulatory interference must be reduced and agency missions and funding decreased, not expanded.

Change may well be the only constant in the telecommunications world today, and to keep up with the rapid technological changes in this industry, the legal environment governing the market must undergo rapid change as well. Most industry experts admit that there is no longer an "essential facility" or "bottleneck monopoly" in the communications sector, especially in the broadband data segment. Therefore, legislative attempts to micromanage the evolution of this market, or to pigeonhole broadband technologies or providers into the outdated and unworkable regulatory distinctions and regimes of the past, are little more than misguided policies that will thwart broadband investment, innovation, entrepreneurialism, and deployment. The hands-off approach that helped propel the computer industry to remarkable success is a superior alternative to regulation that Congress should embrace enthusiastically.

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In a speech before the National Cable Television Association on June 15, 1999, Federal Communications Commission Chairman William Kennard called for the creation of "a national, competitive, deregulatory telecommunications policy" to bring the promise of broadband communications networks and services "to all Americans wherever they live."[1] "Broadband telecommunications"—the technology and services that will enhance access to the Internet and other high-speed telecommunications networks—is, without doubt, the hottest phrase in the communications lexicon today. The evolving broadband industry promises to revolutionize communications by offering Americans greater online capabilities and higher quality at reasonable prices.

Regrettably, however, the broadband debate has become extremely contentious, as a cacophony of contradictory proposals from corporate leaders, policymakers, regulators, and industry-watchers compete for the government's attention. The Federal Communications Commission (FCC), through lengthy proceedings, voluminous filings, a multitude of conferences, and a myriad of publications, is considering this issue, and within the past few months, several legislators have introduced bills in Congress to address what is increasingly perceived as a crisis in the telecommunications industry.

Indeed, Peter Huber, a Senior Fellow at the Manhattan Institute for Policy Research, estimates that "Demand for digital bandwidth is increasing at annual rates ranging from 50 percent to 200 percent."[2] Moreover, "[b]y every plausible projection, it will continue growing at those rates for the foreseeable

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1. William E. Kennard, "The Road Not Taken: Building a Broadband Future for America," remarks before the National Cable Television Association, June 15, 1999,available at *http://www.fcc.gov/commissioners/kennard/speeches.html*.
2. Statement of Peter Huber, a partner in the law firm of Kellogg, Huber, Hansen, Todd, and Evans, at hearing regarding reauthorization of the Federal Communications Commission, Committee on Commerce, U.S. House of Representatives, 106th Cong., March 17, 1999.

future. It will increase at least five-fold over the next few years."[3] Huber also notes:

> If demand is going to grow five-fold—and it is—then network capacities will have to increase as much. But the existing phone, cable, broadcast, wireless, and satellite networks still rely, in significant part, on yesterday's analog technology, and they are already stretched to capacity. Systems deployed a decade ago cannot begin to accommodate five-fold increases in traffic. So new networks must be built…. Which means, in turn, that 80 percent or more of the wires, trunks, cables, transmitters, receivers, switches, and routers that we will be using for digital transport five years from now will be built and put into commission between now and then. Nobody owns them yet. Hardware manufacturers have to build them. Phone, cable, broadcast, wireless, and satellite companies have to deploy them…for as long as demand continues to grow at these explosive rates.[4]

Clearly, it is important that broadband communications capabilities are developed and deployed on an expedited basis. But how Congress legislates will have an impact on the process. Currently, for example, Congress is considering five bills that take various approaches to regulating this industry. In a companion paper, "Broadband Telecommunications in the 21st Century: A Legislative Report Card," these bills are compared using four industry-specific criteria.[5] But before enacting new legislation to reform the telecommunications industry, Congress should decide what principles and economic incentives should govern broadband policymaking for the next century to ensure rapid innovation and widespread deployment of new services.

A model can be found in the "hands-off" approach the government took with the computer industry that encouraged, rather than restricted, its development over the past two decades. Legal governance of the computer industry followed simple, uniform, time-tested, and market-oriented standards—such as strict contract enforcement, patent and trademark protection, property rights, voluntary common-law resolution of disputes, voluntary standard-setting, and free and open national markets for its goods and services. Five overriding principles behind this approach should be applied in any forthcoming legislation to reform the broadband telecommunications industry.

Specifically, to ensure that Americans have adequate and reliable broadband technologies and services in the future, a new federal policy must promote:

1. **Deregulation and open markets.** New forms of regulation or ways to manage markets only impede development of technologies and services. Policymakers must resist the temptation to micromanage every facet of this complex new industry and, instead, allow voluntary-market decisionmaking to govern its development.

2. **Legal simplicity and stability.** Today's complex, contradictory, and changing regulatory regimes inhibit innovation and investment in the telecommunications sector. Current standards should be re-evaluated, updated, and simplified.

3. **Regulatory parity and uniformity.** In the current market, the same rules are not applied to all. Congress should ensure all companies in the industry are regulated equally. Archaic regulatory distinctions must be dropped.

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3. *Ibid.*
4. *Ibid.* (emphasis added).
5. See Adam D. Thierer, "Broadband Telecommunications for the 21st Century: A Legislative Report Card," Heritage Foundation *Backgrounder* No. 1318, September 7, 1999.

4. **A single open market system.** Consumers must be free to purchase the services they want from any national provider without encountering conflicting state or local mandates. State and local regulations that interfere with interstate communications commerce must be prohibited.

5. **Agency constraint and downsizing.** Regulatory reform alone will not solve Washington's propensity to expand agency missions and funding. A deregulated telecommunications market should also be free of constant federal micromanagement. Regulatory interference should be intentionally restricted to allow the unfettered and dynamic development of this new industry.

Continuing a hopelessly convoluted and ever-changing system of regulatory policies will not promote the development and deployment of broadband. A better approach must be based on these sound, market-oriented, and proven principles.

UNDERSTANDING THE BROADBAND MARKET

Broadband, or advanced telecommunications services, are perhaps best understood as something other than the "plain old telephone service" (or, as many industry-watchers call it, "POTS") most Americans currently use. Congress defined "advanced telecommunications capability" in Section 706(c)(1) of the Telecommunications Act of 1996 as the "high-speed, switched, broadband telecommunications capability that enables users to originate and receive high-quality voice, data, graphics, and video telecommunications using any technology."

To distinguish advanced communications technologies and services from the older forms of telephony, many industry observers call the new broadband offerings "PANS," or "pretty amazing new stuff." It is an accurate description, because what really distinguishes the old and new communications technologies is the latter's almost unlimited potential to expand the capacity and capabilities of the communication infrastructure to satisfy the present, seemingly insatiable demand for greater and better access.

At the heart of the current effort to promote the deployment of broadband services and technologies is the realization that yesterday's communications system cannot meet today's demand. America's communications infrastructure remains heavily dependent on copper wires and analog transmission methods used to complete a simple two-way telephone call. But in the digital age of faxes, high-speed modems, data and satellite communications, Personal Communications Services (PCS), and Internet-based telephony and commerce, this analog system is quickly becoming a technological relic.

Almost every commercial sector in America relies on advanced telecommunications technologies, especially the Internet. Whether it is automobiles or agriculture, computers or consumer electronics, electricity or nuclear power, pharmaceuticals or medical care, maritime or trucking, financial or travel services—industries depend on sophisticated communications to remain competitive in an increasingly global economy. Moreover, Americans of any background are accustomed to communications technologies that help them communicate, work, shop, and enjoy their hobbies efficiently.

In short, America—once an agrarian and then an industrial society—is now a communications society in "the Information Age."[6] Broadband services are the oil, steel, electricity, and automobiles of modern times. Broadband technology is no less significant to Americans today than those developments were in their day.

Communications and computing firms are taking impressive steps to roll out new services or upgrade existing systems to satisfy consumers'

6. See Peter K. Pitsch, *The Innovation Age: A New Perspective on the Telecom Revolution*, Hudson Institute and Progress and Freedom Foundation, 1996.

AMERICANS PLUG IN AND POWER UP A NEW MARKET

On June 24, 1999, various industry officials testified before the House Commerce Committee's Subcommittee on Telecommunications, Trade and Consumer Protection about the growth of e-commerce and telecommunications:

> "A few short years ago, the Internet was something that only serious researchers and computer jockeys knew about. Electronic commerce was not part of our vocabulary. In 1995, revenues generated by the Internet were a mere $5 billion. Since then, the growth of the Internet has been astounding, far outstripping the predictions of most experts. Last year, Internet revenues rose to an astronomical $301 billion."[1]
>
> *—Thomas Tauke, Senior Vice President of Government Relations, Bell Atlantic Corporation*

> "The Internet today features over 42 million domains…containing in excess of 830 million pages of web content. To put things in perspective, it is useful to benchmark these statistics against 1996, the year that the Telecommunication Act was signed. In that year, the Internet contained an estimated 240,000 domains, and roughly 72 million web pages. Such growth can only be described as explosive. Nor is it slowing. *Inc. Magazine* recently estimated that 17 new web pages appear on the World Wide Web every second."[2]
>
> *—Howard A. Lenox, Director of Federal Relations and Technology Issues, SBC Telecommunications*

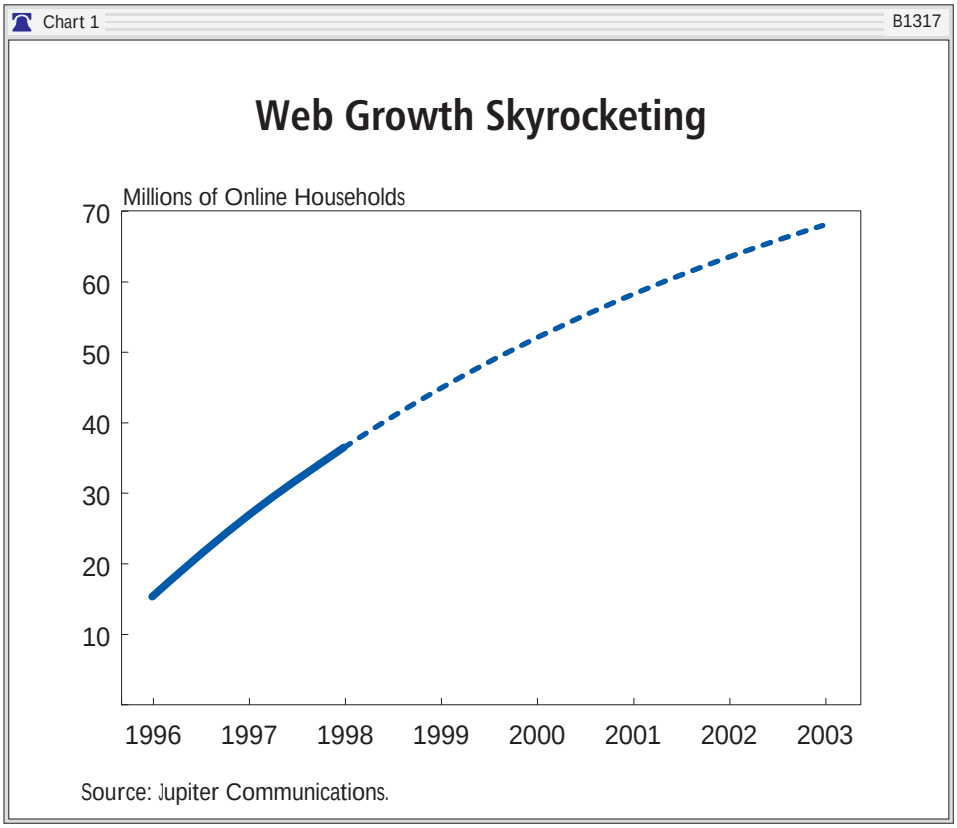
> "More than half of American households—a total of 53 million—now own PCs. And about one-third…have access to the Internet. Every month, nearly 1.5 millions Americans join the online world for the first time, bringing the percentage of the US population online from nearly zero in 1990 to over 30 percent today. Indeed, the number of online households in the United States grew by a factor of eight between 1994 and 1998. In five years, nearly 60 percent of Americans are expected to be online. This same rapid growth path can be seen throughout the world, where the number of online users is expected to reach 250 million by the year 2002. As one would expect from all of these users online, traffic on the Internet is doubling every 100 days and analysts are predicting that by 2002 consumers will spend nearly $43 billion a year online, compared to $8 billion last year."[3]
>
> *—George Vradenburg, Senior Vice President of Global and Strategic Policy, America Online*

1. Thomas Tauke, testimony before the Subcommittee on Telecommunications, Trade and Consumer Protection, Committee on Commerce, U.S. House of Representatives, 106th Cong., June 24, 1999.
2. Howard A. Lenox, testimony before the Subcommittee on Telecommunications, Trade and Consumer Protection, Committee on Commerce, U.S. House of Representatives, 106th Cong., June 24, 1999.
3. George Vradenburg, testimony before the Subcommittee on Telecommunications, Trade and Consumer Protection, Committee on Commerce, U.S. House of Representatives, 106th Cong., June 24, 1999.

demands for access and capabilities. Fiber optic lines, extensive terrestrial wireless networks, space-bound satellite networks, and digital upgrades to older analog networks are currently being deployed to meet those needs.

Impressive as these efforts are, however, they have not satisfied the stunning increase in demand for communications services. And as Peter Huber testified before Congress last March, the demand will only increase. By all statistical measures, in

fact, the numbers will likely continue to exceed annual projections. A significant portion of this demand results from the proliferation of online or interactive computing services and activities, including electronic sales and commerce (or "e-commerce"), telecommuting, teleconferencing, long-distance learning programs, telemedicine, and the use of the Internet by average Americans. As *Wall Street Journal* senior writer George Anders recently observed in a story on e-commerce, "The Internet economy is growing far faster than even the optimists expected a year ago."[7] (See box on Page 4.)



The astounding growth in the numbers of Americans online has even forced the U.S. Department of Commerce to begin tracking the "emerging digital economy."[8] In its recently released report, *The Emerging Digital Economy II*, the Commerce Department acknowledges the remarkable size of the e-commerce and information technology (IT) market: "Between 1995 and 1998, [IT producers] contributed on average 35 percent of the nation's real economic growth."[9] And "By 2006, almost half of the U.S. workforce will be employed by industries that are either major producers or intensive users of information technology products and services."[10]

Despite the efforts of the communications and computer sectors of the American economy to roll out advanced services to meet the mounting demand, the market has been restricted by various factors. Generally, broadband investment is an expensive and risky undertaking, and serious regulatory impediments exist that discourage investment. These market deflators need to be studied before adequate reforms can be drafted.

Expenses and Risks

Rolling out an advanced telecommunications network is quite unlike most other business undertakings. Although firms in other industries certainly hope that they will be able to convert every consumer into a customer, it is not essential that they do so to be successful. Winning the allegiance of a small segment of the market or a cer-

7. George Anders, "Buying Frenzy," *The Wall Street Journal*, July 12, 1999, p. R6.
8. See *http://www.ecommerce.gov/*.
9. United States Department of Commerce, "Executive Summary," *The Emerging Digital Economy II*, June 1999, available at *http://www.ecommerce.gov/*.
10. *Ibid.*

tain niche of consumers is enough to keep many businesses thriving.

New telecommunications offerings work differently, especially for network-based services. Rolling out new networks can be prohibitively expensive, requiring a significant up-front financial investment. Usually, companies seek assistance from external sources or form strategic alliances with other companies. Unlike offerings in other fields, new network services rarely can be targeted to one segment of the economy. For a network to be successful, it needs to be ubiquitous. Indeed, ubiquity is the key to increasing value in the telecommunications field because the value of a network is closely linked to the number of customers using it.[11] Communications consumers expect to be given access to as many individuals or organizations as possible through the network they use. Network developers factor consumer expectation as well as the risks involved in meeting those expectations into their business plans and investment strategies. The failure to capture a significant market share of consumers or subscribers can cause an entire investment to turn sour. Success will depend largely on the ability of the network to convince a diverse group of shareholders, investors, and consumers that it will be comprehensive and sophisticated at the same time it also is affordable and reliable.

Thus, the stars have to be aligned properly if firms are to have the motivation to deploy advanced broadband networks and services. Still, investors and consumers have been willing to gamble on such ambitious, albeit risky, business ventures in the past. Certainly, with demand growing at the pace Peter Huber predicts, more companies would be willing to assume the potential risks of financing, building, and deploying broadband communications networks.

Yet only limited investment is currently taking place in this sector. In fact, there is evidence that throughout the 1990s the industry leaned toward *disinvestment*. Statistical research conducted by Erik R. Olbeter, former director of the Advanced Telecom and Information Program at the Economic Strategy Institute, supports this finding. In testimony before the Senate Commerce Committee in April 1998, Olbeter noted: "Current investment in broadband networks is lagging behind current and projected demand. Specifically, the local exchange carriers (LECs)[12] lack the technology to provide the next generation of broadband services and network applications."[13] At least from 1991 to 1996, investment by LECs generally declined or remained flat, especially for investments in network modernization and maintenance.[14] Olbeter also noted that the capital expenditures made by the LECs during this period were limited primarily to the extension of existing networks rather than the addition of advanced infrastructure.

Fortunately, since 1996, there has been a slight improvement in net investment figures—suggesting that an upturn in investment trends may be developing. Nonetheless, more needs to be done to meet the rising demand for broadband services. The question remains: What is driving network disinvestment over this decade and discouraging new investments? The answer lies in the legal

11. This is known in industry parlance as "Metcalfe's Law," which holds that a given network's value is roughly equivalent to the square of the number of users connected to it. This theorem was conceived by Robert Metcalfe, inventor of the Ethernet.

12. Local exchange carriers (LECs) are the traditional providers of telephone service to residential and business customers. They carry the majority of residential wireline telephone traffic over a network of central switching offices and local loops. The largest LECs are the Regional Bell Operating Companies (RBOCs)—Ameritech–Southwestern Bell–Pacific Telesis, Bell Atlantic–Nynex, U.S. West, and Bell South—and the GTE Corporation, but more than 1,000 LECs exist, most of them servicing rural America.

13. Erik R. Olbeter, testimony before the Subcommittee on Communications, Committee on Commerce, Science and Transportation, U.S. Senate, 105th Cong., April 22, 1998, available at *http://www.econstrat.org/ero706.htm*.

14. Erik R. Olbeter, "Is America Investing in Communications Networks?" presentation to Economic Strategy Institute Conference on "America's Broadband Future," Washington, D.C., March 3, 1998, available at *http://www.econstrat.org/atitp.htm*.

incentives as well as disincentives governing the telecommunications market.

Legal and Regulatory Impediments in the Broadband Market

The primary deterrent to increased broadband investment and deployment is the heavy-handed, intrusive, meticulously detailed, and ridiculously complex system of federal, state, and local laws and regulations governing the telecommunications industry. Laws and legal regimes have an important bearing on decisions made by corporations, consumers, and investors in any given market. If companies are to deploy the most advanced, highest quality, affordable, and technologically feasible networks, they must convince investors to lend them billions of dollars for research, development, and deployment. If telecommunications firms and potential investors fear that the legal environment is not hospitable to their multibillion-dollar capital expenditure, however, they will not invest in the project. Even if resources are available to launch a new communications service or network, the decision to invest in it might be delayed by the mere presence of regulatory uncertainty.

In large measure, this uncertainty contributes to the lack of investment taking place in the broadband market today. Many legal disincentives exist or have been proposed that discourage the development and deployment of advanced broadband capabilities. Although the following list is not comprehensive, it demonstrates the regulatory disincentives to investment in and rollout of broadband technologies:

- **Restrictions on incumbent network providers.** Incumbent local exchange carriers (ILECs)—which include Bell South, Bell Atlantic, U.S. West, SBC, and Ameritech—face a variety of unique restraints that hinder their ability to offer broadband services to the public. The two primary types of regulations that contribute to this problem are line-of-business restraints and the forced access unbundling and mandatory discounted resale requirements.

Line-of-business restraints have been imposed on the so-called Baby Bells since the AT&T divestiture in 1984. They prohibit the RBOCs[15] from offering services across long-distance (InterLATA[16]) boundaries. Such rules forbid extending broadband services to consumers based on their geographic location. An important new study by Erik Olbeter and Matt Robinson on behalf of the iAdvance Coalition shows that

> interLATA data regulations have slowed the growth and diffusion of the high-speed Internet…backbone hubs. Over 60 percent of metropolitan areas do not have access to these hubs, and in rural areas they are virtually non-existent. If there were no interLATA data regulation, we would expect there to be twice as many backbone hubs in the country today.[17]

Another factor that influences investment in broadband is the FCC's implementation of Section 271 of the Telecommunications Act. Under Section 271's forced access and unbundling requirements, the Bell operating companies must open their voice networks to their competitors so that competitors can purchase unbundled network elements at a discounted

15. The seven major local exchange carriers spun off AT&T after the divestiture—known as regional Bell operating companies or Baby Bells—were Ameritech, Bell Atlantic, BellSouth, Nynex, Southwestern Bell, Pacific Telesis, and U.S. West.

16. Local access and transport areas (LATA) are artificial geographic boundaries established after the AT&T divestiture that determine regional Bell operating companies' service areas. A local Baby Bell is allowed to handle all *intra*LATA telephone traffic within its LATA. There are nearly 200 LATA regions in the United States. Under the terms of the divestiture, to limit their market power, RBOCs are not allowed to cross these boundaries.

17. Erik Olbeter and Matt Robinson, *Breaking the Backbone: The Impact of Regulation on Internet Infrastructure Deployment*, iAdvance Coalition, July 27, 1999, available at *http://www.iadvance.org/background/index.html*.

resale rate. Regulators determine the services that the Bell operating companies must unbundle and the discounted price they must charge. The FCC is considering applying these rules to data. Such regulations indirectly discourage investment in broadband network services because they adversely affect the potential return on investment and encourage industry "free-riding" by rivals who would rather use existing local network elements under a rent-control scheme than risk capital building their own.

- **Threat of new "open access" requirements on other sectors.** Forced access and discounted resale are potential threats to other communications sectors and firms as well. Cable companies recently have been the target of open-access proposals (primarily from local regulators) that would require them to open their networks in a similar fashion to their competitors.[18] Some industry experts even foresee the application of forced access mandates to wireless or satellite-based networks. Such mandates discourage competitive new forms of broadband network investment in these industry sectors, since firms are less likely to make risky and expensive investments when they do not expect a fair return.

- **Threat of merger prohibition, restrictions, or conditions.** Federal, state, and local regulators subject every telecommunications-related merger or acquisition to frequently overlapping regulatory reviews. Often through crude forms of regulatory extortion, they attempt to extract promises from the firms in exchange for approval of the new alliance. For example, the FCC recently approved a proposed merger between the two Baby Bells, SBC and Ameritech, but only after imposing a variety of regulatory conditions with billion-dollar fines attached for noncompliance. One condition of that particular agreement will force SBC–Ameritech to provide network access to rivals at a discount rate of 32 percent or more. In addition, it will be required to compete in at least 30 local telephone markets outside its own service area and create separate operating subsidiaries to deliver advanced high-speed services to consumers.[19]

  Such blatant industrial engineering efforts by the FCC (and the Department of Justice) are imposed on top of various state and local merger conditions, and communications firms face this type of regulatory extortion in every region they serve. Such merger conditions and the delays that result increase their costs significantly[20] and discourage innovation, deployment, and entrepreneurialism.[21]

- **Universal service requirements and special concurrent regulatory obligations.** Other regulatory obligations can delay the introduction of broadband services. For example, the current universal service system and the hidden subsidies to administer the program can alter price signals and discourage market entry or the rollout of new services. More traditional "obligation to serve" requirements may discourage companies from deploying services for fear that regulators will force them to roll out the services to all customers in a certain geographic area on the same timetable, no matter how costly or inefficient it would be to do so.

18. See Peter Elstrom, Ronald Grover, and Catherine Yang, "Whose Cables Are They?" *Business Week*, July 5, 1999, pp. 24–26.

19. See Thomas J. Duesterberg, "Who's Running SBC–Ameritech? The FCC," *The Wall Street Journal*, July 6, 1999, p. A15.

20. A recent Heartland Institute study found that "Regulatory delays to mergers in restructuring industries cost over $12 billion in 1996." See Robert B. Ekelund Jr. and Mark Thornton, "The Cost of Merger Delay in Restructuring Industries," Heartland Institute *Policy Study* No. 90, June 23, 1999, p. 1.

21. See Jerry Ellig, "Understanding the Urge to Merge in the Telecommunications Industry," Citizens for a Sound Economy *Issue Analysis* No. 91, May 20, 1999; Jeffrey A. Eisenach, *Comments of the Progress and Freedom Foundation in the Matter of GTE Corporation, Transferor and Bell Atlantic, Transferee for Consent to Transfer of Control,* Federal Communications Commission, CC Docket 98–184, December 23, 1998.

- **Spectrum socialism.** Although often forgotten in the debate over broadband deployment, terrestrial wireless technologies and space-based satellite systems could radically transform the broadband market in America. If regulators were to grant companies the spectrum and regulatory freedom to offer wireless broadband service, they likely would discover that it is more efficient and less costly to consumers than wireline telephone or cable.

  At present, wireless firms do not have either the spectrum or the regulatory freedom to offer this service. The FCC continues to claim that the spectrum, as a socialized natural resource, cannot be privately owned. The legal incentives at work in the wireless market, while improving through auctions and limited spectrum flexibility, still discourage market innovation by disallowing more creative forms of spectrum use.[22] Further, recent spectrum auctions forced firms to spend billions more than perhaps was necessary to purchase spectrum from the government—leaving less to invest in the broadband market in recent years. The primary goal of spectrum auctions should not be to swell the federal government's coffers, but to transfer publicly held spectrum frequencies to the private sector in a way that is both efficient and fair.

- **General tax disincentives.** Telecommunications providers face a myriad of tax assessments that deplete their economic resources to invest in new services. For example, a unique federal excise tax was assessed on telephone companies in 1898 to help fund the Spanish–American War; it has not been repealed and still accounts for a 3 percent tax appearing on ratepayers' telephone bills.[23] Universal service charges are also assessed to help pay for certain social programs at the state and local levels. Like other public utilities, telecommunications carriers must pay certain industry-specific fees or assessments to state and local governments to administer parochial social programs or pad their budgets. Coupled with the general federal and state corporate taxes, these multiple layers of taxation can constitute a significant disincentive to the deployment of new services. This has led Progress and Freedom Foundation president Jeffrey A. Eisenach to ask:

  > [I]n a world in which building out the telecommunications infrastructure is policy goal Number One—why would we place discriminatory taxes on telecommunications?… We're talking about levels of taxation between 20 and 40 percent, depending on the state and the locality…[and] about a level of complexity that is just stunning. There are 38 different kinds of taxes paid by telecommunications companies just in the telephone business…. The tax structure…is not only too high, it's also regressive. Virtually all of the taxes that we levy on telecommunications providers are excise taxes or line taxes, line charges, equivalent of poll taxes. And so they go directly against our objective of making Internet access and the information revolution available to people regardless of their income.[24]

- **General state and local interference.** The FCC and Congress do not deserve all the blame for

22. For more information, see Adam D. Thierer, "A Policy Maker's Guide to Deregulating Telecommunications, Part 6: A Free-Market Future for Spectrum," Heritage Foundation *Talking Points* No. 11, March 19, 1996; "Senator Pressler's Bold Proposal for Spectrum Freedom," Heritage Foundation *Backgrounder* No. 1085, June 7, 1996; "The Law and Economics of Property Rights to Radio Spectrum: A Conference Sponsored by the Program on Telecommunications Policy, Institute of Governmental Affairs, University of California, Davis," *The Journal of Law and Economics*, Vol. XLI, No. 2, Part 2 (October 1998).

23. See Stephen J. Entin, "Taxing Talk: The Telephone Excise Tax and Universal Service Fees," Institute for Research on the Economics of Taxation *Policy Bulletin* No. 74, February 2, 1999.

> creating perverse legal incentives in the market for telecommunications services. State and local legislators and regulators impose a volume of regulatory requirements that firms must tolerate as well. For example, state bureaucrats regulate the rates many carriers charge their customers and even tell carriers which customers they must serve. Such requirements and restrictions often are built on the edifice of existing federal law or regulation. Overlapping and often contradictory regulatory policies skew investment decisions by region and discourage the development of robust national markets on a timely basis.

Countless regulatory requirements remain on the books at every level of government. Understanding the overall effect of this regulatory activity helps unlock the broadband disinvestment riddle: *Firms will not invest in new technologies when the legal climate is inhospitable and void of a potential for profit*; *and potential backers will not invest when the technologies are overly burdened by heavy-handed regulation*.

WHY THE TELECOM ACT FAILED TO SOLVE THE PROBLEMS

In theory, the Telecommunications Act of 1996 should have solved the broadband deployment crisis. In this statute, which is notable for its stunning ambiguity, Congress made clear that deploying broadband services on the most rapid timetable possible was in the national interest. In Section 706(a), Congress established an unambiguous broadband policy:

> The [FCC] and each State commission with regulatory jurisdiction over telecommunications services shall encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans (including, in particular, elementary and secondary schools and classrooms) by utilizing, in a manner consistent with the public interest, convenience, and necessity, price cap regulation, regulatory forbearance, measures that promote competition in the local telecommunications market, or other regulating methods that remove barriers to infrastructure investment.[25]

Thus, Congress expressed its intent to encourage the rollout of advanced broadband telecommunications services. Unfortunately, it was much less clear about how this goal should be accomplished. Beyond its general call for the use of regulatory forbearance, the FCC and the states found no roadmap in the Telecommunications Act on the steps needed to ensure that its intent became reality. In essence, state and federal regulators received *carte blanche* to make up their own plans for the deployment of broadband services.

The results are discouraging. Federal and state regulators are so cautious as to be counterproductive. The few FCC actions on this front are primarily pro-regulatory proposals that make the legal environment even more convoluted. Worse, few actions have been truly *deregulatory* in nature. Regulators refuse to relinquish control of the industry and subject most decisions of importance to the industry and consumers to layers of filings, hearings, debates, conferences, rulemakings, court cases, and appeals. As a result, only rarely are decisions made on a timely basis.

This should not be surprising. Regulators exist to regulate and therefore, to justify their own existence, have a tendency (perhaps even a desire) to perpetuate the system that causes so many of the industry's problems. It is simply not in the best interest of bureaucrats to remove regulatory obstacles to innovation if doing so places their own jobs at risk and diminishes the scope of their power. Rather, it is in their interest to create regulatory theories or regimes that will provide them with a

24. Jeffrey A. Eisenach, speech before winter meeting of the National Governors' Association, February 21, 1999, available at *http://www.pff.org/NGA_speech_by_JAE_990221.htm*.

25. Telecommunications Act of 1996, Public Law No. 104–104, Section 706(a).

raison d'être in the future. As J. Gregory Sidak of the American Enterprise Institute and Daniel F. Spulber, professor of management strategy at Northwestern University's Graduate School of Management, explain:

> How should regulators approach the competitive transformation of network industries? The temptation is to "manage" the competitive transition to determine the *outcome* of competition. Thus, paradoxically, deregulation often brings increased regulatory intervention in the marketplace and correspondingly greater administrative costs and market inefficiencies. The result is neither fish nor fowl, neither a regulated market nor a competitive one. The benefits of competition do not materialize. Partial deregulation distorts economic incentives far worse than do traditional rate-of-return regulation or new forms of incentive regulation. The staffs and budgets of regulatory agencies swell as they undertake the impossible task of managing markets.[26]

As Robert Crandall of the AEI–Brookings Joint Center for Regulatory Studies argues, "In telecommunications…there is little 'deregulation.' Instead, managed competition is replacing managed monopoly under the assumption that government can manage the transition better than market forces could."[27]

The Telecommunications Act is so vague, in fact, that it has caused a plethora of court filings by firms and regulators to seek judicial resolution of their legal disputes. In the most prominent case, *AT&T Corp., et al.* v. *Iowa Utilities Board, et al.* (*AT&T* v. *Iowa Utilities),* the Supreme Court rendered a harsh verdict on the nature of the Act itself. Speaking for the majority, Justice Antonin Scalia noted:

> It would be gross understatement to say that the Telecommunications Act of 1996 is not a model of clarity. It is in many important respects a model of ambiguity or indeed even self-contradiction. That is most unfortunate for a piece of legislation that profoundly affects a crucial segment of the economy worth tens of billions of dollars.[28]

Indeed, because of this legal ambiguity, the Act has done little to help consumers and, instead, has done more to enrich and empower the legions of bureaucrats and special interests who interpret the Act's many legal ambiguities. As Henry Geller, former general counsel of the FCC and a communications analyst for the Markle Foundation, told *The Washington Post* shortly after passage of the Telecommunications Act in February 1996, "This is full employment for lawyers, lobbyists and economists."[29] Leonard S. Hyman, Edward DiNapoli, and Richard C. Toole, in *The New Telecommunications Industry,* describe lawyers' reactions to the passage of the Act:

> At a seminar at Columbia University Law School in November, 1996, presenters, both lawyers and economists, described the Telecommunications Act of 1996 as an employment act for lawyers. The air in this prestigious seat of legal learning seemed positively jubilant, as if the cat had found a new toy to play with.[30]

They concluded: "There should be no doubt that the legal wrangling which will surround the implementation of the Telecommunications Act of

26. J. Gregory Sidak and Daniel F. Spulber, "Deregulation and Managed Competition in Network Industries," *Yale Journal of Regulation*, Vol. 15, No. 1 (Winter 1998), p. 118.

27. Robert W. Crandall, "Managed Competition in U.S. Telecommunications," AEI–Brookings Joint Center for Regulatory Studies *Working Paper* 99–1, March 1999, p. 18.

28. *AT&T CORP., et al.* v. *Iowa Utilities Board, et al.*, 97–826. Argued October 13, 1998; decided January 25, 1999.

29. Quoted in Cindy Skrzycki, "New Deregulation Game Leaves the FCC with Tough Calls," *The Washington Post*, February 16, 1996, p. B1.

1996 will exceed in length and cost the unbelievable lobbying which preceded the Act itself."[31]

Such comments were remarkably farsighted. It is not at all uncommon at hearings or conferences today for industry analysts to state that the Telecom Act may result in more costs than benefits to society. Yet few critics offer policymakers a clear and coherent model for solving the broadband crisis and governing this industry with sound policy. Overarching principles are needed to encourage the deployment of high-speed broadband communications capabilities and establish a superior legal framework for industry investment decisions.

BROADBAND POLICY FOR THE FUTURE

The Telecommunications Act, although notable in its expressed support of competition, did not lay out a legal and economic framework to guide the development of the broadband telecommunications industry. If Congress wants to understand why the expected investments in broadband services and deployment have not materialized, it should first define a set of clear market-oriented rules that will apply to all industry players. There are three broad models of regulation with very different track records from which to choose. (See box on Page 13.)

Why Regulated Monopoly and Managed Competition Are Less Effective

Of the industry regulatory models described in the sidebar, only one, Model No. 3, is capable of achieving the objectives of increased competition and broadband investment, superior service quality, and more affordability in the modern telecommunications industry. Many industry observers and policymakers certainly will agree that the old regulated monopoly/public interest model of regulation is an abject failure. Nonetheless, much of the substance of this outdated model lives on in the rhetoric of managed competition or deregulatory industrial policy that many regulators and legislators now espouse.

The managed competition approach seems to offer what some call a "Third Way" to regulate the telecommunications industry. That is, it appears to offer a balanced mix of market competition and government-imposed "public interest" requirements with benevolent regulation. Such a system is more appropriately labeled "corporatism" since it involves wide-ranging efforts by the government to direct corporate behavior and accomplish various sociopolitical objectives. But like other "Third Way" systems, the managed competition model has been unable to spur the development of a more competitive, pro-consumer industry for two reasons:

First, as explained above, the current "don't rock the boat" mentality behind the FCC's oversight of the telecommunications industry has resulted in limited deregulation and, in many cases, has *increased* regulation of the industry. The suffocating hand of regulatory oversight and micromanagement has been substituted for the spontaneity and unencumbered evolution of a deregulated market environment. Today, the few freedoms allowed come at a heavy price to industry and consumers who must endure continual delays, mounds of paperwork, and concurrent regulatory obligations or requirements. The Third Way approach has not created a telecommunications nirvana, as Congress hoped, but rather an industry riddled with discontented providers and dissatisfied consumers.

Second, in its worst form, the FCC's managed competition approach has given one set of competitors an advantage over others, which has less to do with encouraging competition than with predetermining specific market outcomes. Current FCC policies are preoccupied with giving long-distance providers advantages over local carriers; cable competitors and Internet firms over traditional telephone carriers; and wireline over wire-

30. Leornard S. Hyman, Edward DiNapoli, and Richard C. Toole, *The New Telecommunications Industry: Meeting the Competition* (Vienna, Va.: Public Utilities Report, Inc., 1997), p. 162.

31. *Ibid.*

MODELS OF INDUSTRY REGULATION

Model No. 1: Regulated Monopoly/Public Interest Policy. The traditional model of utility industry regulation employed throughout most of this century.

Legal Foundation: Radio Act of 1927, Communications Act of 1934, and subsequent federal and state regulatory law. Regulations characterized by heavy-handed controls, rate-of-return and price regulation, geographic monopoly franchising, market entry and exit restrictions, standard-setting, line-of-business controls, and general "public interest" oversight by overlapping layers of government.

Result: No market competition, limited innovation and entrepreneurialism, poor service quality, limited choices, no price competition.

Model No. 2: Managed Competition/Deregulatory Industrial Policy. Followed the 1984 AT&T divestiture, which was sparked by several important FCC and court decisions in the 1960s and 1970s.

Legal Foundation: AT&T antitrust case and divestiture agreement, Cable Act of 1992, Telecommunications Act of 1996, and the extensive body of regulatory and case law developed during this period. Regulation distinguished by a willingness to allow and encourage market entry and competition, *but only within the confines of the regulated monopoly era's legal environment.* Competition seen as beneficial but possible only by conscious design and guiding hand of benevolent regulators. Entry and rate controls continue and are used like the sword of Damocles by regulators to encourage the industry to evolve in a predetermined direction. Similarly, regulators often use the merger approval process to extort favors from industry.

Result: Limited deregulation in certain sectors and *status quo* in others, innovation and investment hindered by regulatory delays, limited price and entry competition, consumer choice limited to sectors with regulatory freedom.

Model No. 3: New Internet/Computer Industry Free-Market Principles. During the past two decades, free-market principles have allowed the American computer industry to develop quickly and efficiently.

Legal Foundation: No industry-specific laws governed the computer sector or the Internet. Time-tested legal standards of contract enforcement, patent and trademark protections, common-law resolution of disputes, and free and open national markets for goods and services are characteristic of this legal environment. No central regulatory authority, state or local interference, or extensive body of regulations interfered with development. Uniform and universal legal principles and business standards apply. Self-regulation and voluntary standards are common.

Result: Vigorous competition, unparalleled innovation and entrepreneurialism, high-quality products and services, extensive choices, serious price competition.

less providers. It is unclear how such industrial policy benefits consumers, since restricting market options and picking winners and losers hardly constitute a pro-consumer approach.

Why the Computer Industry Model Is Better

The only realistically advantageous model for governing the vibrant telecommunications industry is the approach used during the development of the computer industry and the Internet. In less than 20 years, this model transformed the computer sector from an obscure niche industry domi-

nated by techno-nerds and garage-based operations into a vibrant, innovative, high-growth, export-enhancing, and job-producing industry. It is one of the most remarkable stories of spontaneous market development and growth in the history of the republic, rivaling those of the steel, railroad, and automobile industries.

What is most remarkable about the computer industry is that its growth was predicted by few and planned by none. The success of the Internet and computer industry can be attributed largely to the hard work, ingenuity, and risk-taking of ordinary American citizens and small business start-ups. No "Federal Computer Commission" guided the evolution of this sector, and no single law or regulation gave rise to it or encouraged its explosive growth. Markets evolved free of federal, state, or local interference; and the wisdom of the consumer was trusted more than the whims of bureaucrats. A simple, predictable, and uniform legal environment provided a hospitable atmosphere for investment and entrepreneurialism on an unprecedented scale.

This free and open national market explains why millions of Americans use and benefit from computer-based technologies, while the FCC's century-long experiment in communications bears limited fruit. The vision and legal framework that allowed the computer industry to grow can and should be applied to the evolving telecommunications sector in order to encourage broadband investment and deployment.

Not surprisingly, the computer industry has proposed that the FCC take this approach.[32] Last December, 13 respected officials of major U.S. computer-related corporations delivered a joint letter to the FCC advocating a hands-off policy for broadband deployment. The presidents, vice presidents, CEOs, and corporate partners from such corporations as Intel, Cisco Systems, Novell, Compaq Computer, and IBM signed a joint declaration of principles that outlined how the application of a market-oriented approach would help solve the broadband crisis. The computer industry firms agreed on two fundamental points:

1. "The marketplace is building multiple competitive broadband networks, but needs to move faster," and
2. "The government should avoid actions that will dampen the willingness of financial markets to finance the construction of broadband facilities."[33]

The declaration clarified why misguided past and current regulatory models should not be applied to efforts to encourage broadband deployment:

> It is a simple but undeniable reality that new and unnecessary regulations will diminish the willingness of capital markets to finance the construction of new broadband networks…. As a threshold matter, such investments are very risky and lack any guaranteed return. Government regulation would actually limit the return on investment, and cause investors to be less willing to risk the billions of dollars necessary to build out the networks. Government intervention is particularly misplaced in the case of new broadband networks deployed by entities that lack the market position of the traditional telephone companies. Not only is broadband investment in its infancy, there is plenty of competition from existing networks and there will be plenty of competition from emerging networks. Further, the uncertainty created by even potential government regulation increases the cost of capital for new networks.
>
> We share the [FCC's] view [that] the public interest will best be served by the

32. See Jeffrey A. Eisenach, "The Computer Industry Flexes Its Muscle on Bandwidth," Progress and Freedom Foundation *Progress on Point*, Release 5.9, December 1998.

33. Leslie L. Vadasz *et al.*, *Letter to Honorable William E. Kennard*, Ex Parte Presentation, CC Docket No. 98–146, December 9, 1998.

> deployment of multiple broadband networks as widely as possible. But that goal will only be realized if the Commission maintain a "hands off" approach that trusts markets to determine how the emerging broadband networks will be built and utilized.[34]

Simply put, what was good for the computer industry will be good for communications companies as well. Of course, computer companies have good reason to advocate the hands-off, market-oriented model. After all, broadband communications technologies are essential to the delivery of most computer-based services today. Computer industry executives most likely realize that as computer and communications technologies converge, there is a serious risk that "back door" regulating of the computer industry will follow. A hands-off model for the communications sector would ensure that the computer industry will not be sucked into the FCC's regulatory morass.

Although these arguments for a hands-off broadband policy are convincing, a recent FCC working paper entitled "The FCC and the Unregulation of the Internet" provides conclusive evidence that markets rather than mandates offer the best hope for the future of the industry. In the paper, Jason Oxman, counsel for advanced communications in the FCC's Office of Plans and Policy, notes: "The success of the Internet has not been an accidental development. Market forces have driven the Internet's growth, and the FCC has had an important role to play in creating a deregulatory environment in which the Internet could flourish."[35]

Despite giving regulators too much credit for encouraging the development of the Internet, the FCC report nonetheless makes clear that it was the FCC's regulatory forbearance (or reluctance to regulate) that helped to facilitate the growth of the Internet and online services. Furthermore, the report appropriately concludes that it would be a mistake to impose older forms of regulation on new technologies, and "When Internet-based services replace traditional legacy services, [the FCC should] begin to deregulate the old instead of regulate the new."[36] Now that even the FCC understands and accepts the logical benefits a hands-off, computer industry model of regulation offers, there is little reason for Congress *not* to apply this approach to the entire telecommunications sector.

AN ACTION PLAN FOR BROADBAND DEPLOYMENT

To ensure the timely rollout of broadband services, policymakers must translate the free-market principles that worked so well for the computer industry into an immediate action plan for the telecommunications sector. Five general principles should be incorporated:

1. **Deregulation and free markets,** not new forms of regulation or managed markets.
2. **Legal simplicity and stability,** rather than complex, contradictory, and changing regulatory regimes.
3. **Uniformity and regulatory parity,** so that the same rules apply to all players.
4. **A single open market system,** without conflicting state and local mandates.

34. *Ibid.*

35. Jason Oxman, "The FCC and the Unregulation of the Internet," Federal Communications Commission, Office of Plans and Policy *Working Paper* No. 31, July 1999, p. 3. A March 1997 FCC report also stressed the benefits of a hands-off policy, noting that "Government policy approaches toward the Internet should start from two basic principles: avoid unnecessary regulation and question the applicability of traditional rules…. Although government should support the growth of the Internet, this support need not involve explicit subsidies that are not independently justified as a matter of public policy and economics. Instead, government should create a truly level playing field, where competition is maximized and regulation minimized." See Kevin Werbach, "Digital Tornado: The Internet and Telecommunications Policy," Federal Communications Commission, Office of Policy and Plans *Working Paper Series* No. 28, March 1997, pp. ii, 9.

36. *Ibid.*

5. **Agency constraint and downsizing,** to avoid the encumbrances that follow an expansion of the agency's mission and funding.

PRINCIPLE NO. 1: Telecommunications reforms should promote deregulation and free markets, not new forms of regulation or managed markets.

Congress should focus first on getting back to basics by issuing a new call for across-the-board deregulation. Specifically, to advance the rollout of broadband services, a truly deregulatory agenda must end all line-of-business restraints, especially long-distance (InterLATA) restrictions on the Baby Bells that discourage broadband deployment. It should never be a crime for communications firms to offer consumers legitimate new services, yet current line-of-business restrictions essentially make the extension of high-speed broadband service to certain customers a criminal offense. These rules and the logic that supports them should be scrapped to enable a free market in the provision of new services.

A free-market broadband agenda should also require the "sunsetting" of current forced access regulations for ILECs to encourage future broadband deployment. Finally, recommendations to adopt industry-wide forced access regulations to protect future market innovation should be ignored.

It is important to understand why true industry deregulation and forced access proposals cannot coexist. Forced (or open) access regulation is becoming a regulatory cancer within the body of modern telecommunications law. Supporters of forced access, interconnection, and mandatory resale requirements argue that such mandates break down the traditional market power of incumbent firms to "level the playing field" for their potential rivals.

There is some truth to this, since open access regulation places substantial demands on larger or incumbent firms, requiring them to play by special rules to give other firms a chance to break into the industry and compete. But most supporters of open access and interconnection requirements argued originally that this arrangement was to be (1) *temporary and transitional* in nature and (2) *limited to core services* where incumbent telecommunication firms held significant market power—namely, the local telephone exchange. Forced access was viewed as a second-best solution to deregulation, a means of getting from one point to another. Therefore, open access was intended to be a deregulatory halfway house, not a regulatory end in itself.

In the current legal environment, however, there is no end in sight for the open access and interconnection rules crudely forced on local exchange carriers through volumes of federal and state rulemakings. Now many supporters of forced access are claiming that it should be applied more broadly to new technologies and industry segments. In their view, everything could be opened to competitors via forced access, interconnection, or mandatory resale arrangements. They see nothing wrong with demanding that all current and future network elements—such as wires, cables, loops, switches, transport services, modems, computer systems, and operational and support services—are forcibly opened to competitors that have no financial stake in the inventing, building, or assembling of these systems or technologies.

Thus, forced or open network access is framed as the cure-all for every problem in the communications sector.[37] In an ironic twist, some incumbent telephone companies even support the extension of forced access requirements to their rival long-distance or cable companies to ensure that their rivals are burdened by the same forced access requirements they face. In other words, as

37. For an excellent overview of the problems open access might pose in the electricity sector as well, see Clyde Wayne Crews, Jr., "Rethinking Electricity Deregulation: Does Open Access Have It Wired—Or Tangled?" testimony before the Subcommittee on Water and Power, Committee on Resources, U.S. House of Representatives, 106th Cong., July 24, 1999. See also Crews, "Electric Avenues: Why 'Open Access' Can't Compete," Cato Institute *Policy Analysis* No. 301, April 13, 1998.

the old adage goes, these firms have come to believe "if you can't beat 'em, join 'em."

Problems with the current framework. The problems with this emerging legal structure are numerous and manifest themselves in various ways. For example:

- **Forced access is re-regulatory in nature.** Notably, forced access requires the continuation of price regulation. Many policymakers thought price controls would become a policy relic, but the open access era simply enshrined price regulation under new names like interconnection charges, unbundling rates, and resale pricing. Today, regulators must consider whether interconnection or resale rates are "fair and reasonable" both for the party given access to the network and for the owners of the networks who must provide access. Deregulation should mean that rates and prices are determined by the voluntary interaction of buyers and sellers. Instead, forced access relies on the "wisdom" of bureaucrats.
- **Forced access increases regulatory bureaucracy.** Deregulation and agency downsizing should go hand in hand. Forced access regulations require additional oversight and therefore increase bureaucratic meddling and paperwork. They also lead to repeated calls for more regulatory agency funding and staffing.
- **Forced access creates serious disincentives to investment and innovation.** Legal arrangements can have important economic consequences. In the case of the open access, interconnection, unbundling, and mandatory resale arrangements, the consequences could discourage investment in new services, including the broadband market. Economist Robert Crandall argues:

> [I]t is obvious that by creating such ample opportunities for entrants to use incumbents' network facilities, the [Telecommunications] Act discourages investment in new facilities. But if "deregulation" and liberalization are to accomplish their principal purpose, they must encourage the construction of new facilities—by entrants and incumbents alike—that are designed to serve today's market with today's and tomorrow's technology. The major benefits of deregulation would be lost if the exercise were simply to collapse into a sharing of facilities built while the numbing effects of regulation were in place. Leasing yesterday's technology to today's rivals at tomorrow's cost may sound good in the political arena, but it makes little economic sense and surely provides no incentives for investment for either lessor or lessee.[38]

Equally as caustic are the comments of noted regulatory economist Alfred E. Kahn, former head of the now-defunct U.S. Civil Aeronautics Board and author of *The Economics of Regulation* and *Letting Go: Deregulating the Process of Deregulation*. In a recent filing with the FCC on these matters, Kahn argued:

> If rivals can share use of whatever ILEC facilities they ask for—with their mere asking constituting sufficient demonstration that access is "necessary" to them—at prices explicitly intended to recover only the minimum cost of supply employing the most modern technology, it cannot but have a fatally discouraging effect on their own imitative and innovative efforts: when every applicant can be a free rider, at such minimum prices, who is going to build the vehicle? The Commission appears completely to have ignored the discouraging effect of their rules on facilities-based competition with the ILECs.[39]

38. Crandall, "Managed Competition in U.S. Telecommunications," p. 16.

Finally, as Supreme Court Justice Stephen Breyer summarized in the recent case of *AT&T* v. *Iowa Utilities*:

> 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.[40]

As Crandall, Kahn, and Justice Breyer cogently observed, the current forced access/interconnection/mandatory resale regime creates a textbook example of "free-rider" problems. The extension of those rules into new industry sectors such as cable will have the same free-rider effect, dampening investment incentives in those markets as well. Consider what might occur if the warped logic of forced access and mandatory resale was applied to automobile manufacturing or the fast-food business. If a car manufacturer is required to let its competitors resell every new car model it makes under a different name and at a lower price, what incentive is there for the manufacturer to offer new models in the first place? Or if every large fast-food chain was required to sell each new sandwich it created to smaller competitors at a substantial wholesale markdown so that they could then sell them in their own stores, would the large chains create new sandwiches at all?

In these hypothetical examples, investment and innovation suffer for two reasons. First, the producers will not want to invest in new products if they are required to surrender those products to rivals. The producers' potential return on those new goods or services would depreciate, discouraging them from making the investment in the first place. Second, competitors will have little need to develop or offer new goods or services if they can acquire them from a larger firm at a significant discount and then resell them at a healthy markup.

This is essentially what is taking place in the telecommunications market because of forced access and mandatory resale requirements. True deregulation should mean, as it does in the computer industry, the freedom to enter into arrangements or contracts on a *voluntary* basis. Instead, forced access and mandatory resale demand that certain companies give an advantage to competitors that regulators currently favor. Such regulatory extortion is antithetical to a free market.

Open access is a regulatory euphemism for mandatory infrastructure sharing, or the equivalent of quasi-socialistic network management. As such, it undermines private property rights and interferes with the efficient and voluntary market interaction of producers, investors, and consumers. Supporters of forced access will continue to argue that the forced access regime must be given more time to whittle away the market power of incumbent firms; but if investment suffers as a result of this exercise, the logical course of action would be either to curtail the experiment or to subject it to a time limit.

Indeed, the market power of incumbent firms has decreased in recent years and will continue to do so as a variety of competitors, industry sectors, and technologies emerge that have the potential to become the broadband providers and services of choice. In addition to local telephone providers and cable companies, there are long distance firms, satellite providers, terrestrial wireless companies, global underwater network carriers, and electric

39. Alfred E. Kahn, "Declaration of Alfred E. Kahn in Response to *Second Further Notice of Proposed Rulemaking*, *In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*," Federal Communications Commission, CC Docket No. 96–98, p. 17.

40. Justice Stephen Breyer, *AT&T Corporation, et al.* v. *Iowa Utilities Board*, January 25, 1999.

utilities that are gearing up to provide broadband communications services.

In other words, there is now no such thing in telecommunications as an "essential facility" or "bottleneck service." The notion that one firm, or even one sector, will be able to monopolize this industry and provide consumers with all the communications services they desire is farfetched. Therefore, no additional forced access, interconnection, or resale mandates need be imposed. In addition, existing regulations should be phased out on a rapid timetable to achieve complete deregulation.

PRINCIPLE NO. 2: Telecommunications reforms should promote legal simplicity and stability, not complex, contradictory, and ever-changing regulatory regimes.

After deregulation, few of the complex regulatory regimes designed by regulators for the communications industry should remain on the books. Any regulations that do remain should be straightforward and "simple rules for a complex world," to borrow a phrase from University of Chicago law professor Richard Epstein in an influential book on legal incentives.[41] Epstein argues for a return to a common-law vision of simple and time-tested legal standards—such as strict property rights, freedom of contract, a sensible system of torts and just compensation, and voluntary dispute resolution—to avoid the complex legal quagmires typical of modern times.

Just as these traditional, universal legal standards guided the birth, growth, and market evolution of countless American industries and firms, so can common-law principles guide telecommunications firms toward a beneficial end. Peter Huber charts such a bold course in his new book, *Law and Disorder in Cyberspace: Abolish the FCC and Let Common Law Rule the Telecosm*.[42] Even the Clinton Administration, in its surprising 1997 *Framework for Global Electronic Commerce*, argued that "Where governmental involvement is needed, its aim should be to support and enforce a predictable, minimalist, consistent and simple legal environment for commerce."[43] The computer industry model shows how such simple and timeless legal standards can promote entrepreneurialism and investment. Meticulously detailed, hopelessly convoluted, and ever-changing regulations have not produced and will not produce beneficial results in broadband deployment.

PRINCIPLE NO. 3: Uniformity and parity should govern the new telecommunications market so that the same rules apply to all players.

After a century's worth of failed regulatory policies, legislators still do not grasp the importance of making sure that the same rules apply to all players within the same industry. For decades, regulators quarantined firms and technologies into neatly defined but highly illogical boxes in order to keep cable separate from broadcasting, long distance separate from local telephony, wireless separate from wireline, voice separate from data, and so on. These regulatory distinctions were established in the Communications Act of 1934 (Title II for common carriers, Title III for broadcasting, and Title VI for cable). Distinct FCC bureaus were created to oversee each sector and keep the distinctions intact. The result of this "regulatory apartheid" has been limited consumer choice, restricted output, deterred innovation and entrepreneurialism, fewer job opportunities, and artificially high prices.

Regrettably, instead of altering this archaic structure when it passed the Telecommunications Act of 1996, Congress ignored market realities and

41. Richard A. Epstein, *Simple Rules for a Complex World* (Cambridge, Mass.: Harvard University Press, 1995).

42. Huber, *Law and Disorder in Cyberspace: Abolish the FCC and Let Common Law Rule the Telecosm* (New York: Oxford University Press, 1997).

43. *A Framework for Global Electronic Commerce*, The White House, July 1, 1997, available at *http://www.ecommerce.gov/framewrk.htm*.

kept the increasingly unworkable regulatory distinctions intact. Of course, it could be argued that pragmatic political limitations kept Congress from changing the system and that the Act incorporated the only possible compromise. Nonetheless, the continued existence of these regulatory distinctions is a serious impediment to the technological advancement of the communications sector in relation to other global players who are not constrained by outdated and inefficient regulations. It would be a mistake to establish new regulations or incentives to force or encourage one segment of the industry to roll out advanced broadband services and then refuse to apply those same standards to other industry segments. Yet that is exactly what is being proposed by many on Capitol Hill and at the FCC. Instead, one simple standard should apply to all industry players. In the computer sector, for example, every business operates under the same market rules.

The goal of federal telecommunications policy should be to provide clear and simple rules for any company that wants to offer services to its customers. Any rules left on the books after deregulation should be carrier- and technology-neutral.[44] To ensure this is the case, federal legislators could adopt a principle from trade law by creating the equivalent of a "most favored nation" (MFN) clause for telecommunications. In the context of global trade laws and systems, MFN requires that countries offering special treatment or favors to another country must offer that same treatment or favor to all other countries within a given trading system. Essentially, MFN demands nondiscriminatory and symmetrical treatment of all trading partners. In short, MFN normalizes trade relations with all players in a given system.

To apply the MFN principle to telecommunications, Congress could pass a one-sentence statute declaring that "Any communications carrier seeking to offer a new service or enter a new line of business should be regulated no more stringently than its least regulated competitor." This rule would ensure both that no business becomes the victim of disparate regulatory treatment and that regulatory parity exists within the U.S. telecommunications market as the line between existing technologies and new industry sectors blurs. Treating everyone equally on a *deregulated* playing field should be the heart of telecommunications policy to ensure non-discriminatory treatment, across all levels of government, of competing providers and technologies.

PRINCIPLE NO. 4: Telecommunications policy should promote a single open market, unencumbered by conflicting state or local mandates.

The fourth principle builds on the principle of legal parity and uniformity. A national broadband policy should ensure the rapid rollout of advanced services, since state and local interference is neither economically efficient nor constitutionally sound. Just as computer companies market their goods and services free of state and local barriers to trade, so too should national markets be open in the communications sector.[45]

The economic argument against permitting state and local regulatory actions and initiatives for broadband rollout is relatively straightforward. As Brookings Institution economist Roger Noll argued in 1988:

> The notion that there is a meaningful technical and economic distinction between federal and state services was always a fiction, but it has become increasingly so. This fiction is likely to become even more costly as the federal government withdraws from regulation, thereby increasing the capability of the states to impose mutually inconsistent requirements on what amounts to a

44. This theme is developed nicely in Olbeter, testimony before the Subcommittee on Communications, Committee on Commerce, Science, and Transportation, U.S. Senate.

45. See, generally, Adam D. Thierer, "Federalism and Telecommunications," Federalist Society *Telecommunications & Electronic Media News*, Vol. 3, No. 1 (Spring 1999), pp. 1–4.

> national network providing national information services using equipment manufactured for a national market.[46]

Indeed, numerous city governments have aggressively pursued or considered the imposition of forced access mandates on cable companies interested in offering broadband Internet services to their customers. Late last year, for example, regulators in Portland, Oregon, proposed that, as a condition of AT&T's acquisition of the local cable franchise, rivals should be given access to its lines on regulated terms. Despite the FCC's efforts to discourage city regulators from enforcing such burdensome mandates, Portland won a showdown with AT&T in federal court—opening the door for forced access regulation in thousands of other municipalities.[47] Several other cities, including San Francisco, Los Angeles, and Fort Lauderdale, have discussed applying forced access regulations on AT&T as a condition of its ongoing acquisition of cable franchises.[48] AT&T has appealed the Portland decision, noting that continued regulation will only delay the rollout of high-speed Internet service in these communities.[49]

The criticisms of forced access are just as applicable to municipal efforts to regulate broadband communications networks, such as telephone, cable, or wireless networks. As FCC Chairman Kennard noted:

> There are 30,000 local franchising authorities in the United States. If each and every one of them decided on their own technical standards for two-way communications on the cable infrastructure, there would be chaos…. [T]he Information Superhighway will not work if there are 30,000 different technical standards or 30,000 different regulatory structures for broadband. The market would be rocked with uncertainty; investment would be stymied.[50]

State-by-state or city-by-city attempts to regulate these services along strict geographical lines are tantamount to "dividing the indivisible," in the words of legal scholars Michael K. Kellogg, John Thorne, and Peter Huber, the authors of *Federal Telecommunications Law*.[51] Attempting to partition regulatory responsibility along *inter*state (versus *intra*state) lines is highly problematic, as these experts note:

> The fundamental problem with this verbally neat division of the regulatory turf is that nothing in telephony is purely intrastate, nor would many telephone users wish it to be. The same telephones and most of the same wires and switches are used for both intrastate and interstate activity.[52]

Moreover, "There is, indeed, a fundamental paradox in the idea that a service whose entire purpose is to obliterate distance and transcend geographic boundaries can be regulated by dual

46. Quoted in Robert Entman, *State Telecommunications Regulation: Developing Consensus and Illuminating Conflicts* (Wye, Md.: Aspen Institute Program in Communications and Society, 1988), p. 17.

47. See Kathy Chen, "FCC's Hands-Off Position on Access to the Internet Is Complicated by One City's Hands On Officials," *The Wall Street Journal*, July 7, 1999, p. A24.

48. See Peter Elstrom, Ronald Grover, and Catherine Yang, "Whose Cables Are They?" *Business Week*, July 5, 1999, pp. 24–26; Kara Swisher, Khanh Tran, and Kathy Chen, "High-Stakes Internet Battle Erupts in San Francisco," *The Wall Street Journal*, July 26, 1999, p. A24; Corey Grice, "San Francisco Considers Open Access Rules," *CNET News.com*, June 23, 1999, available at *http://www.news.com/News/Item/0,4,38307,000.html*.

49. See "AT&T Asks to Speed Process in Suit Over Access to Cable," *The Wall Street Journal*, June 17, 1999, p. B11.

50. Kennard, "The Road Not Taken: Building a Broadband Future for America."

51. Michael K. Kellogg, John Thorne, and Peter W. Huber, *Federal Telecommunications Law* (Boston, Mass.: Little, Brown, and Company, 1992), p. 88.

52. *Ibid*.

authority divided along strictly geographic lines."[53]

This regulatory arrangement is not only economically indefensible, but also constitutionally suspect. A careful reading of the U.S. Constitution establishes that the federal government is legitimately empowered to exercise only a few enumerated powers. The regulation of legitimate interstate commerce qualifies as one of those enumerated federal powers in Article I, Section 8, Clause 3.[54] And the deployment of nationwide broadband communications capabilities, whether wireline or wireless, is an unambiguous example of interstate commerce that deserves federal protection from state and local interference.

This statement does not imply that states and localities should be stripped of all their oversight functions. In fact, there are many tasks that should remain exclusively within the purview of state or local governments. Zoning policy and oversight of rights of way are good examples. Localities should retain the right to determine their own land use policies so long as those policies do not unjustly interfere with the ability of communications carriers to roll out interstate services. Universal service safety net policies should be devolved to the local authorities. To the extent that governments attempt to encourage broadband deployment directly or solve a "digital divide"[55] within their communities, however, such assistance should be targeted to those individuals who need service and not enforced through new mandates on communications providers.

State and local officials also should investigate ways to eliminate cumbersome intrastate regulations and taxes and sunset their Public Service Commissions (PSC), or at least the portion of their PSC that regulates communications. These Commissions are quickly becoming more irrelevant, and thus unnecessary.

Placing boundaries on the boundless makes little sense and makes no one happy. Telecommunications companies should be free to offer consumers the broadest range of services under a single brand name, at the lowest price possible, anywhere they want, and on whatever terms they find mutually agreeable. Such an open market is possible only if state and municipal regulators are prohibited from imposing restrictive regulations that hinder the ability of communications firms to roll out new services in a timely fashion. Thus, a limited dose of federal preemption is required to protect the lanes of interstate commerce and encourage rapid broadband deployment nationwide.

PRINCIPLE NO. 5: Telecommunications policy should focus on defining down the regulators' roles rather than expanding agency missions or funding.

None of the goals and objectives listed above can be accomplished so long as federal regulators have the ability and resources to tinker with telecommunications markets. No matter how much they claim to be in favor of competition and free markets, their very existence and their disposition to render a judgment on any industry question serve as a powerful disincentive to entrepreneurialism and investment.

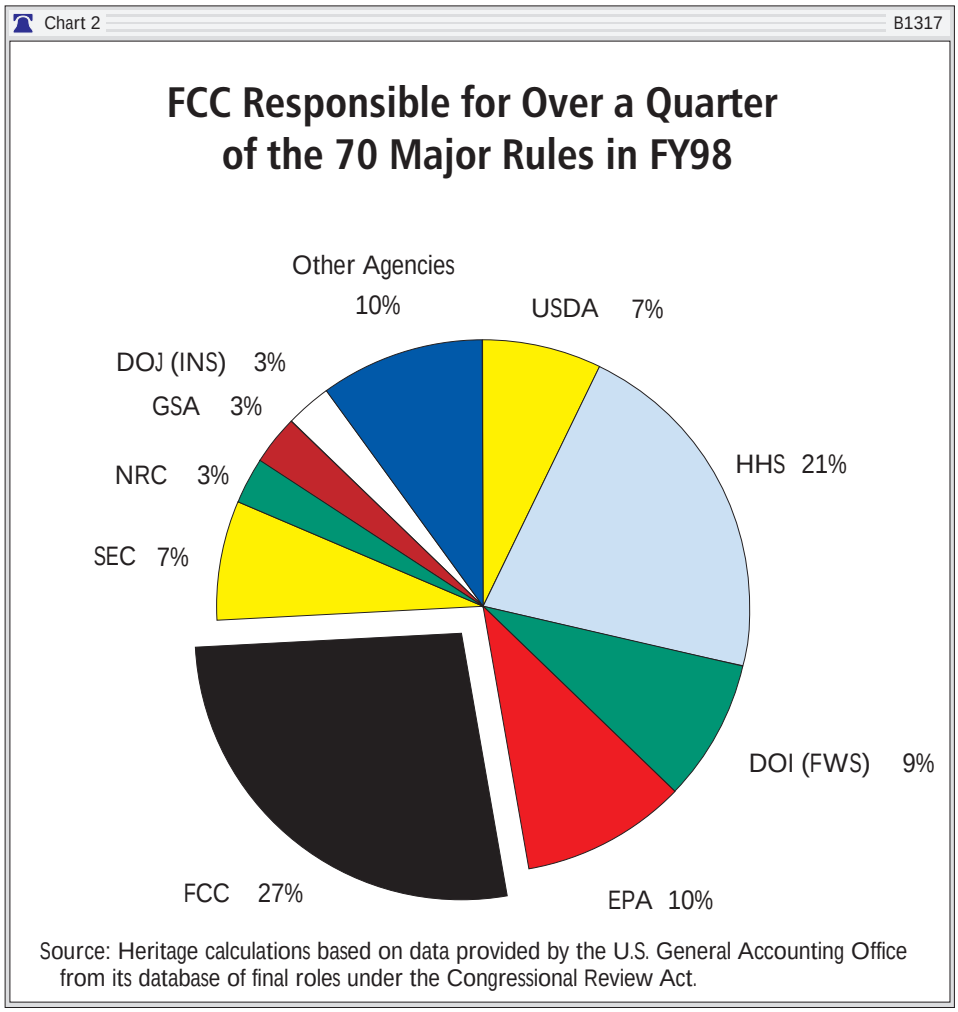
Consider the computer industry. Unconstrained by volumes of regulatory restrictions or guidelines, and confident that new ideas and investment decisions would not be met with bureaucratic resistance or interference, the computer industry flourished. No grand federal design created its success. Claims that the industry or consumers would have been better off had such

53. *Ibid.*, pp. 85–86.

54. See, generally, Adam D. Thierer, "The Founders' Vision of Constitutional Federalism," in *The Delicate Balance: Federalism, Interstate Commerce, and Economic Freedom in the Technological Age* (Washington, D.C.: The Heritage Foundation, 1999), pp. 15–24.

55. See United States Department of Commerce, National Telecommunications and Information Administration, *Falling Through the Net: Defining the Digital Divide, A Report on the Telecommunications and Information Gap in America*, July 1999.

regulatory oversight existed have no merit.



Compare this approach with managed competition of the communications industry today. FCC staffing and spending are growing[56] and producing more paperwork than ever before. The Congressional Review Act of 1996 requires agencies to track the volume of rules they publish, including "major rules" that result in an impact on the economy of more than $100 million.[57] From 1997 until March 1999, the FCC promulgated 497 final rules. This is almost exactly the total number of rules promulgated by the Department of Defense (165), Veterans Administration (81), Department of State (42), Department of Justice (133), and Department of Education (133) combined during that same period. Incredibly, in fiscal year (FY) 1998, no other federal agency produced as many major rules as had the FCC, which published 27 percent of all federal agency major rules. The Department of Health and Human Services ranked second with 21 percent of all major rules, and the Environmental Protection Agency ranked third with 10 percent.

This stunning increase in regulatory activity is proof that little deregulation is taking place under the FCC today. Yet it is unclear what companies or consumers have gained from this much regulation. Defenders of the FCC often claim that increased spending, staffing, and rule promulgation show that the agency is busy deregulating, just as Congress stipulated in the Telecommunications Act of 1996. Nothing could be further from the truth. The majority of the paperwork produced by the FCC in recent years has been *re-regulatory* in nature.

Indeed, if the agency is deregulating the industry, little paperwork should be required. Regulations can be eliminated without issuing voluminous rulemakings. Instead, FCC officials

56. See Melinda Warren and William F. Lauber, "Regulatory Changes and Trends: An Analysis of the 1999 Federal Budget," Center for the Study of American Business *Regulatory Budget Report* No. 21, November 1998.

57. Angela Antonelli, "Two Years and 8,600 Rules: Why Congress Needs an Office of Regulatory Analysis," Heritage Foundation *Backgrounder* No. 1192, June 26, 1998.

are determined to increase both the agency's budget and its powers to micromanage the "deregulatory" process. In recent years, moreover, Congress has obliged them by appropriating generous increases in the FCC budget.

As John C. Wohlstetter, GTE Service Corporation's Director of Technology Affairs, argues, "It is a given today that the telecom future is less predictable than ever before. To micro-manage market evolution in such a period smacks of unbounded regulatory hubris."[58]

CONCLUSION

To promote broadband telecommunications technologies and services for Americans in the next century, Congress must take an approach that is based not on regulatory distinctions, but on a "predictable, minimalist, consistent, and simple legal environment for commerce," as the Clinton Administration espoused in its *Framework for Global Electronic Commerce*. As J. Gregory Sidak and Daniel F. Spulber conclude in "Deregulation and Managed Competition in Network Industries," "Government policy makers must be willing to forsake power and influence over the economy, and to trust what they sometimes view as the 'chaos' of the marketplace."[59] Until policymakers are willing to do so, rapid broadband deployment will not become a reality.[60]

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58. John C. Wohlstetter, "Packet Plutocracy, Data Democracy, and the Bureaucracy," *New Telecom Quarterly*, Vol. 6, No. 4 (Fourth Quarter, 1998), p. 17.

59. J. Gregory Sidak and F. Spulber, "Deregulation and Managed Competition in Network Industries," *Yale Journal of Regulation*, Vol. 15, No. 1 (Winter 1998), p. 118.

60. For an evaluation of current legislative efforts to deal with the broadband problems, see the companion paper to this study: Thierer, "Broadband Telecommunications Policy for the 21st Century: A Legislative Report Card."