

The Telecommunications Act of 1996: Codifying the Digital Divide

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Any Change may bear seeds of benefit.

Seek them out.

Any Change may bear seeds of harm.

Beware.

God is infinitely malleable.

God is Change.¹

Each time a new medium comes along, great hopes are raised. But the lesson of history is that every new medium provides new opportunities for selling as well as for education, for monopolists as well as for democracy, and for abuse as well as for benefit.²

I. Introduction

By now most Americans have heard about the Information Superhighway and many of the new services that it may provide. It is expected that efficiencies garnered from the marriage of network technology, telephones, and computers will further revolutionize the finance, manufacturing, and advertising businesses;³ stimulate economic development⁴ and facilitate electronic commerce;⁵ enhance educational pedagogy and service delivery;⁶ extend health care to remote locations;⁷ and provide the impetus for electronic democracy.⁸ Many Americans have also heard about the deregulation of the telephone, cable, and broadcast industries accomplished by the passage of the Telecommunications Act of 1996 (Act or 1996 Act).⁹ Through this deregulation it is promised that we, as a nation, will be the beneficiaries of lower consumer prices via increased competition and an increased number of new goods and services.¹⁰ In addition, the Act seeks to ensure every American eventual access to advanced telecommunications networks and services, and more immediate access to basic telephone networks and services.¹¹

Telecommunications networks and the telephones, computers, televisions, and other equipment connected to them have a significant impact on the lives of all Americans—as individuals, learners, citizens, and consumers. Access to these networks increasingly determines the ease with which we can conduct and control financial affairs; pursue an education;¹² acquire the skills to become employable; call for emergency police, fire, or medical assistance;¹³ apply for a job; work at a distance;¹⁴ or participate in the political process. Through them we are connected to family, friends, schools, employers, political representatives, markets, and society. For many Americans this statement reflects the fact that access to the basic and advanced functions of these networks provides a broad range of services at our elective consumer convenience. In this sense, we are the "critical mass of Netizens—the 'eyeballs' and wallets to attract advertisers and commercial ventures to the Net."¹⁵

As we identify the potential of network technology to benefit our society, we must be wary that it not become a tool of disenfranchisement. Many are concerned that a significant portion of America's inner city and rural communities will become the domain of "information and technology have-nots" due to the unequal access to telecommunications network technologies and the telephones, computers, and other customer equipment that may be attached to the networks.¹⁶ The telecommunications and electronic network infrastructure serving many American communities is old and less able to provide the newer services and functions, which many middle- and upper-class neighborhoods take for granted.¹⁷ Already, consumer and civil rights groups allege that network providers are bypassing low-income and minority communities in the early stages of enhancing older networks or building new networks.¹⁸ There is legitimate concern that network deployment will be driven by short-term market strategies dictating that systems be enhanced or built in communities perceived to possess the requisite dollars and demand.¹⁹ These strategies appear to preclude near-term access to advanced network infrastructure for many inner city, rural, and near-suburban communities which are not viewed as desirable markets regardless of their actual consumption of telecommunications and video services.²⁰

Americans in these same communities often are also those less likely to own or have access to the telephones and computers necessary to take advantage of basic or advanced network services and efficiencies.²¹ In part as a consequence of their limited access to networks and equipment, their access to the information necessary to function as citizens, students, workers, and consumers in society is diminishing. Chief among the reasons for these Americans' critical access deficiencies is their relative lack of wealth²² and that of their communities. Their access to information

is also diminishing as large amounts of public information are privatized, and access to this information increasingly must be purchased. For instance, competition and innovation in the video distribution market is creating a shift from advertiser-supported to subscription-supported delivery of video information.²³

Viewing this lack of access to networks, equipment, and information as a lack of access to the "Information Superhighway" runs the risk of mischaracterizing the gravity of the disconnections these fellow Americans will suffer. It is not just that they will be unable to travel "virtually" to the locus of various information sources just as many of us today cannot afford vacation excursions. It is more than the fact that some will be unable to instantaneously correspond with others. The impact of these deferred connections and disconnections are far more profound, touching the fundamental nature of who we are as Americans. As the networks and the equipment attached to them become the preferred mode of political participation, lifelong learning, employment and commerce, as well as personal expression, nonaccess and nonconnection could become tantamount to "nonexistence."

In this sense, the "Information Superhighway" metaphor is inapt. A more appropriate metaphor is the national nervous system—for this is what the electronic networks of this country truly are. Taken as an integrated, transparent whole, the national network system is a collection of transmission pathways connecting multiple points that communicate via electrical and photonic signals. In much the same manner, the human nervous system is a collection of integrated nerve transmission pathways connecting all parts of the body that communicate with each other via electrical impulses switched through the brain.²⁴ The severing or atrophy of major nerve pathways results in the disconnection of essential body parts and/or the impairment of body functions. In extreme cases, atrophy of significant portions of the human nervous system results in paralysis, and eventual death. Appropriate medical analogies include Alzheimer's²⁵ and Amyotrophic Lateral Sclerosis (ALS or Lou Gehrig's Disease).²⁶

Viewed through the lens of the nervous system metaphor, many American inner cities, old and near-suburbs, and rural areas, are experiencing diminishing and/or limited access to basic and advanced networks and services. This is coupled with limited access to telephones and computers, resulting in loss of connection and access to information. Lack of connection subjects these communities to the equivalent of Lou Gehrig's disease,²⁷ and the nation of which they are part, to Alzheimer's.²⁸ If there is any doubt about the truth of the above statements, consider the following scenarios.

II. Surveying the Digital Divide

A. *Tale of Two Cities: Access to Finance and Commerce*

There are two popular images of the city of the future, based on the impact of technology: dead or dying; its trash-filled streets looked upon by empty, graffiti-marked buildings; its only signs of life a few remaining smoke stacks pumping effluents into the air; its unemployment offices marked by block-long lines of the hopeless, the unskilled, the illiterate—the human effluent of an economic storm. Or thriving, ribboned by green parks, its clean air humming with electronic commerce and the happy jingling of the cyber-cash register in the sky.

Advanced network infrastructure efficiencies are allowing businesses to abandon cities, near-suburbs and rural areas for lower property taxes, better services, and more highly skilled and/or cheaper labor pools. By providing faster, more efficient communications, networks facilitate businesses' ability to out-source manufacturing and back-office jobs previously held by urban residents. For minorities and women who comprise the majority of our urban cores, the net result is that there are fewer available jobs for which they are trained. In addition, urban core residents increasingly find there are far fewer businesses providing the basic goods and financial, medical, and social services where they live. Where such goods and services are provided, too often they are provided at an increased price, and the businesses that provide them are often less efficient than their network-enhanced counterparts. While many other developments have contributed to urban blight, the reliance on network efficiencies is exacerbating the problems.²⁹

The business emigration experienced by inner city and rural communities as a result of relocation is only the first wave of abandonment. The second wave is well underway. According to many, we as a nation have entered the era of

electronic finance and commerce.³⁰ An increasing number of public and private sector financial transactions are migrating to telecommunications networks. Retail commerce now housed in brick and mortar stores is beginning to migrate to electronic networks and on-line services.³¹ It is estimated that as much as 6 billion dollars in consumer transactions will have migrated to the World Wide Web by 1998.³² Not surprisingly, the demographics of the on-line consumers reflect the absence of those without access to the advanced network and equipment technologies necessary to take advantage of the shift to the World Wide Web and on-line services.³³

The migration does not end here. As much as 13 billion dollars worth of business-to-business transactions will have migrated to electronic networks by the year 2000.³⁴ Even the federal government has decided to place a substantial portion of its procurement business on-line.³⁵ Thus for minority-owned and small-business providers, contracting with the government necessitates investing in electronic networks. This federal procurement development mirrors procurement efforts already underway in large commercial firms relying on value-added and private networks.³⁶ Increasingly, the network serves as a means of reducing costs, enhancing efficiencies, and expanding the markets of firms. Given the value of networks, businesses seek out communities which have made the necessary investment in network infrastructure as part of their competitive strategy.³⁷ Consequently, officials of many states, municipalities, and rural communities realize that without the investment in infrastructure to support electronic commerce and other services, their communities will be bypassed by businesses of all types to the detriment of those who reside therein.³⁸

B. Living Just Enough for the City?

A teenager in Inner City, USA, rushes out of her family's apartment to call for family or emergency help. During the night, her grandmother has become seriously ill. Her family does not own a phone. The family was forced to give up the phone when they were unable to pay the growing long-distance collect phone charges from her incarcerated uncle coupled with the extensive phone usage of her and her teenage sister. Many of her family's close neighbors do not own working phones either. Concerned for the teen's safety, the family would not let her attempt the call for assistance during the night. Now, in the morning, she's allowed to venture out, quarters in hand. But there are precious few payphones, and those that are available, don't work.

She decides to find a cab so that she can take her grandmother to the hospital, but she doesn't have enough money in her possession. Because she works at a local fast food restaurant, she has a small bank account from which she can make a withdrawal. Unfortunately, as a cost-saving measure precipitated by a merger, her bank recently closed the branch in her neighborhood. She has to search for an automated teller machine (ATM), but this search ends like her search for a working phone. She heads for the check cashing store to write a check and pays a large fee, so she can finally get back to her grandmother and take her to the hospital.

C. An Honor Student's Tale

Branden Diehl is an honors student, a hard-working kid with a lot of potential. He has a 3.8 grade-point average.

Come spring, he's a shoo-in to place near the top of his graduating class at Bedford County's sprawling rural Everett Area School District.

Then, his prospects dim.

Diehl is aiming for college and a career protecting the environment. That means he faces a college curriculum laden with math and science—subjects where computer savvy and advanced-placement classes in high school would give him a big boost.

But his school offers no advanced-placement classes. ``And I've never even been on the Internet," Diehl said.

Neither have a lot of his schoolmates.

At a time when students statewide are becoming citizens of cyberspace and computers have become as indispensable as pencils, this cash-poor school district has yet to link its past-generation computer lab to the outside world.

"We're missing out on opportunities that students in places like Pittsburgh have access to," said Diehl, the first member of his family to go to college. "Those kids know how to use the Internet as well as we know how to use something like a calculator. Kids here are still using things like manual typewriters."³⁹

Branden's problems are shared by other American children in school districts across the nation. Everett Area School District's financial problems are the same as those of suburban schools outside of Chicago, Illinois, Washington, D.C., and schools in urban California, New York, and Utah.⁴⁰ While higher education, business, and government increase performance requirements for American students,⁴¹ disparities in economic wealth continue to manifest as unequal access to computer and Internet technology and services and increased proficiency in the skills that access to these tools can provide.⁴² This inability to acquire and profit from such access reduces one's chances of educational and economic success.⁴³

D. Political Expression and Power

The outcome of the election [of 1994] was due in great measure to the Republican party's ability to mobilize voters through technology—television, talk radio, voice mail, on-line services, and fax communication. Whether you agree or disagree with the outcome of the election, the fact is that those who best controlled technology came out on top.⁴⁴

Historically, many broadcast licensees and their advertisers have been criticized for declining to program to, or address the needs, interests, or perspectives of minority and poor communities.⁴⁵ To the extent minorities and/or the poor were portrayed as individuals or as a group, the portrayals were overwhelmingly stereotypic.⁴⁶ Activists' efforts to reverse these problems focused on changing licensee editorial discretion via diversification of staff,⁴⁷ requiring fairness in the presentation of controversial issues of public importance (Fairness Doctrine),⁴⁸ requiring licensee dialogue with the community (ascertainment), establishing citizen challenges to license renewals,⁴⁹ and increasing the number of minority- and female-owned broadcast facilities to provide minority- and female-oriented perspectives. At present, the Fairness Doctrine has been overturned; Equal Employment Office (EEO) rules have been circumscribed and some allege, largely ineffectual.⁵⁰ Ascertainment requirements have been repealed; consequently, citizen challenges to licensee renewals have become less effective. Meanwhile, recent Court decisions have overturned efforts to facilitate female ownership of media and are viewed as substantially undermining Federal Communications Commission (FCC or Commission) efforts to address minority underrepresentation in media ownership.⁵¹

And, while the creation of public and educational access channels has increased the opportunities for individuals and groups to gain access to cable channels to speak, the introduction of cable television was substantially delayed in many urban and rural areas.⁵² Even today, some communities still do not have access to cable.⁵³ Once made available via cable, public access channels provide welcome, but nonetheless limited, access to the cable medium in part due to inadequate program funding.

Lack of sufficient access to media is a matter of no small importance for those Americans who have historically been politically underrepresented. The recent Supreme Court decisions banning many efforts to redraw congressional districts taking race into account provide a critical case in point. These redrawing efforts by civil rights groups and the Department of Justice created districts with high enough percentages of minority voters to increase the likelihood of electing minority representatives. Such districts are credited with doubling the number of Black representatives in Congress over the past six years.⁵⁴ The creation of the new districts prompted challenges by some White voters who

claimed that the reconfigured districts were an unconstitutional attempt to classify people on the basis of skin color and discriminated against them. Regardless of the constitutionality of the current district redrawing, the Court rulings overturning many of the reclassifications are particularly ironic given the historical practice of diluting minority voting power via racial gerrymandering.⁵⁵

Despite the Supreme Court rulings, Black and Hispanic Americans can still associate across geographic and political boundaries to pursue common community agendas. The use of e-mail, participation in on-line and/or Internet user groups, and the creation of Web sites is essential to accomplish this goal. Political party Web sites are one of the fastest ways to get or share information on party positions. Web sites are one of the fastest growing ways to get information about political candidates and each major presidential candidate in the last election had one. Many state and local candidates are following the presidential candidates' lead. E-mail is another fast way to respond to a candidate's speeches and positions. Many more voters are participating in the political process in this manner. However, the exercise of electronic political power requires access to telecommunications networks and computers with modems.⁵⁶

The continuing debate over welfare reform is another case in point. The poor in the United States have not fared well in the arena of public debate as recent defeats in welfare reform attest. There are multiple reasons for these defeats. Chief among them is the inability to set the agenda or effectively participate in the debate because of limited access to the means of mass communication. Erroneous perceptions about welfare recipients flourish throughout the nation. Nationally, the welfare rolls are not filled primarily with inner city Americans. Nationally, White Americans make up forty percent of welfare recipients, Black Americans thirty-seven percent and Hispanic Americans eighteen percent.⁵⁷ Yet, too many believe the media's portrayal of Americans on welfare as Black and Hispanic.⁵⁸ The minority portion of the welfare population is overrepresented in the media, coloring the debate on the issue, while the White American portion of the welfare population is rarely mentioned, consigning them to obscurity if not virtual nonexistence. The absence of the poor as an unmediated, representative, electronic presence in the welfare debate was critical to the misuse of race as an issue in the debate's outcome.⁵⁹ Unless the poor gain access to the new tools of electronic political expression, this circumstance is not likely to change.

E. Access by the Numbers: Horizontal and Vertical Disparities

1. Access to Basic Network Technology and Telephones

The Communication Act of 1934, Title I, Section 1, set forth the goal of American communications policy "to make available, so far as possible, to all people of the United States a rapid, efficient, Nation-wide, and world-wide wire and radio communications service with adequate facilities at reasonable charges."⁶⁰ In telephony, this policy evolved into the requirement that monopoly telephone companies provide service to as many Americans as possible.⁶¹ The companies were allowed to subsidize the cost of serving poor, rural, or other less profitable customers with higher margin clients such as downtown businesses.⁶² The access policy, coupled with a policy of nondiscriminatory common carriage, allowed individual telephone subscribers to acquire relatively inexpensive access to technology and speech with very little constraint on what could be said.

Even with this inclusive goal of universal service in place, there are substantial gaps in service.⁶³ Roughly 6 million homes lack direct phone service.⁶⁴ Pay phones, the traditional substitute for a phone in the home, are becoming less and less accessible.⁶⁵ To combat their use in facilitating drug dealing,⁶⁶ and other illicit activities such as phone fraud and computer hacking,⁶⁷ in many poor neighborhoods, pay phones have been removed, restricted to outbound calls only, or returned to rotary dialing.⁶⁸ Without access to a phone, poor people lose opportunities to acquire government benefits, to secure employment, and to obtain emergency care and other connections, to the larger society.⁶⁹

2. Access to Advanced Networks and Computers

The three places where Americans are likely to have access to computer technology are at home, at school, and at work. Currently, there are substantial horizontal (comparisons across race and ethnicity) and vertical (comparisons by income class) disparities in access. For instance, taking into account access at home, school, or work, census data indicates that roughly twenty-six percent of Americans have access to computers. By comparison, almost thirteen percent of Hispanic Americans have access to computers.⁷⁰ Almost forty-six percent of working Americans use computers at work. Among Hispanic Americans, the percentage is roughly twenty-nine percent.⁷¹ What these "horizontal comparisons" also indicate is that roughly seventy-four percent of Americans do not have access to a computer.

Current data on home-based access to computers indicates that forty percent of White American households have access to a computer as compared to twenty-six percent of Black American households.⁷² In another survey, thirty-six percent of White American students reported using a computer at home in comparison to fifteen percent of Black American students.⁷³

Access to computer technology is even more skewed when income is considered irrespective of race. American families earning \$15,000 or less per annum are more than seven times less likely to own a computer than families earning \$75,000 or more per annum.⁷⁴ By comparison, some researchers have found there is little disparity in ownership between Black American and White American households making \$75,000 or more per annum.⁷⁵ Disparities in computer access are reflected in Internet usage.⁷⁶

In access to telephones and computer ownership, as in many other ways, the poor are at a severe disadvantage navigating the new world of technology and in preparing their children for it. Moreover, the vast majority of poor people in our communities are not computer literate. Even where corporate and government efforts provide Internet access to schools and give some children greater access to the use of computers during the day, the absence of computers at home places many low-income children at a distinct and growing disadvantage.⁷⁷ Even if some forecasts suggest that as much as sixty to sixty-five percent of U.S. homes will have a personal computer by the year 2000,⁷⁸ the cost of computers relative to the income of poor Americans is likely to preclude such penetration rates among the poor.

a. Commerce and Community Economic Development

The efficiencies of network technology allow more of the economy to operate at a distance. Many U.S. firms out-source substantial amounts of clerical back-office work to English-speaking nations in Europe and Asia, thereby reducing the pool of jobs recently held by minority and female workers.⁷⁹ Businesses previously located in the urban core have migrated to communities with lower taxes, higher concentrations of highly skilled workers, and a better quality of life. To the extent that there is a continuing need to interface with corporate personnel in the central business district, it can be done electronically via telecommuting.

The inner city is likely to be the weakest part of a metropolitan economy. Without economic development initiatives, such communities find it hard to compete. The cities also face a substantial challenge. They must bridge the growing gap between the skills required for employment in advanced services concentrated in urban cores, and the limited skills that many inner city residents—like our teen—bring to the job market.⁸⁰ The road to employable skills and individual economic self-sufficiency leads through education and access to technology. But the telecommunications infrastructure in many urban and rural areas is incapable of providing access to the advanced services necessary to make passage on this road successful.⁸¹

b. Control of Personal and Community Wealth

Despite state and federal laws requiring that banks and financial institutions serve all segments of society,⁸² numerous banking firms have closed branches in inner city areas due to mergers and consolidation, cost reductions, or discrimination.⁸³ Urban residents in New Jersey are four times more likely to have a community bank branch close

than are residents in any other part of the state. As a result, many people in inner city communities cannot make a deposit or withdrawal from a bank branch or an ATM within walking distance of their home.⁸⁵ Given the limited access to phones and the virtual absence of computers, not many inner city residents bank by phone or personal computer.⁸⁶ Yet, one of the chief impacts of an increase in the use of telecommunications networks is the closing of local branches and the reliance on less expensive electronic banking by phone and computer as bank consolidation and competition increase.⁸⁷

Welfare recipients and their communities will be particularly hard hit. By the end of 1998, persons receiving public assistance⁸⁸ benefits will be required to do so electronically. These benefits will be transmitted over private telecommunications networks. For public assistance recipients living in neighborhoods where bank branches have closed, this change in policy and practice creates significant inconvenience. The recipients will have to frequent banks⁸⁹ or larger food stores in other communities that have ATMs allowing recipients to use their debit cards. For the small merchants that accept food stamps and welfare checks as legal tender, it will mean an immediate loss in money changing and cash flow as their clientele "bank" and shop elsewhere. This new practice is likely to remove a significant amount of legal tender from the cash economies of the inner cities.

In addition, studies have shown a significant correlation between the existence of an operating bank branch in a community and success in securing a house mortgage or business loan.⁹⁰ As bank branches close, communities lose more than convenience and access to services; they lose control of their economic resources and a measure of economic viability as well.⁹¹ Without access to phones, computers, and the networks to which they are attached, the gap in access to financial services and economic development will surely widen.

Increasing bank and governmental reliance on network-delivered financial and benefit services means that people in underserved communities will have to acquire greater access to phone and computer services in order to maintain access to financial resources. If they are unsuccessful, they will lose more of the control over their already limited economic resources. And, their ability to stimulate economic activity in their communities will be further compromised.

c. Education and Employment

Sixty percent of the jobs available in the year 2000 will require skills in information technologies.⁹² Children in poor inner city, near-suburban, and rural schools are least likely to have access to learner-oriented, skill-enhancing computer hardware and software. According to a 1994 report by the U.S. Census Bureau, only thirty-nine percent of Black students and fifty-six percent of White students use computers in school.⁹³ Statistics on home computer use are even more dismal. Fifteen percent of Black students and thirty-six percent of White students reported using a computer at home.⁹⁴ A different look at the same numbers indicates that approximately half of American students report using a computer in school; approximately seventy percent have no access to a computer at home. Because so many jobs in our economy are going to require some computer skills, children without computer skills will be increasingly left behind. Access is essential for the development of the skills necessary for employment today and in the next millennium. While the amount of usage is growing,⁹⁵ far too few Americans use a personal computer to access the Internet, remote databases, and Web sites for work, school, shopping, or recreation.

If our teen does not attend a school which provides meaningful access to a learner-oriented computer use curriculum, she is less likely to qualify for a better paying job. She has approximately a fifty percent chance of attending such a school. Approximately half of the states have been sued for the inequitable distribution of revenues to finance schools in neighborhoods like hers.⁹⁶ Furthermore, even if she is technologically literate, the better paying jobs are not likely to be in her neighborhood.

d. Freedoms of Speech and Association

Computer and Internet technologies have created opportunities for greater electronic expression. Newer media, such as the Internet and services such as e-mail, have occasioned greater opportunities for electronic expression by individuals

and groups who use, but do not own, media.⁹⁷ The opportunities have resulted in increased personal and political electronic expression.⁹⁸ For instance, the use of computers and telecommunications networks has been positively linked to the enhancement of democracy.⁹⁹ As one commentator has stated:

In the age of mass media, citizens and grassroots groups need an equalizer. The combination of personal computers and the telephone network might prove as important to citizens in the information age as the printing press has been for several centuries. The use of electronic mail services, computer bulletin-board systems, and computer conferencing systems as channels to make decisions and disseminate information can help grassroots political organizations, nonprofit groups, and other public interest groups to gather critical information, organize political action, sway public opinion and guide policy-making.¹⁰⁰

F. A Critical Point in Time

The confluence of communications convergence and concentration, and the rapid expansion of governmental and business reliance on network efficiencies, are occurring at a time of uneven and often inequitable deployment of technology and information, rising costs of access to technology and information, and growing disparities in personal and geographic income. In this context, the passage of the Telecommunications Act of 1996 comes at a critical point in time. It is a time pregnant with opportunity for substantial gain and fraught with the potential for irreversible loss. Communications technology can be used to expand and equalize access to education and electronic political empowerment, or it can be used to disenfranchise the growing number of Americans who are at risk. It can be used to provide much needed efficiencies in service delivery and economic development to urban and rural communities, or it can be used to bypass and abandon them.

Changes during this time of confluence will determine which Americans will have access to electronic communications to speak, what we will be allowed to say, and what we will be allowed to hear.¹⁰¹ The interactive communication afforded by computers and the Internet can provide a critical, necessary democratic alternative assuring speech and association opportunities for individuals and communities. They serve as the potential foil to the increasing centralization of control in the converging traditional media of broadcasting, cable, print, and telephony. However, these technologies and services can do so only if all individuals and communities have access to technology and services, the literacy necessary for their proper use, and inexpensive access to the information.

To the extent that all members and groups within American society do not have equitable opportunities to create, speak, and hear electronically, our collective notions of individual self-worth, equality, and equity cannot be fully inclusive. This is the substantial risk of basing opportunities to create, speak, and hear electronically on economic wealth expressed in the marketplace. For, in a society possessing the greatest gap in economic wealth of any industrialized western nation, basing the opportunity to create, speak, and hear on economic wealth is to consign many to silence, invisibility, and potential extinction.

In addition, enhanced networks present us with the opportunity for improved, cost-efficient delivery of needed goods and services. However, if inequitably deployed, these networks will eventually result in further urban atomization and rural stagnation as the business and service institutions exit or atrophy due to the escalating costs of providing and securing goods and services, in relation to their diminishing levels of availability. Meanwhile, new technology- and network-reliant businesses will decline to enter, or be delayed in their introduction into, remote rural areas and urban cores. In summary, without equitable access to speak and to acquire information and without equitable access to network technologies and efficiencies there will be far less equality in the twenty-first century. For many Americans then, the ultimate measure of the success of the Telecommunications Act of 1996 will be the number of at-risk Americans enabled by the legislation to become full contributing participants in the intellectual, political, economic, and social fabric of American life in the twenty-first century.

III. Assessing the Act: Legislative Disconnect?

The key test for any telecommunications reform measure is whether it helps the American people.

Legislation should provide benefits to consumers, spur economic growth and innovation, promote private sector investment in an advanced telecommunications infrastructure, and create jobs.¹⁰²

Congress's primary goal in passing new legislation is to ensure that all Americans have affordable, nondiscriminatory access to communications services. To accomplish its goal, Congress instituted a number of regulatory changes via the Telecommunications Act of 1996. For the most part, these changes reflect a preference for "marketplace and market demand" driven methods for accomplishing the legislative goal of nondiscriminatory, affordable access. However, while the legislation evidences a distinct and deep-seated congressional preference for reliance on the market, there are some provisions which seek to address the market's inability to assure access to all. These provisions include a revised nondiscrimination provision, a revision of the nation's universal service policy, and the retention of targeted Lifeline and Link-Up subsidies for the poor.¹⁰³

Among the market-reliant regulatory changes enacted in the legislation are the introduction of greater competition in the provision of local and long-distance telephone services; the deregulation of cable television rates; the creation of opportunities for competition between telephone and cable firms in providing video-programming services; and the relaxation of the broadcast media concentration rules.¹⁰⁴ Many in government and industry anticipate that increased competition in the local and long-distance telephone markets, as well as in the video market, will result in reductions in the prices consumers pay for access to existing telecommunications and video services. In addition, it is argued that increased competition will result in the more rapid deployment of new, innovative, and responsive services.

Eighteen months after its enactment, and six months after the Commission's implementation of Congress's directive, difficulties encountered in the Act's implementation call into question the likelihood of reaching significant portions of Congress's goal. Many consumers are finding that their subscription rates are higher—not lower.¹⁰⁵ And while some find their access to service options has increased, the number of firms from which such access may be purchased has shrunk.¹⁰⁶ Consumer access to advanced telecommunications services such as the Internet has not improved significantly since the Act's passage. Some consumer groups are complaining that the implementation of provisions such as the Act's local market competition and universal service requirements is resulting in a shift of the cost to consumers.¹⁰⁷

Despite the establishment of a universal service discount for schools and libraries,¹⁰⁸ only nine percent of all instructional rooms (classrooms, labs, and library media centers) are currently connected to the Internet—due in large measure to inadequate funding.¹⁰⁹ But the current lack of access is not the most pressing problem regarding the implementation of the discount; rather, it is the filing of numerous legal challenges to the Commission's methods for funding the universal service discount,¹¹⁰ and a congressional threat to the funding of the discount.¹¹¹ The initiation of litigation, assures that the implementation of the universal service discount will most certainly be delayed in the short term. Meanwhile, a decision to use universal service funds to augment the deficit in the general treasury would establish a dangerous policy that could eviscerate any meaningful national attempt at equitable deployment of technology.¹¹²

A. Access to Basic Technology

The strategy envisioned by Congress and the Commission to increase the percentage of Americans having access to a phone is to maintain and expand the Lifeline and Link-Up programs.¹¹³ In this way, it is hoped that the percentage of Americans having access to a phone will be further increased. This strategy enjoys the support of a majority of the telecommunications industry.¹¹⁴ However, because these programs have essentially been in place at the federal level and in many states, something additional seems necessary.

Even with these programs, approximately nineteen percent of rural and urban residents with incomes under \$10,000 do not own a phone.¹¹⁵ At least two reasons are offered for the current shortfall. First, as one study suggests, the current telephone access deficit is created by a lack of knowledge of the discount on the part of those Americans who are eligible to receive the Lifeline discount. In addition, another study suggests that those who may have at one time

acquired access to phone service, but who are currently disconnected for failure to pay, may not be able to afford the reconnection fees.¹¹⁶ Second, as others suggest, the Lifeline and Link-Up programs may not be capable of significantly increasing phone penetration among those not already connected. They suggest that the programs mostly accomplish a redistribution of income among those members of the poor who would have been connected even without the programs.¹¹⁷ Based on their economic estimates, the programs have a minimal impact at best on the telephone penetration rate among the poor in the United States.¹¹⁸ They suggest that a more efficient Lifeline program would target low-income households that would not otherwise subscribe.¹¹⁹

Even if one accepts the estimates and calculations upon which the criticism of the programs is based, an increase in the number of people enjoying access to telephone service they heretofore could not afford is critically important. For, as is increasingly clear, "[t]elephone service is no longer considered a luxury in today's society where communications are vital to finding and holding a job, calling for emergency help and staying in touch with friends and family."¹²⁰ Even a minimally significant increase in access rates among the 6.3 million households currently without phones¹²¹ results in a substantial increase in the quality of life, heightened chances for economic survival, and greater opportunities to become a contributing member of society.¹²²

B. The Legislative Disconnect

In addition to an assessment of the success of the Act's current implementation, it is reasonable to raise fundamental questions about the practical advisability of Congress's reliance on marketplace solutions in an era in which so much of American society is economically stratified. An analysis of the legislation in light of the needs established earlier in this Article, underscores this point.

1. Equating Antidiscrimination with Antiredlining

Despite early efforts to include specific language prohibiting the electronic redlining of poor and minority communities in earlier drafts of legislation, the Act does not address electronic redlining. Instead, the redlining issue is addressed as part of the amendment to section 151 of the Communications Act of 1934, which now states in pertinent part:

[T]o make available, so far as possible, to all people of the United States *without discrimination on the basis of race, color, religion, national origin, or sex*, a rapid, efficient, Nation-wide and world-wide wire and communications service with adequate facilities at reasonable charges¹²³

The Act thus amends the section 151 language, which many have interpreted as the first and heretofore sole statutory basis for universal service,¹²⁴ by prohibiting discrimination in the provision of service on the basis of race, color, religion, national origin, or sex. Nevertheless, in doing so, the legislation fails to address minority and poor communities' concern that they are being electronically redlined because they are perceived as being less economically desirable, not necessarily because they are composed of particular religious, ethnic, or racial groups, nor because they are women.

Section 254 establishes the procedure whereby the FCC will develop the new and evolving definition of universal service, including which services will be deemed "basic" or "advanced," what subsidies will be created, and who will be eligible for them. The FCC has since established the definitions for basic and advanced telecommunications services.¹²⁵ However, given the bifurcated definition of services, the section essentially contemplates that all Americans will not be able to afford all services immediately and thus will not be economically entitled to have access to them.

As a result, even with the nondiscrimination principle in section 151, and, even if access to "basic" services is actually achieved via section 254, the Telecommunications Act does not prohibit or discourage business decisions to delay or decline to upgrade architecture, nor to provide new services in many communities.¹²⁶ Nor does it create a positive incentive for encouraging earlier deployment.¹²⁷ So long as the competitive business decisions are based on perceptions that communities possess limited wealth, or constitute less desirable markets, those communities will

continue to be left out for the near term when it comes to the provision of all services not deemed "basic."

2. Universal Service in All Regions of the Nation

The guiding principles of section 254 do little to blunt this economic reality. Subsection (b)(3) of section 254 requires that the FCC must develop the nation's universal service policy such that:

[C]onsumers in all regions of the Nation, including low-income consumers . . . should have access to telecommunications and information services, including interexchange services and advanced telecommunications and information services, that are reasonably comparable to those services provided in urban areas and that are available at rates that are reasonably comparable to rates charged for similar services in urban areas.¹²⁸

At minimum, the subsection's guiding principle that access be provided in "all regions of the Nation" is a directive assuring that rural consumers are afforded access to reasonably comparable basic and advanced telecommunications and information services at comparable rates. But, even if the subsection is given a broader and more equitable interpretation, which includes low-income urban and suburban consumers, it still contemplates payment for a bifurcated panoply of services available at rates comparable to those available in the more desirable urban regions. These are likely to be rates that many will be unable to afford.

Even if the FCC should ultimately determine that the service roll-out is too slow or inequitable due to electronic redlining, the FCC only may stimulate faster deployment of services by facilitating more competition which presumes market, rather than equitable social considerations. If the delay or failure to provide service is due to misperceptions, or accurate perceptions of a market segment's desirability, more competition is not likely to solve it.

3. Universal Service via Targeted Subsidies

Aside from the legislative intent embodied in section 151 as amended and section 254(b)(3) of the 1996 Act, Congress sought to assure that those Americans deemed poor by established criteria are protected from a loss of service via the continued provision of Lifeline services.¹²⁹ In addition, the FCC, upon the advice of the Joint Board, has promulgated and seeks to implement regulatory policies which assure that low-income communities are provided access to advanced telecommunications and information services via their schools and libraries.¹³⁰

The services are to be provided to schools and libraries at a discount ranging from twenty percent to ninety percent based on established need criteria.¹³¹ The proposed discount structure is currently subject to litigation.¹³² Aside from the heated debate raging over the size and scope of the discount and who will pay to subsidize it, the framework in which the debate over subsidies, payment responsibility, and services is conducted presumes the existence of a bifurcated service model based on price. Such a model establishes two tiers of access and concedes the continued existence of the digital divide.

The provisioning of libraries and schools is laudable and pragmatic, but it is also problematic. Based on the number of school finance suits filed and the budgetary wars over education funding in Congress and many state legislatures, it is reasonable to conclude that the pool of existing state education dollars is often inequitably distributed, and the pool of federal and state education dollars is likely to shrink relative to need, rather than grow.¹³³ Thus any technology dollars made available to schools without regard to the current disparity in—and pressures on—educational allocations, may exacerbate rather than ameliorate the disparity. Second, many communities are closing local library branches for budgetary reasons. Thus, an access policy for low-income communities solely based upon access via schools and libraries will inadequately serve some communities, while leaving out many other communities. In other words, even where the bifurcated access model is implemented, Americans in many communities will still be underserved or remain unserved.

Even where the opportunity for access is achieved, using the school/library discount strategy to benefit working parents, guardians, and local businesses will oft times be problematic. Even where sufficient finances are found to purchase discounted access over time, acquire the necessary end-user equipment and software, as well as train teachers

and librarians in the technology's use as a pedagogical and research tool, added financial resources will be necessary to make schools and libraries accessible on a daily basis as well as in the evenings and on weekends. Absent the technology's availability to parents, guardians, businesses, and community organizations, at best, the digital divide will be compounded by parent-child, school-business, and school-community divides. First, successful school-based meldings of technology and education have included the substantial participation of parents and communities as user/adopters of the technology. Second, as the vast majority of new jobs in this nation are created by small businesses; sole reliance on a technology deployment strategy that does not facilitate the early adoption and use of the technology by small businesses severely reduces the prospect that the businesses will maintain a sufficient level of competitiveness. This in turn leads to a situation in which children conversant with the technology will nevertheless have fewer opportunities for gainful employment when they become eligible to work. Downsized technology corporations are not likely to be the primary source of employment. Third, sole reliance on the school/library deployment strategy excludes Community Based Organizations (CBOs) that have successfully helped bridge the parent-child, school-business, and school-community technology divides. In the final analysis, it is not that the school/library deployment strategy is ill-advised; it is essential, pragmatic, and must be enthusiastically supported. However, sole reliance on the school/library deployment strategy to the exclusion of other complimentary strategies is ill-advised for all the aforementioned reasons.

Despite these reasons, the Act and the FCC's *Report and Order* only allow significant discounts for schools and libraries acquiring access to the Internet, distance learning, and other telecommunications services.¹³⁴ However, despite expressions of public concern,¹³⁵ the FCC's *Report and Order*, like Congress's Act, did not make discounts for advanced telecommunications services available to CBOs, which bridge the education, economic, and service delivery gaps left by the current social service and education delivery systems.

Many CBOs are playing a key role in efforts to provide access to computer technology to enhance educational achievement, employment opportunity, and civic engagement.¹³⁶ Consider the success stories of Ms. Miskovitz and Ms. Neiswonger:

The 55-year-old widow, who lives in the Stockyard neighborhood, worked the janitor detail for eight years with hardly a thought of giving up what she called "good, honest work." But that changed last year when she bought a used computer for \$50 through a neighborhood program working to connect low-income households to cyberspace. The deal included four two-hour classes in basic computer skills. Today, Miskovitz still works at Apex Paper Box Co., though she is no longer doing windows—unless they are of the software variety. In mid-November, about five months after getting her computer, Miskovitz was promoted to a secretarial job that includes working the office computer, doing e-mail and simple accounting.

....

Pam Neiswonger, a single welfare mother of seven, has had her \$50 system for more than a year. "When we first got it, the kids were all fighting over it," she said. "My young ones play with the math games, my older ones use the word processor to type school reports, and they can get into the library to use the on-line encyclopedia." Neiswonger, 42, . . . used the computer last July to organize a neighborhood cleanup, compiling lists of volunteers and [d]umpster sites and creating fliers to circulate throughout the neighborhood. She said she would like to see an electronic bulletin board serving the neighborhood, where people could post notices or advise others of meetings and common concerns.¹³⁷

There are numerous stories of real Americans whose lives have been profoundly changed in positive ways due to CBOs' provision of access to computers. Possessing enhanced skills learned at community access centers, the working poor find better paying jobs; parents become adopters and users of the technology as they participate in the education of their children; and residents engage in civic organizing for the betterment of the community.

Unlike Congress, which has failed to extend the discount to CBOs and is ambivalent towards Administration programs to assist community organizations in acquiring technology,¹³⁸ in response to community concerns,¹³⁹ the California

legislature and the Public Utility Commission (PUC) have recognized the critical role which CBOs can play in making the benefits of advanced telecommunications networks and services available to their communities.¹⁴⁰ The California PUC stated, "because of their economic and social impact . . . community . . . institutions must be positioned to be early recipients of the benefits of the information age."¹⁴¹ The PUC determined, "In accordance with state . . . directives, qualifying . . . community based organizations (CBOs) shall be entitled to discounted rates for certain services."¹⁴² The PUC went on to adopt rate discounts for CBOs. It determined that in California qualifying CBOs shall be entitled to a discounted rate for switched 56, ISDN service, and T1, or their functional equivalents.¹⁴³ Only a tax exempt organization¹⁴⁴ offering health care, job training, job placement, or educational instruction, qualify for the discounted rates for CBOs.¹⁴⁵ Similar efforts are underway in Wisconsin and Pennsylvania.¹⁴⁶

It may be argued that making the discount available to CBOs would increase the proposed yearly discount amount of 2.25 billion dollars, (roughly the cost of one B-1 bomber), thereby placing an even greater burden on those consumers and firms paying into the fund. While there certainly will be some increase if CBOs become eligible for a discount, the size and impact of such an "increase" can be minimized in several ways. The scope of services for which a discount is provided could be more limited than that for schools and libraries, the relative size of the discounts might be smaller, and the eligibility criteria could fairly limit the number of organizations receiving the discount. In addition, community organizations could be required to form partnerships with telecommunications, video, or service firms to provide the telephone, Internet, financial, and telecommuting services, which are disappearing or being deferred from introduction. The not-for-profit CBOs through for-profit subsidiaries would share the cost and profits of service provision with the commercial providers. In this way, the "discount" serves as an investment in the CBO as joint partner. This investment is repaid in a reduced (shared) cost of doing business relative to the provider's return on investment.

For example, as this Article documents, many urban and rural communities are suffering from limited access to basic telephone communications and a loss of access to financial services. In neither case is this mainly a function of a lack of profitability in these communities. Rather, it is arguably a function of an increase in the cost of providing service relative to the revenues to be gained because of a change in the competitive environment in which local telephone companies and banking firms operate. A technology deployment strategy that engages the CBO as a joint partner in aggregating telephone and banking service demand, marketing current and future services, and providing a brick and mortar point of presence for the provision of services creates opportunities for shared costs, shared risk, and volume discount-based resale revenues in phone parlor, phone card, ATM, kiosk/point of sale, and bill payment services.

In addition, inner city and rural communities are not likely to be early recipients of advanced technology and services. It is argued that in many cases, these access problems are a function of the perceived cost of the network upgrade and marketing of new services relative to the revenues to be generated given the low penetration of necessary, consumer, electronic equipment and the relative lack of wealth. Here again, the use of the CBO as the focal point of presence for the deployment of donated new or used computers; an advanced network gateway for multimedia and Internet access; as well as telecommuter and small-business related services such as e-mail, Internet access, postal and parcel delivery services, copy, just-in-time inventory, and software-defined tax preparation and accounting services provide opportunities for consumer education and the marketing of new services to residents and local businesses at a fraction of the cost associated with a community-wide upgrade. Moreover, as mentioned above, the community participates in sharing the costs, risks, and attendant benefits of the technology and service deployment and marketing efforts.

In addition, the Telecommunications Act of 1996 did not extend the rural health care provider discount to urban health care organizations providing medical services to the poor and elderly. The omission is itself discrimination against those with comparable needs. Ironically, the FCC's decision to provide school, library, and rural health care discounts is now being appealed in the courts, not on the issue of leaving CBOs and urban health care providers out, but on the issue of the size of the discount and what it should include.¹⁴⁷

IV. Conclusion

Congress has established a nascent market-based regulatory paradigm that has, as its stated goal, the provision of affordable communications services to all Americans. Its effort can fairly be said to fall far short of its intended result.

Because the Act's implementation is to be evolutionary in development, it is possible for one to offer a potentially hopeful assessment of its final impact. However, at this point in time, the Act, whatever Congress's intent, codifies the digital divide which currently exists, constrains the FCC and National Telecommunications Information Association (NTIA) in their efforts to achieve an equitable deployment of increasingly necessary, advanced technology, and provides no mechanism for timely resolution of the growing number of lawsuits which challenge FCC decisions. In all likelihood, the dawn of the millenium will have come and gone before equitable access to technology is achieved. If it does, it will have left behind as much as half of America.

There are some critical short-term actions that would assure that more Americans are technologically empowered. They include extending the telecommunications discount to eligible CBOs and urban health care providers; funding NTIA's Telecommunications Information Infrastructure Assistance Program at a level more commensurate with its pivotal role in facilitating the equitable, timely deployment of advanced technology; and the adoption of a national congressional perspective that recognizes Americans not just as consumers, but as citizens, students, and workers deserving of the legitimate opportunity to contribute fully and responsibly to the nation regardless of geography, race, sex, national origin, religious belief, physical impairment, or wealth.

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1. Octavia E. Butler, *Parable of the Sower* 107 (1993).
2. Steve Lohr, *The Great Unplugged Masses Confront the Future*, N.Y. Times, Apr. 21, 1996, § 4 at 1 (quoting Erik Barnouw, Professor Emeritus at Columbia University and media historian).
3. *Telecommute America: New National Survey Reports Sharp Rise in Telecommuting*, M2 Presswire, July 3, 1997, available in 1997 WL 11937925.
4. Studies have identified a significant economic multiplier effect that occurs as a result of a nation possessing an efficient telecommunications infrastructure. Martyn Warwick, *Rural Communications: Wishful Thinking Versus Reality*, *Comm. Int'l*, July, 1993, at 44, available in LEXIS, News Library, Cmintl File.
5. Many retail firms are moving a portion of their consumer marketing and sales transactions on-line as the number of potential consumers on the Internet and on-line services has grown rapidly. See Hollee Actman, *Net Results: Sporting Goods Industry Links Up with the Internet*, *Sporting Goods Bus.*, June 1, 1995, at 36, available in 1995 WL 12557391; John M. Moran, *More National Retailers Weave Web Sites Into Sales Strategy*, *Hartford Courant*, Nov. 28, 1996, at E1; *Prodigy to Launch First Personalized Virtual Mall with Secure Transactions on the Internet*, *Edge Work-Group Computing Rep.*, Dec. 4, 1995, available in 1995 WL 13722672. Business-to-business transactions are rising as well. See T.C. Doyle, *It's No Longer Too Early to Get In*, *VARBusiness*, May 1, 1995, at 54, available in 1995 WL 8275161. The federal government is also planning to conduct three-quarters of all practicable transactions electronically by the year 2000. See Christopher Yukins, *Managing Electronic Commerce on the Federal Acquisition Computer Network (FACNET)*, *Nat'l Cont. Mgmt. J.*, 35, 35 (1996), available in LEXIS, Busfin Library, Abi File.
6. Researchers have documented impressive learning gains achieved through the use of interactive video and computer-based instruction. In some cases, such instruction has been found to be 30% more effective than more traditional instructional formats. *Hearing Before the Subcomm. on Labor, Health and Human Services, Education and Related Agencies, of the Senate Comm. on Appropriations*, 103rd Cong. (1995), available in 1995 WL 221193 (prepared testimony of Madeline Kunin, Deputy Secretary of Education). Other education officials have acknowledged the importance of technology to education. See *Hearings Before the Subcomm. on Science, Technology, and Space of the Senate Comm. on Commerce, Science, and Transportation*, 104th Cong. (1996), available in 1996 WL 10162798 (prepared testimony of Dr. Linda G. Roberts, Director, Office of Educational Technology, U.S. Department of Education); *Council of Chief State School Officers Releases Recommendations for the National Education Summit*, PR

Newswire, Mar. 20, 1996, *available in* LEXIS, Market Library, Prompt File.

7. Mary Gardiner Jones, *Telemedicine and the National Information Infrastructure: Are the Realities of Health Care Being Ignored?* (1997) (unpublished paper presented at the American Medical Informatics Association Spring Congress) (on file with author). Telemedicine is the use of technology to provide health care over distance. Some current applications include the 911 system, "telesurgery," and the monitoring of patients at home. Robert Bellinger, *Report Proposes Rx for Telemedicine*, *Elec. Eng'g Times*, Nov. 11, 1996, at 117; *see also Bell Atlantic Helps Major Medical Group Establish First Teleradiology Network to Use PCs and Desktop Video*, PR Newswire, Nov. 16, 1995, *available in* Westlaw, Prwire; Robert B. Cohen, *The Economic Impact of Information Technology*, *Bus. Econ.*, Oct. 1995, at 21; *Just What the Doctor Ordered; NYNEX Teams Up with Healthcare Industry to Improve Patient Care*, *Business Wire*, July 20, 1995, *available in* Westlaw, Buswire; Mark Rockwell, *Networked M.D.s Share X-Rays, MRIs*, *Comm. Wk.*, Nov. 27, 1995, at 26; David Rohde, *ISDN and ProShare Zap X-Ray Images to Doctors*, *Network World*, Nov. 27, 1995, at 18, *available in* LEXIS, News Library, NWW File; Margaret Ryan, *'Distance Health Care' is Latest Medicine*, *Elec. Eng'g Times*, Apr. 29, 1996, at 55; Michael Unger, *Digital Doctors: Physicians on LI are Practicing Telemedicine, A New High-Tech Way in Treating Patients*, *Newsday*, Jan. 29, 1996, at C1. Mary Gardiner Jones has been at the forefront of efforts to regionalize telemedicine and create community-centered networks for health information and services. Cailin Brown, *High-Tech Access May Aid Elderly*, *Times Union (Albany, N.Y.)*, Oct. 3, 1995, at B4.

8. Proponents say that linked computers have the ability to profoundly affect everything from commerce to democracy, dramatically changing society. Dwight Silverman, *No Universal Agreement on the 'Net: Debate on Need for Access Spirited*, *Hous. Chron.*, July 5, 1996, at 1.

9. Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (codified in scattered sections 47 U.S.C.A. (West Supp. 1997)).

10. Although reductions in cable and telephone service rates for consumers were promised, they have not yet materialized. Rory J. O'Connor, *Government Won't Make President's Vision a Reality*, *Augusta Chron. (Ga.)*, Feb. 8, 1997, at B8.

11. Section 254(j) provides that "Nothing in this section shall affect the collection, distribution, or administration of the Lifeline Assistance Program provided for by the Commission under regulations set forth in section 69.117 of title 47, Code of Federal Regulations, and other related sections of such title." Telecommunications Act of 1996, sec. 101(a), § 254(j), 47 U.S.C.A. § 254(j) (West Supp. 1997). The Commission has implemented Congress's directive. *See* Federal-State Joint Bd. on Universal Serv., *Report and Order*, 7 Comm. Reg. (P & F) 109 (1997) [hereinafter *Universal Serv. Report and Order*].

12. Beth Frerking, *Computer Dreams: Educators Want to Give All Students Access to Technology, But Schools Often Lack Funds and Necessary Equipment*, *Plain Dealer (Cleveland)*, Feb. 26, 1996, at 5D; Michael N. Milone, Jr. & Judy Salpeter, *Technology and Equity Issues: Assuring Fair Access to All*, *Tech. & Learning*, Jan. 1, 1996, at 38, *available in* 1996 WL 9329322; Robert O'Harrow, Jr., *Computer Access Found to Vary Widely in Fairfax Schools*, *Wash. Post*, May 18, 1997, at B1.

13. A recent study determining the correlation among obstacles to medical care, lack of a regular medical provider, and delays in seeking medical care for patients at an urban public hospital, disclosed that 20% of respondents cited a lack of phone service. Kimberly J. Rask, et al., *Obstacles Predicting Lack of A Regular Provider and Delays in Seeking Care for Patients at an Urban Public Hospital*, *JAMA* 1931 (1994). Fear of physical harm at the neighborhood payphone is so extensive that people who need medical attention will avoid the phone and hope their condition gets better. Bill Hendrick, *Coverage is No Panacea for the Poor*, *Atlanta J. & Const.*, June 22, 1994, at A7. Because there are so few public phones in some New York City neighborhoods, residents cannot alert the fire department to the existence of a fire. Alan Finder, *Phone Scarcity Complicates Fire Alarm Plan*, *N.Y. Times*, Feb. 11, 1996, at 49.

14. *Telecommute America: New National Survey Reports Sharp Rise in Telecommuting*, *supra* note 3 ("More than 11 million people reported working as telecommuters in 1997, compared to eight million in 1995."); *see also Wiring the*

Countryside—Will it Bring in New Jobs? Trends in Telecommuting in Rural Areas, Telecommuting Rev.: The Gordon Rep., Oct. 1, 1991, at 5, available in LEXIS News Library, Asapii File.

15. Amy Cortese, *A Census in Cyberspace*, Bus. Wk., May 5, 1997, at 84.

16. Many are concerned that large segments of the population—including low-income households unable to afford hardware or the cost of Internet connection, rural residents without local access to a network, and people with disabilities who are unable to use traditional computer equipment—will become "technologically disenfranchised." Silverman, *supra* note 8, at 1; see also Jube Shiver, Jr., *Busting Barriers to Cyberspace*, L.A. Times, Mar. 29, 1995, at A1; Peter Y. Hong, *Losing the Cyberspace Race*, L.A. Times, Feb. 26, 1995, at 12; *Personal Technology: Info Highway May Bypass Poor*, Atlanta J. & Const., June 12, 1994, at H10; Steve Lohr, *Data Highway Ignoring Poor, Study Charges*, N.Y. Times, May 24, 1994, at A1; Manuel Mendoza, *Information Superhighway Bypasses Poor Neighborhoods*, Times Union (Albany, N.Y.), July 24, 1994, at H2; Ed Rose, *The Haves and the Have-Nots: Access to Information Technologies*, Comm. World, Nov. 1994, at 22, available in 1994 WL 13211289.

17. See David Butler, *All-Digital Phone Network Makes Its Way Across U.S.*, Columbus Dispatch, Feb. 10, 1996, at H7; *NYNEX Accepts Plan to Freeze Phone Rates*, Buffalo News, July 4, 1995, at B7.

18. Farhan Haq, *Minorities Look for Access on Information Highway*, Inter Press Service, Jan. 4, 1995, available in 1995 WL 2257708; Laura B. Randolph, *Blacks in the Fast Lane of the Information Superhighway*, Ebony, Jan. 1995, at 98B; *Bell Companies Decry Consumer Groups' Claims of Discrimination*, Telco Bus. Rep., Aug. 1, 1994, available in 1994 WL 2468166; *Groups Petition FCC for Prohibition of 'Electronic Redlining' by RHCs*, Advanced Intelligent Network News, June 1, 1994, available in LEXIS, Market Library, Iacnews File. Minority communities' concerns about being redlined electronically have historic precedent in the recent absence of cable service from 40% of Brooklyn, New York and 45% of the Bronx, New York. See *City Council Tunes in on Lagging Cable Television Services*, UPI, Feb. 2, 1993, available in LEXIS, News Library, Upistat File.

19. See James Carlini, *Universal Service—Or Regulated 'Telewelfare'?*, Network World, June 19, 1995, at 51, available in LEXIS, News Library, Nww File; Peter Costantini, *Third Wave Hits Third World*, Inter Press Service, Oct. 9, 1995, available in LEXIS, Market Library, Iacnews File; Gwen Moore & Richard Polanco, *Avoiding a New Era of Redlining*, S.F. Chron., July 3, 1995, at A17.

20. The now defunct Office of Technology Assessment determined that inner cities, built because people needed to work in close proximity to each other, are in decline as business and the requisite communications infrastructure move to suburban areas. See Alex Marshall, *Will Information Highway Hasten the End of "The City"*, Virginian Pilot (Norfolk), Jan. 7, 1995, at D1; Timothy J. Mullaney, *Does Information Revolution Pose Threat to Nation's Center Cities?*, Balt. Sun, Oct. 19, 1995, at 1E; see also Bill Pietrucha, *FCC Urged to Challenge Industry on Universal Access*, Newsbytes, Dec. 23, 1996, available in 1996 WL 15118505; Bill Pietrucha, *Coalition Forms to Support Universal Telecom Service*, Newsbytes, Oct. 24, 1996, available in 1996 WL 12026264.

21. According to a study conducted by the U.S. Department of Commerce's National Telecommunications and Information Administration (NTIA), 19% of both rural and urban residents with yearly incomes under \$10,000 do not have a phone. Silverman, *supra* note 8.

22. For instance, at current market prices, a computer is the most expensive consumer purchase after a house and a car. Laura Freeman, *Job Creation and the Emerging Home Computer Market*, Monthly Lab. Rev., Aug. 1996, at 46.

Roughly onethird of American households have personal computers But analysts say that gaining ground from now on will be more difficult because so many affluent households already have personal computers and the lessaffluent ones resist shelling out \$2,000 or more for a computer.

The Dataquest report, based on a survey of 10,000 households, estimated that twothirds of all the personal computers sold to households are bought by those with incomes of \$40,000 or more. Yet census data show that only about one in three households have incomes of \$40,000 or more.

Unless prices drop drastically, some experts predict, the personal computer will be unlikely to find its way into more than 40 percent or 45 percent of American households.

Lohr, *supra* note 2.

23. Edwin L. Artzt, Speech on the Future of TV Advertising Agencies, in *P&G's Artzt: TV Advertising in Danger; Remedy is to Embrace Technology and Return to Program Ownership*, Advertising Age, May 23, 1994, at 24.

24. In telecommunications terminology, the spinal cord can be described as "a telephone trunk line with 31 pairs of individual lines extending from it to transmit messages from the brain to the rest of the body and to send sensory signals from organs and tissues along the lines back to the brain." Jane Brody, *Paralysis May Not Be Incurable; Studies Suggest Some 'Dead' Nerve Cells Can Revive*, Star Tribune (Minneapolis-St. Paul), Sept. 4, 1994, at 3E.

25. Alzheimer's is a disease in which brain cells stop releasing chemicals that allow the cells to receive and transmit messages. Without communication, the cells deteriorate and die. Parts of the brain involving memory, speech, and personality are affected, while parts controlling functions such as heartbeat, breathing, and sexual activity remain intact. Zaven Khachaturian & Alicia Brooks, *The Long Goodbyes*, People Mag., Feb. 27, 1995, at 40. In other words, Alzheimer's is "a neural disaster in which cells in the cerebral cortex—the part of the brain involved in memory and cognition—mysteriously die off, taking with them a person's ability to think, reason and recall." Rick Weiss, *Diseases That Attack the Brain: Scientists Try a Novel Approach to Save Brain Cells*, Wash. Post, Apr. 4, 1995, at Z10.

26. Amyotrophic Lateral Sclerosis is the medical term for Lou Gehrig's disease. Early manifestations are often weakness and clumsiness in the hands. As the disease progresses, most muscles are not only weakened, but exhibit twitches and decrease in size and stiffness. Eventually the tongue and muscles controlling swallowing and respiration are involved. ALS is invariably fatal—often ending in respiratory failure two to five years after initial symptoms. Dr. Simeon Margolis, *Ripken Streak Brings a Look at Illness That Felled Gehrig*, Balt. Sun, Sept. 26, 1995, at 5E. "ALS, occurs when motor neurons—the nerve cells that run from the brain to the limbs—spontaneously degenerate, paralyzing victims and ultimately robbing them of the strength to breathe." Weiss, *supra* note 25.

27. See Margolis, *supra* note 26; Weiss, *supra* note 25.

28. Khachaturian & Brooks, *supra* note 25; Weiss, *supra* note 25.

29. Cf. McLean Greaves, *Time to Rush the Net*, Essence, June, 1997, at 130 (discussing the current lack of skills in Black communities, and the NTIA's mission to bring the Black community on-line); Secretary Riley, *Others Launch NetDay2000, Initiate Action to Connect America's Classrooms to the Internet*, PR Newswire, Feb. 7, 1997, available in LEXIS, News Library, Prnws File (quoting Rep. Sheila Jackson Lee of Texas: "As a congresswoman from an inner-city district, I believe access to technology is as key for the poor as it is for those more fortunate."); see also, Mullaney, *supra* note 20.

30. "[E]lectronic commerce combines EDI with the buying and selling that takes place via e-mail and among computers connected to the Internet and commercial subscription services, including CompuServe, America Online and Prodigy." Doyle, *supra* note 5. By 1995, America Online had surpassed the 2 million subscriber mark, CompuServe stood at 1.82 million in the U.S. (and claimed 2.7 million worldwide), and Prodigy boasted at least 1.5 million subscribers. Actman, *supra* note 5. And in 1996, more than 10 million Americans had access to the Internet through on-line services. Millions more obtained access through direct Net connections at work or at home. Graeme Browning, *Updating Electronic Democracy*, Database, June 16, 1997, at 47, available in 1997 WL 9718189.

31. Major retail and catalog companies are flocking to the Web and providing sites where customers can browse inventory and make on-line purchases. L.L. Bean, Eddie Bauer, Land's End, The Bombay Company, and Wal-Mart are some of the participants who are "bringing with them name-recognition, established customer relationships, distribution networks and advertising budgets." Moran, *supra* note 5.

32. "Estimates of consumer spending on-line this year [1995] range from a low of \$250 million to as high as \$1 billion. While those numbers may seem impressive, they are in fact but a tiny sliver of overall retail sales Most estimates put the value of on-line consumer spending at upwards of \$6 billion by the year 2000." *Id.*

33. According to the 1995 Consumer On-line Services Report, approximately 30 million people are already communicating on the Internet. Although no one is quite sure exactly who these surfers are, recent studies indicate that the average Internet browser is an entertainment-oriented, educated male between 18 and 34 years old, with an average household income of \$85,000. Actman, *supra* note 5.

34. "[T]he market for electronic commerce products and services totaled \$4.8 billion in 1994. . . . [And is] anticipated to grow to roughly \$13.7 billion by 1998. EDI, meantime, is expected to grow to \$1.2 billion from \$500 million during that same period" Doyle, *supra* note 5. Others predict that Internet consumer purchases alone will grow to as much as \$4 billion by the year 2000. Jim Ostroff, *AAMA Web Page Still Awaits 1st Vendor*, *Women's Wear Daily*, May 28, 1996, at 3, available in 1996 WL 8527465.

35. The Federal Acquisition Streamlining Act (FASA) of 1994, Pub. L. No. 103-355, 108 Stat. 3243, requires the government to implement a governmentwide system for electronic commerce—the Federal Acquisition Computer Network (FACNET)—by the year 2000. Although initially used for small acquisitions, this electronic commerce/electronic data interchange (EC/EDI) system will eventually be used for all practicable federal procurements. By the year 2000 the government plans to use computers to conduct 75% of all practicable transactions. Yukins, *supra* note 5.

36. See Doyle, *supra* note 5; Moran, *supra* note 5.

37. Ruth Thompson & Nancy Hunt-Coffey, *If We Build It, Will It Pay?*, *Rural Telecomm.*, Mar./Apr. 1996, at 44-51, available in LEXIS, Busfin Library, ABI File.

38. David Lazarus, *Manufacturers Moving, Shippers Shipping Out: Information-Based Companies, Services Rising Industry Stars in the Bay Area*, *S.F. Examiner*, Feb. 16, 1997, at W4; Dick Netzer, *The Outlook for the Metropolitan Area*, *Fed. Reserve Bank N.Y. Q. Rev.*, Feb. 1, 1997, at 93, available in 1997 WL 10710103; Joel Kotin, *Still the Best Places to Do Business: Think Cities Are Death to Entrepreneurial Commerce? Then Come See New York or L.A.*, *Bus., Inc.*, July, 1996, at 42.

39. Tom Gibb, *Poor Schools, Poor Schooling? Rural, Pa. Districts Press Suit Over Lack of Equal Education*, *Pitt. Post-Gazette*, Dec. 8, 1996, at A1.

40. John Gittelsohn, *Tale of Two Schools, Just Miles Apart*, *Orange County Reg.*, Apr. 23, 1997, at A6; Katherine Kapos & Samuel A. Autman, *Reading, 'Riting and ROMs: Computers Expand the Three R's, but Utah Schools Still Must Close the Cybergap Among the Classes*, *Salt Lake Trib.*, Jan. 28, 1996, at A1; O'Harrow, *supra* note 12; William Raspberry, *Tale of Two Schools Is Text for a Sermon on Class*, *Sacramento Bee*, Mar. 6, 1997, at B7.

41. See Peter Applebome, *An Education Conference with a Corporate Agenda*, *N.Y. Times*, Mar. 28, 1996, at 10; Jerry Markon, *Clinton: Let's Raise Academic Standards*, *Newsday*, Mar. 28, 1996, at A8.

42. Rene Sanchez, *Poor, Minority Students Lack Access to Computers: Report Also Suggests That Few Teachers Are Trained to Use PCs as Learning Tools*, *Wash. Post*, May 15, 1997, at A13; Frerking, *supra* note 12.

43. Milone & Salpeter, *supra* note 12.

44. *Id.*

45. See Allen S. Hammond, IV, *Diversity and Equal Protection in the Marketplace: The Metro Case in Context*, 44 *Ark. L. Rev.* 1063 (1992); Allen S. Hammond, IV, *Now You See It, Now You Don't: Minority Ownership in an "Unregulated" Video Marketplace*, 32 *Cath. U. L. Rev.* 633, 639-45 (1983); Kurt A. Wimmer, *Deregulation and Market Failure in Minority Programming: The Socioeconomic Dimensions of Broadcast Reform*, 8 *Comm/Ent L. J.*

329, 334-88 (1986).

46. *See* Wimmer, *supra* note 46.

47. 47 C.F.R. § 73.2080 (1996) requires that a broadcast licensee refrain from engaging in employment discrimination and establish and maintain a positive and continuing effort to recruit, employ, and promote qualified women and minorities. The Commission evaluates a licensee's equal employment performance by analyzing the licensee's effort to recruit, employ, and promote qualified minorities and women. The Commission also examines and weighs any evidence of discrimination by the licensee. *See id.* § 73.2080(b)-(c). Where the Commission's analysis of a licensee's renewal application indicates an absence of adequate EEO efforts, the Commission may impose a variety of sanctions or remedies. These may include reporting conditions, renewal for less than a full term, forfeiture, or a combination of the above. The Commission may also designate the renewal application for hearing. Amendment of Part 73 of the Comm'n's Rules Concerning Equal Employment Opportunity in the Brdcast. Radio and TV Serv., *Report and Order*, 2 FCC Rcd. 3967, 63 Rad. Reg. 2d (P & F) 220 (1987), *clarified by Memorandum Opinion and Order*, 4 FCC Rcd. 1715, 65 Rad. Reg. 2d (P & F) 1697 (1989); *see also* Sun Mountain Brdcast., Inc., *Memorandum Opinion and Order and Notice of Apparent Liability*, 9 FCC Rcd. 2124, paras. 7-8 (1994); NAACP v. FCC, 854 F.2d 501, 506 (D.C. Cir. 1988); Bilingual Bicultural Coalition v. FCC, 595 F.2d 621 (D.C. Cir. 1978).

48. *See* Red Lion Brdcast. v. FCC, 395 U.S. 367 (1969); Brandywine-Main Line Radio, Inc., *Decision*, 24 F.C.C.2d 18, 19 Rad. Reg. 2d (P & F) 433 (1970), *reconsideration denied by Memorandum Opinion and Order*, 27 F.C.C.2d 565, 21 Rad. Reg. 2d (P & F) 22 (1971); Public Media Center v. FCC, 587 F.2d 1322 (D.C. Cir. 1978); Alan F. Neckritz, *Order*, 29 F.C.C.2d 807, 21 Rad. Reg. 2d (P & F) 1097 (1971), *aff'd on reconsideration by Memorandum Opinion and Order*, 37 F.C.C.2d 528, 25 Rad. Reg. 2d (P & F) 631 (1972), *aff'd sub nom.* Neckritz v. FCC, 502 F.2d 411 (D.C. Cir. 1974); Wilderness Soc'y, *Order*, 30 F.C.C.2d 643, 22 Rad. Reg. 2d (P & F) 407 (1971); *see also* The Handling of Pub. Issues Under the Fairness Doctrine and the Pub. Interest Standards of the Comm. Act, *Fairness Report*, 48 F.C.C.2d 1 (1974). The FCC has been petitioned and has ruled that a license should be denied due to the chronic and repeated refusal to present diverse, minority-oriented programming. *See* Alabama Educ. TV Comm'n, *Decision*, 50 F.C.C.2d 461, 32 Rad. Reg. 2d (P & F) 539 (1975); Leflore Brdcast. Co., *Memorandum Opinion and Order*, 46 F.C.C.2d 980, 24 Rad. Reg. 2d (P & F) 953 (1974); Lamar Brdcast. Co., 38 F.C.C. 1143, 5 Rad. Reg. 205 (1965), *rev'd sub nom.* Office of Comm. of the United Church of Christ v. FCC, 425 F.2d 543 (D.C. Cir. 1969).

49. Office of Comm. of the United Church of Christ v. FCC, 359 F.2d 99 (D.C. Cir. 1966).

50. Jenny Hontz, *Diversity in the Media: For Minorities, Future in Media Looks Bleak*, Elec. Media, Aug. 21, 1995, at 16; *Patrick Partially Dissents: FCC Adopts Cable EEO Rules Focusing on Efforts, Not Numbers*, Comm. Daily, Sept. 19, 1985, at 4.

51. Adarand Constructors, Inc. v. Pena, 515 U.S. 200, 225-39, (1995) (overruling Metro Brdcast., Inc. v. FCC, 497 U.S. 547 (1990)).

52. *City Council Tunes In on Lagging Cable Television Services*, UPI, Feb. 2, 1993, *available in* LEXIS, News Library, Upi File.

53. *Id.*

54. Joan Biskupic, *New Georgia Voting Map Upheld by Supreme Court: 5-4 Ruling Calls 1 Majority-Black District Enough*, Wash. Post, June 20, 1997, at A1.

55. *Id.*

56. For further discussion on the exercise of electronic political power, see *infra*, Part II.E.2.d.

57. John Disconsiglio, *Are We Turning Our Backs on the Poor?*, Scholastic Update, Feb. 21, 1997, at 2, *available in* 1997 WL 9585603.

58.

Some fundamental facts about welfare need to be grasped. The perception exists—widely—of hordes of welfare mothers sitting around with hordes of children, most of them conceived with the intent of getting a higher welfare payment. Such cases can be found, of course, but the far more typical case is much different [T]he numbers don't indicate that a large number of welfare mothers bear more children to boost their benefits Erroneous perceptions about welfare and welfare recipients abound . . . across the nation. Nationally, some 42.5 percent of welfare families include one child, and another 30.2 percent include two children. The stereotypical huge welfare family simply isn't the norm. Nor are the welfare rolls filled primarily with inner-city minorities. Nationally, non-Hispanic whites make up 48 percent of welfare recipients, African-Americans 27 percent and Hispanics 22 percent

. . . .

The point here is not to overdose on statistics, but rather to keep the reform debate grounded in reality. . . . Reform is important and necessary, but it must be based on accurate information about the system and the people in it.

Stick to Reality: Perceptions Hamper Reform Effort, Montgomery Advertiser, Sept. 25, 1996, at A16.

59. For instance, as one journalist has observed, even presidential candidates with the complicity of the press:

[D]eal with race indirectly through hedged statements about, say, affirmative action, or through code words about their policies on such issues as crime, welfare, or immigration [For example,] when candidates talk about welfare reform—far-reaching legislation that Clinton, after agonizing, decided to sign—race is implicit. Yet political reporters seldom call on candidates to address the law's racial repercussions. For example, tougher work rules have a disproportionate impact on [B]lacks and Latinos, many in central cities long ago stripped of industrial jobs. Likewise, if reform hurls one million children into poverty, as critics allege, racial disparity looms. While one in eight American children receives welfare, roughly 60 percent of the recipients are [B]lack or Latino. Too few stories connect those dots.

Sid Gissler, *Who Was Burning the Black Churches? The Coverage of Church Burnings Focused on Race; the Coverage of the Campaign Ignores It; Where Is Race in the Race?*, Colum. Journalism Rev., Sept./Oct., 1996, at 34, available in LEXIS, News Library, Curnws File.

60. Communications Act of 1934, ch. 652, § 151, 48 Stat. 1064, 1064 (codified as amended at 47 U.S.C. § 151 (1994)).

61. Jerry Weikle, *Ready for Prime Time: Universal Service Meets Universal Competition*, Rural Telecomm., Mar./Apr., 1995, at 50, available in LEXIS, Busfin Library, ABI File.

62. Richard Taylor, *Leveling the Field in Telecommunications*, St. Louis Post-Dispatch, Feb. 21, 1995, at B11.

63. "In July 1994, the national telephone penetration rate was almost 94% of U.S. households. Although this percentage gives the appearance of universal service coverage, in fact there are 21 states at or below the average penetration rate. There are still 6.2 million homes without telephone service." Weikle, *supra* note 61.

64. Barbara Ruben, *Access Denied: Inequality in Access to Information Networks*, Env'tl. Action Mag., Sept. 22, 1995, at 18, available in LEXIS, News Library, Curnws File. Fifty percent of homes headed by single women with children are without direct access to telephone service, and 21% of those living in public housing lack access. *Id.* In Chicago's lowest income areas, around 20% of homes are without phones. Mary A. Johnson & Fran Spielman, *Daley: Ban Pay Phones from Private Property*, Chi. Sun-Times, July 13, 1994, at 4.

65. A survey by *The New York Times*, covering more than 450 public telephones in 15 New York City neighborhoods from January 23 to February 2, 1996 found that nearly one-third were broken. Finder, *supra* note 13. Between 1992 and 1994, about 2800 pay phones were removed in Chicago. Johnson & Spielman, *supra* note 64.

66. Johnson & Spielman, *supra* note 64.

67. Michael Moss, *Calling Sprees: Crooks Hack into Phone Lines, Call Around World*, Newsday, Mar. 19, 1995, at A5.

68. Robert Davis, *New Stab at Lifeline of Dealers: Pay Phones Face 2nd Daley Attack*, Chi. Trib., July 13, 1994, at 1.

69. In a recently published study of obstacles which predict a lack of a regular medical provider and delays in seeking medical care for patients at an urban public hospital, 20% of respondents cited a lack of phone service. Rask, *supra* note 13. Many people in public housing do not want to go to a pay phone on the corner because it is simply too dangerous. Instead, they hope their medical problem gets better, or goes away. Hendrick, *supra* note 13. Because there is an insufficient number of phones on the street in some New York City neighborhoods residents have no way to let the fire department know if there is a fire. Finder, *supra* note 13.

70. Rick Mendosa, *Hispanics Increase Access to Computers*, New America News Service, May 5, 1997, available in LEXIS, News Library, Curnws File.

71. *Id.*

72. Earnest Holsendolph, *Blacks Step Up Their Computer Buying Increasingly*, Atlanta J. & Const., Jan. 5, 1997, at F3.

73. *CMP's NetGuide Focuses on Issues of Internet Content and Access in African-American Communities; February Issue of NetGuide Magazine Features a Report on 'The Quest for a More Diverse On-line World'*, PR Newswire, Jan. 27, 1997, available in LEXIS, News Library, Curnws File [hereinafter *CMP's NetGuide*].

74. Holsendolph, *supra* note 72; Anjetta McQueen, *Winning the Fight Against 'Electronic Apartheid'; Programs Give Low- and Middle-Income Ohioans a Chance to Log On to the Computer Revolution*, Plain Dealer (Cleveland), Jan. 21, 1996, at A1.

75. For families with income of \$75,000 per year and up, 76.4% of Black families are computer owners, versus 74.6% of White families. Among families with annual incomes of \$15,000 and less, the ownership percentages for Black and White families are 12% and 10.7%, respectively. Holsendolph, *supra* note 72; As this information indicates, middle- and upper-class Black families are beginning to spend more on technology than their White counterparts. See Shelia M. Poole, *Survey: Black Buyers Current with Technology*, Atlanta J. & Const., Sept. 10, 1997, at 11C; John Schmeltzer, *'Mainstream' Spending Up by Minorities*, Chi. Trib., Aug. 28, 1996, at B1.

76. Internet users are 85% White, while Blacks and Hispanics each account for 6% of the Net population. Only 18% of Web users make \$25,000 or less, while 42% of Internet and Web users have household incomes exceeding \$50,000 per year. The lower-income category probably includes Web use by students. As a result, it may even overstate Net participation by the country's poorest households. Amy Cortese, *A Census in Cyberspace*, Bus. Wk., May 5, 1997, at 85. For an in depth analysis of Internet usage and an assessment of the reliability of recent studies on such usage, see Donna L. Hoffman, et al., *Internet and Web Use in the U.S.; World Wide Web*, Comm. of the ACM, Dec. 1, 1996, at 36, available in LEXIS, News Library, Curnws File; see also Kate McKee, *For African-Americans/Community On-Line*, News & Rec. (Greensboro, N.C.), May 20, 1996, at D1; Thomas E. Miller, *Segmenting the Internet*, Am. Demographics, July, 1996, at 48. Although there remains a lack of online activity among low-income Blacks, recent increases in the purchase of hardware by middle- and upper-income Blacks has fostered an increase in their on-line activity. Michelle Singletary, *Revving Up Their Computer Power; Now Black Americans are Outpacing Whites on Online Services*, Wash. Post., Sept. 29, 1997, at F5.

77. Kapos & Autman, *supra* note 40; Milone & Salpeter, *supra* note 12.

78. Freeman, *supra* note 22.

79. Samuel M. Ehrenhalt, *Economic and Demographic Change: The Case of New York City*, Monthly Lab. Rev., Feb. 1, 1993, at 40; Rochelle L. Stanfield, *Strains in the Family*, Nat'l J., Sept. 28, 1991, at 2316.

80. Thompson & Hunt-Coffey, *supra* note 37.

81. *Pennsylvania Industry Report Says Telcos Not Selling Advantages of New Services*, Fiber Optics News, Jan. 27, 1992, available in LEXIS, Market Library, Iacnws File; Steven Titch & Richard Karpinski, *Telecommunications Services Special Report: Approaching the 21st Century, the Urban Challenge*, Telephony, Mar. 18, 1991, at 88; Dinah Zeiger, *Rural Colorado Seeks Tech Linkup*, Denv. Post, July 6, 1993, at C1.

82. For instance, the Community Reinvestment Act (CRA), a 1977 federal law, mandates that banks provide credit to all segments of their communities. 12 U.S.C. § 2901-07 (1994).

83. Paul D'Ambrosio, *No Check or Balances*, Asbury Park Press (N.J.), Sept. 10, 1995, at C1. As banking moves toward an electronic future, leaders of technology poor communities are concerned:

It's only in the last seven or eight years that the Community Reinvestment Act has had a noticeable impact on bank lending to low-income neighborhoods . . . this has typically been done through physical presence—the brick-and-mortar branches that consultants and Wall Street analysts say banks must unload if they want to control their costs and remain competitive

. . . .

Right now, it doesn't look like there are any community reinvestment regulations related to electronic banking that will substantially affect the industry. But Washington has begun to focus on the issue, and legislators and officials with the key banking agencies have raised some of the same concerns that community activists have voiced.

Joseph Radigan, *Will Electronic Banking Ignore the Poor?*, U.S. Banker, Dec. 1, 1996, at 58, available in 1996 WL 8735689.

84. D'Ambrosio, *supra* note 83.

85. Inner city communities are underserved by both bank branches and ATMs. *Id.*

86. Inner city Black and Hispanic households have the fewest personal computers of any racial group. Radigan, *supra* note 83.

87. *Id.*

88. Public assistance programs include Aid to Families with Dependent Children; Emergency Aid to the Elderly, Disabled and Children; and food stamps. Nationally, Blacks comprise 37% and Hispanics comprise 18% of welfare recipients. Disconsiglio, *supra* note 57.

89. Basic banking services are not readily accessible to many at the lowest end of the economic spectrum. Banks will not cash a public assistance check unless the recipient has an account at the bank or the government agency uses that bank to issue its checks. D'Ambrosio, *supra* note 83.

90. *Id.*

91. Many are finding that equitable access to credit and banking services is a crucial civil rights issue of the 1990s and 2000s, just as voting and housing rights were in the 1960s. Without the assurance that all individuals and communities have the opportunity to grow economically, the gulf between haves and have-nots will widen. *See, e.g., id.*

92. U.S. Advisory Council on the Nat'l Info. Infrastructure, Kickstart Initiative: Connecting America's Communities to the Information Superhighway 11 (1996).

93. See *CMP's NetGuide*, *supra* note 73.

94. *Id.*

95. Mendosa, *supra* note 70; Holsendolph, *supra* note 72.

96. At least half of the fifty states have been involved in litigation over the constitutionality of their school financing schemes. See *School Finance: Three States' Experience With Equity in School Funding*, (Letter Report, GAO/HEHS 96-39, Dec. 19, 1995); Colin D. Campbell & William A. Fischel, *Preferences for School Finance Systems: Voters vs. Judges*, *Nat'l Tax J.*, March, 1996, at 1; Richard Briffault, *The School Finance Cases*, *N.Y. L.J.*, Aug. 10, 1995, at 3.

97. Mitchell Kapor, et al., *We Need a National Public Network*, *Whole Earth Rev.*, Mar. 22, 1992, at 72; Howard Rheingold, *Electronic Democracy: The Great Equalizer*, *Whole Earth Rev.*, June 22, 1991, at 4.

98. Browning, *supra* note 30. It is estimated that in 1996, well over 10 million Americans had access to the Internet through commercial on-line services. Several million more used e-mail and surfed the Web through connections at work or home. Both Clinton and Dole actively solicited votes through Web sites, and they were joined by hundreds of other candidates nationwide. Political consultants agree that: "the Internet played a role at all levels of the [political election] campaigns last fall. Some candidates attribute their success at the polls to the impact of their web sites, and a few hardy political consultants even predict that cyberspace will be the prime political battleground in the year 2000." *Id.*

99. Hong, *supra* note 16.

100. Rheingold, *supra* note 97.

101. It is undisputed that much of what we know about ourselves and others is acquired through electronic sources of communication. To the extent that such information serves as a basis for determining how we define ourselves as individuals, groups, and communities; who is valuable in our society; and our very notions of individual self-worth, equality, and equity are subject to change as well.

102. *Communications Law Reform, 1995: Hearings on H.R. 1555 Before the Subcomm. On Telecomm. and Finance of the House of Representatives Comm. on Commerce*, 104th Cong. 230 (1995) (prepared statement of Larry Irving, Assistant Secretary for Communications and Information, U.S. Dep't of Commerce); *Antitrust Issues in Telecommunications Legislation, 1995: Hearings on S. 652 Before the Subcomm. on Antitrust, Monopolies, and Business Rights of the Senate Comm. on the Judiciary*, 104th Cong. 36 (1996) (prepared statement of Larry Irving, Assistant Secretary for Communications and Information, U.S. Dep't of Commerce).

103. Christine Arpe Gang, *Reduced Fees Available to Needy*, *Com. Appeal* (Memphis), Aug. 2, 1991, at C3; *Telecommunications Act of 1996*, sec. 101(a), § 254(j), 47 U.S.C.A. § 254(j) (West Supp. 1997).

104. The limited, evolutionary focus of the universal service policy stands in stark contrast to the congressional decision to liberalize the broadcast multiple ownership rules. The Act increases the number of broadcast stations any one person or company can own to such a great extent that small broadcasters are being driven out of the industry by the new economics of multiple owner competition. The virtual repeal of the broadcast multiple ownership rules means very few Americans can afford to own a radio or television station. Meanwhile, government auction of the spectrum has resulted in the sale of vast public resources to private interests—a sale in which most Americans have played virtually no part. As a result, Americans are left even further behind as the courts uphold the private speech and editorial rights of media owners often to the exclusion of the public.

105. *Telecom Act Is Year Old: Many Are Willing to Wait for Results*, *Comm. Daily*, Feb. 5, 1997, at 1.

106. *Id.*

107. *Consumer Organization Fires Shot in David and Goliath Battle*, *Business Wire*, Jan. 21, 1997, available in WL,

Allnewsplus.

108. *Universal Serv. Report and Order*, 7 Comm. Reg. (P & F) 109, paras. 29-34 (1997).

109. Federal-State Joint Bd. on Universal Serv., *Notice of Proposed Rulemaking and Order Establishing Joint Board*, 11 FCC Rcd. 18,092, para. 7 (1996).

110. See *Telephony*, Comm. Daily, June 27, 1997 (court of appeals panel to hold a lottery to decide which circuit will hear the appeal of the FCC's *Universal Service Report and Order*); *Telephony*, Comm. Daily, June 26, 1997 (announcing GTE's filing of an appeal of the FCC's *Universal Service Report and Order* because it allegedly "fails to ensure that quality services will be provided at affordable prices to customers in rural areas"); *Telephony*, Comm. Daily, June 20, 1997 (announcing SBC's suit alleging that the school and library discounts place an enormous \$2.25 billion burden on telephone customers to finance programs, training, equipment, and services by the Telecommunications Act of 1996); *Telephony*, Comm. Daily, June 19, 1997 (announcing Celpage's suit asking that paging companies not be required to contribute to the Universal Service Fund and alleging that such requirement constitutes an "illegal and discriminatory tax on the paging industry").

111. The fiscal year 1998 budget proposed by the U.S. Senate in S. 1022, includes the use of the 1998 universal service funds as a source of revenues to balance the national budget by fiscal year 2002. Meanwhile, a separate bill, S. 2015, proposes that universal service payments be delayed from 2002 to 2003 for some telephone companies. Some senators are concerned that if adopted, the proposals would severely undermine the deployment of advanced telecommunications services to schools, libraries, and hence, many American communities. *Appropriations Bill Tangled in Budget Fight*, Comm. Daily, July 28, 1997.

112. *Id.*

113. Telecommunications Act of 1996, sec. 101(a), § 254(j), 47 U.S.C.A. § 254(j) (West Supp. 1997).

In order to make telephone service available to all Americans, the federal government has mandated reduced fees for those who meet certain economic criteria. The program, Link Up America, offers telephone installation at reduced prices. Customers who want basic telephone service but who don't use their telephones a lot may save money by using one of several measured service options Life Line costs \$4.85 per month. Customers are charged 4 cents for the first minute of a call and 2 cents for each additional minute. The first \$1 worth of calls are included in the basic fee. Additional discounts are given for calls made at night Local Measured Service is \$8.50, with the first \$7.50 in calling time included in the fee. For additional calling time, 4 cents is charged for the first minute and 2 cents for each additional minute Message Rate Service costs \$6.10 per month with a 30-call allowance. Each additional call over the 30 costs 10 cents.

Gang, *supra* note 103.

114. *Competition in the Local Loop*, Telecom Persp., July 1996, at 73; see also *Hearing on Universal Service, 1997: Before the Subcomm. on Communications of the Senate Comm. on Commerce, Science, and Transportation*, 105th Cong. (1997) (statement of Jonathon B. Sallet, Chief Policy Counsel, MCI Communications Corp.).

115. Silverman, *supra* note 8.

116. *Id.*

117. Christopher Garbacz & Herbert G. Thompson, Jr., *Do Lifeline Programs Promote Universal Telephone Service for the Poor?*, Pub. Util. Fort., Mar. 15, 1997, at 30.

118. It is alleged that the penetration rate for the poor absent Lifeline programs would have been roughly 80% rather than 81%. *Id.*

119. *Id.*

120. Gang, *supra* note 103.

121. *Id.*

122. Andrew L. Shapiro, *Total Access: Universal Telecommunications Services*, *The Nation*, Jan. 6, 1997, at 5 ("In 1994, 4.4 million households received \$123 million worth of aid on their phone bills, and connection charges were partially paid for 840,000 households, at a cost of \$19 million.").

123. Telecommunications Act of 1996, sec. 104, § 151, 47 U.S.C.A. § 151 (West Supp. 1997) (emphasis added).

124. The idea that the Communications Act of 1934 required universal service has been labeled a "myth" propagated by AT&T. Actually, there were two myths AT&T extracted from the 1934 Act: universal service had a statutory basis in the 1934 Act, and widespread telephone penetration was dependant upon the maintenance of AT&T's monopoly and the ability to cross-subsidize. Milton Mueller, *Myth Made Law; Telecommunications Act of 1996*, *Comm. of the ACM*, Mar 1997, at 39, *available in* LEXIS, News Library, Cacm File. Others have seen universal service as a logical and fundamental purpose of the 1934 Act—an Act designed to assure basic telephone service, even to those in remote areas, as the country was emerging from economic disaster. Arielle Emmett, *Universal Service: the New Deal?*, *Am. Network*, March, 15, 1996, at 50, *available in* LEXIS, News Library, Curnws File; Patric Hedlund, *The FCC's Balancing Act*, *Digital Media*, April 8, 1996, *available in* News Library, Asapii File. For a concise look at the historical regulation of the telephone industry and AT&T, see Tracey V. Lenore, *30 Years: A Brief History of the Communications Industry*, *Telecomm.*, June 1997, at 24, *available in* LEXIS, Busfin Library, Abi File.

125. *Universal Serv. Report and Order*, 7 *Comm. Reg.* (P & F) 109, paras. 61-87 (1997).

126. Ted Hearn, *Ameritech: We Don't Redline*, *Multichannel News*, July 29, 1996, at 3; Ted Hearn, *Cable Accuses Bells of Targeting Only Wealthy*, *Multichannel News*, Apr. 17, 1995, at 18; John J. Oslund, *U.S. West's Long March*, *Star Trib. (Minneapolis-St. Paul)*, July 17, 1995, at 1D. As one telephone executive has stated: "To say that we are going to stay out of areas permanently is dishonest and ridiculous. But we had to start building our network someplace. And it is being built in areas where there are customers we believe will use and buy the service. This is a business." Rose, *supra* note 16 (quoting Jerry Brown of U.S. West).

127. This is one of the legislation's true shortcomings. While it establishes a technology fund to underwrite the development of new telecommunications businesses, the criteria for funding will necessarily entail the adoption of monetary and market disciplines similar to those employed by firms currently entering or competing in the more desirable markets. Even with liberal interconnection requirements, resale protection, and short-term entry barriers for network based competitors, absent the creation of an incentive structure favoring investment, deployment, and service provision in less developed markets, entrepreneurs entering such markets will still find raising capital and providing service at a profit more difficult.

128. 47 U.S.C.A. § 254(b)(3).

129. *Id.* § 254(j).

130. *Id.* § 254(b)(6), (h)(1)(b).

131. *Universal Serv. Report and Order*, 7 *Comm. Reg.* (P & F) 109, para. 31 (1997).

132. 47 U.S.C.A. § 254(h)(1)(b).

133. At least one half of the fifty states has been involved in litigation over the constitutionality of their school financing schemes. Moran, *supra* note 5; Campbell & Fischel, *supra* note 96; Briffault, *supra* note 96. Federal and state government efforts to fund education have also been subject to increasing budgetary pressure. *National Education Association (NEA) Statement on Final Agreement for FY '96 Education Budget*, U.S. Newswire, Apr. 25, 1996,

available in 1996 WL 5620939; Robert Polner, *Cutting Where It Hurts: Federal Aid Slashed for City Schools*, Newsday, Feb. 2, 1996, at A3; Rick Green & Robert A. Frahm, *In Search of Solutions for Troubled Schools*, Hartford Courant, May 22, 1996, at A1; Robert Polner, *Special-Ed Cuts Draw Fire: Plan Would Jack Up Class Sizes*, Newsday, May 21, 1996, at A3.

134. *Universal Serv. Report and Order*, 7 Comm. Reg. (P & F) 109, paras. 29-34.

135.

Public policy advocates are also pushing for inexpensive access to Internet services for residents in lowincome neighborhoods and rural areas. The information highway, they say, has the potential to deliver everything from online literacy programs to health information to help poor families. "But none of the promise of this new technology will come to pass unless the Internet is accessible to lowincome communities as well as the wealthy."

Lohr, *supra* note 2 (quoting Jeff Chester, executive director of the Center for Media Education, a nonprofit public policy group in Washington).

136. Churches have been at the forefront of providing access to computers, education, and training. Charlise Lyles, *Dayton Daily News Ministry Programs, Churches Are Launching Computer Classes In Effort To Empower The Disadvantaged*, Dayton Daily News, June 22, 1997, at 1E.

137. Michael O'Malley, *Computer Upgrades; Program Helps Poor People Help Themselves by Offering Secondhand Computers, Classes*, Plain Dealer (Cleveland), July 1, 1997, at 1B.

138.

NTIA's Telecommunications Information Infrastructure Assistance Program (TIIAP) provides matching grants to schools, libraries, hospitals, state and local governments and other non-profit entities. Last year, TIIAP leveraged \$35.7 million in federal funds with \$60 million in private, state and local funding. We awarded 117 grants to projects in 47 states, and the District of Columbia. More than 75 percent of the funds went to projects serving rural America or traditionally underserved Americans living in urban areas.

Fiscal Year 1997 NTIA Appropriations: Hearings Before the Subcomm. of Commerce, Justice, and Related Agencies of the House Comm. on Appropriations, 104th Cong. 7 (1996) (statement of Larry Irving, Assistant Secretary for Communications and Information, U.S. Dep't of Commerce).

139. *California Regulators Pass Universal Service Program*, Washington Telecom Newswire, Oct. 25, 1996, available in LEXIS, News Library, Curnws File.

140. *Mandates of Assembly Bill 3643*, No. 96-10,066, available in 1996 WL 651546 (Cal. P.U.C.).

141. *Id.* at *4.

142. *Id.* at *1. The California PUC cited Assembly Bill [AB] 3643 as authority, and established, inter alia, the following principles:

(1) Essential telecommunications services should be provided at affordable prices to all Californians regardless of linguistic, cultural, ethnic, physical, geographic, or income considerations.

....

(6) Because of their economic and social impact, education, health care, community, and government institutions must be positioned to be early recipients of the benefits of the information age.

143. *Id.* at *45.

144. The PUC specified that an organization must be tax exempt under the Internal Revenue Code, 26 U.S.C. § 501(c)(3)-(d) (1994).

145. *Mandates of Assembly Bill 3643*, No. 96-10,066, available in 1996 WL 651546 at *158.

146. Louise Trubek & Caleb Keller, *PSC Should Ease Accessibility to Information Highway*, Wis. State J., July 23, 1997, at 9A.

147. Appeals of the *Universal Service Report and Order*, 7 Comm. Reg. (P & F) 109 (1997), have been assigned to the Fifth Circuit Court of Appeals. *Telephony*, Comm. Daily, Aug. 8, 1997.