

# THE DIGITAL DIVIDE IN THE NEW MILLENNIUM

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## INTRODUCTION

The national debate about the existence, scope and solution to the digital divide has intensified over the past two years. During this time, various stakeholders and commentators, whether concerned or skeptical, have defined the digital divide in a variety of ways. Because each definer proffers a definition based on his or her perspective and may selectively emphasize particular statistical evidence, the definitions can seem conflicting and incongruous, potentially leading to confusion. There is a danger that confusion regarding the nature and import of the divide could lead to the divide being dismissed by some as a hoax or hyperbole.<sup>1</sup> And, as a consequence, efforts to reduce the divide may be diffused and ultimately defeated.

Despite some skeptical newspaper headlines and study titles to the contrary,<sup>2</sup> there is still a digital divide. The general policy consensus is that the digital divide exists.<sup>3</sup> Even the small number of articles and studies skeptical of the divide do not in fact question its existence. Rather, they question its scope, import and whether

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<sup>1</sup> See generally General Accounting Office, TELECOMMUNICATIONS: CHARACTERISTICS AND CHOICES OF INTERNET USERS, Feb. 2001 [hereinafter *GAO Report*]; see also Eric Cohen, *Divided We Surf*, WRLY STANDARD, Feb. 28, 2000, at 26; Robert W. Crandall, *The Digital Divide: Bridging the Divide-Naturally*, BROOKINGS REVIEW, Winter 2001, at 38; Jube Shiver, Jr., *Big Bandage for a Narrowing Internet Gap*, L.A. TIMES, Jan. 29, 2000, at A1.

<sup>2</sup> See generally Adam D. Thierer, *How Free Computers are Filling the Digital Divide*, Heritage Foundation Executive Summary No. 1361, Apr. 20, 2000. Thierer cites computer ownership and Internet access statistics that he argues clearly call into question the presence of a significant digital divide in America and the extent to which it demands any national solution or federal entitlement. See *id.* at 4-7. Thierer concludes that the marketplace is doing more than an adequate job of providing computing technologies to Americans. See *id.* at 15. Federal policymakers should be wary of interfering with this spontaneous and vibrant process. See *id.*; see also Ernest Holsendolph, *Newcomers Discover Wealth of Knowledge on Internet*, ATLANTA J. AND CONST., May 23, 2001, at 7D; Dan Lerner, *World News: The Americas: Divide or Deluge?*, FIN. TIMES (London), Apr. 27, 2000, at 15 (reporting Adam Thierer's conclusion that "[f]ree computers and inexpensive computing technologies are filling any digital divide that remains"); Tsutomu Yamaguchi, *Digital Divide May Polarize U.S. Society*, DAILY YOMIURI (Tokyo), Feb. 20, 2000, at 1.

<sup>3</sup> The majority of Congress, the current and prior presidential administrations, industry, academics, and the international community have all concluded that a divide exists. While there is not unanimity on its size, scope or remedies, there is near unanimity on its existence.

or how it should be addressed.<sup>4</sup> During a time when businesses, financial institutions, educational institutions, health care providers and governments are allocating a sizeable portion of their transactions and services to online distribution, the adverse consequences of failing to eliminate the divide are real and pervasive. Arguments that the divide will reduce over time fail to acknowledge the near-term dangers of exclusion when time is measured in Internet, rather than standard, years, and educational and job competence are increasingly measured in terms of computer and Internet proficiency.

Given the importance of closing the divide,<sup>5</sup> it is essential to recognize, and where possible, clarify the relationships between the definitions. The importance of an effort to clarify the relationships is particularly warranted now, because a thoughtful analysis of the definitions should lead to a conclusion that they can be harmonized, as they address the same fundamental problem albeit from different vantage points.

There is a second compelling reason to resolve definitional issues now. The continuation of efforts to further reduce the divide is being conducted during an economic downturn in the high-tech economy. The downturn is adversely affecting the financial viability of the major high-speed data competitors expected to provide meaningful competition for the incumbent local exchange carriers. The downturn places additional pressure on the balance struck by key provisions of the Telecommunications Act of 1996<sup>6</sup>

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<sup>4</sup> See Cohen, *supra* note 1, at 26; Crandall, *supra* note 1, at 38; Thierer, *supra* note 2, at 2.

<sup>5</sup> See David McGuire, *Report Urges World Leaders Not to Ignore 'Digital Divide,'* at <http://www.newsbytes.com> (June 4, 2001). Nations ignoring the so-called "digital divide" between information technology "haves" and "have-nots" could be undermining their own ability to compete in the global market, a new report contends. See *id.* International Data Corp. (IDC) Research Analyst Ludovica Bruno believes that "[u]nless everybody (in a country) has an opportunity to be online, the nation will fall behind." *Id.* Bruno was the lead author of a new IDC study comparing the technology infrastructures of dozens of nations. See *id.* Bruno based her findings on IDC's Information Society Index (ISI), which ranks nations based on several criteria relating to their information-technology backbones. See *id.* Initially released in February 2001, the 2000 ISI rankings showed that the United States had slipped from second in the world to fourth in terms of overall score. See *id.* Bruno said that the U.S.'s failure to bring more people online contributed to the decline. See *id.*; see also Diane Rezendes Khirallah, *Divided We Fall: Companies are Doing Their Part to get Technology into the Hands of Young People,* at <http://www.informationweek.com/830/prdd.htm>. (Mar. 26, 2001). A recently released InformationWeek Research survey of five hundred business and IT professionals found seventy-seven percent concerned about the divide. See *id.* The chief concern of business is the continued shortage of IT workers and how it will affect the U.S. economy. See *id.* In addition, nearly seventy-seven percent of survey respondents said their companies were concerned about the divide because the U.S. economy needs more IT talent. See *id.*

<sup>6</sup> Pub. L. No. 104-104, 110 Stat. 136 (codified as amended in scattered sections of 47 U.S.C. (Supp. IV 1998)).

(the "1996 Act") and supplemented by Clinton administration policies.

The 1996 Act signatories adopted a market-driven approach to assure rapid deployment, greater innovation and, eventually, lower prices for telecommunications and Internet services. However, heedful of the real potential for market failures, the Clinton administration and the Act's authors also included universal service and advanced network provisions,<sup>7</sup> initiated technology seed programs and encouraged private industry efforts to offset limitations in network and service availability and affordability resulting from market-driven solutions to deployment.<sup>8</sup>

In addition, the Act's authors and the Federal Communications Commission (FCC), responsible for the Act's implementation, sought to manage the expense of subsidizing access by limiting the definition of services for which subsidies could be provided. The early battles over the definition of basic and advanced telephone service,<sup>9</sup> the extent, eligibility and responsibility for sub-

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<sup>7</sup> See Federal Communications Commission, *THE EMERGENCE OF CONVERGENCE*, July 22, 1999, available at LEXIS, News Group File; *Hearing on Federal Communications Commission Oversight Before the Senate Comm. on Com., Sci., and Transp.*, May 26, 1999, available at LEXIS, News Group File (statement of William E. Kennard, Chairman, Federal Communications Commission).

<sup>8</sup> See Wallys W. Conhaim, *The Digital Divide: Industry Trend or Event*, at <http://www.infotoday.com/LU/jul00/conhaim.htm> (July/August 2000); Bill Carey, *NTIA Leads Commerce Charge to Close "Divide,"* NEW TECH. WK., Feb. 14, 2000, at 1; J. Timothy Sprehe, *The Digital Divide: Internet Haves and Have-Nots*, INTERNET CONNECTION, Feb. 2000, at 1; Bill Carey, *Telecom Grant Program: From TIIAP to TOP*, NEW TECH. WK., Jan. 24, 2000, available at LEXIS, News Group File; Sasha Samberg-Champion, *Clinton Promises Focus on 'Digital Divide' Next Year*, COMM. DAILY, Dec. 10, 1999, available at LEXIS, News Group File.

<sup>9</sup> As early as 1994 and continuing through 1996, proposals by public interest advocates that basic service include advanced network services were met with questions from companies and consumer groups about subscriber eligibility, service cost, and responsibility for subsidizing access. See *Hearing on H.R. 3636, National Communications Competition and Information Infrastructure Act of 1993 and H.R. 3626, Antitrust Reform Act of 1993 Before the House Subcomm. on Telecomm. and Fin. Comm. on Energy and Com.*, Feb. 3, 1994, available at LEXIS, News Group File (statement of Dr. Mark N. Cooper, Director of Research, Consumer Federal of America) [hereinafter Feb. 1994 Cooper testimony]; John Carey et al., *Yield Signs on The Info Interstate*, BUS. WK., Jan. 24, 1994, at 88 (stating that the pressure to include advanced network services prompted some in Silicon Valley to question whether basic service might not ultimately include software and Internet services); Ted Bunker, *How Much for the New-Tech Subsidies?*, BOSTON HERALD, Apr. 15, 1996, at 26 (stating that at least one research organization warned that an overly expansive definition of basic service might have a potentially adverse effect on the competitiveness of smaller companies); *A Guide to Telecommunications Deregulation Legislation*, HERITAGE FOUND. REP., June 3, 1994, available at LEXIS, News Group File.

On the other side, some early legislation proposed a definition of basic service composed of no more than voice quality without including touch tone dialing which companies would have been allowed to charge for. See De'Ann Weimer, *Consumer-Friendly Provisions Dropped from Phone Bill*, PALM BEACH POST, Apr. 5, 1995, at 6B. Once the FCC defined basic service, battles still raged over which companies would be required to pay into the subsidy fund and the fairness of the FCC's subsidy requirements. See *Changes Needed: Universal Service Recommendations Seen as Too Broad*, COMM. DAILY, Dec. 26, 1996, at 2.

sidies for universal service, and the “e-rate”<sup>10</sup> necessitated by inherent market failures will now be fought anew. This time, one of the questions will be whether dial-up or broadband Internet access should be included in the definition of basic “phone” service.<sup>11</sup>

Given the economic downturn, telecommunications market competitors again will plead economic hardship. These include new competitors (CLECs), because they allegedly are barely able to secure sufficient capital to finance their continued market viability;<sup>12</sup> long distance carriers (IXCs), because a requirement to alter business plans by contributing to social subsidies allegedly will push them perilously close to negative cash flow; and incumbent carriers (ILECs), because they fear they will be left to underwrite the subsidization of availability and affordability as the carriers of last resort and suffer competitive pricing disadvantages.<sup>13</sup> These concerns may push some of the competitors to renew arguments that their assets are subject to an unconstitutional and unfair taking by the government, that subsidy revenues generated solely from telecommunications transactions constitute an unconstitutional or undemocratic tax.<sup>14</sup>

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<sup>10</sup> Prior to the passage of the Telecommunications Act of 1996, there were numerous proposals regarding what a basic service should include. See Christopher R. Conte, *Reaching for the Telephone*, GOVERNING MAG., July 1995, at 32; *Hearing on S. 2195, National Public Telecommunications Infrastructure Act of 1994 Before the Senate Subcomm. on Com., Sci., and Transp.*, June 22, 1994, available at LEXIS, News Group File (statement of Anthony Riddle, Chair, Alliance for Community Media) [hereinafter Riddle testimony]; *Hearing on Universal Service and Local Competition Before the Senate Comm. on Com.*, May 17, 1994, available at LEXIS, News Group File (statement of Dr. Mark N. Cooper, Director of Research, Consumer Federal of America) [hereinafter May 1994 Cooper testimony]; Alan Stewart, *Baby Bells Grow Up*, COMM. INT'L, May 1994, at 21.

<sup>11</sup> See Patrick Ross, *Telric an Unbundling Rules Said to Inhibit Broadband Growth*, COMM. DAILY, July 27, 2001, available at LEXIS, News Group File.

<sup>12</sup> See Neal Weinberg, *The Economic Slowdown is Affecting Spending on Network Equipment, Services and Software, Shaking Some Enterprise Segments to the Core*, NETWORK WORLD, Apr. 23, 2001, at 77.

<sup>13</sup> See Feb. 1994 Cooper testimony, *supra* note 9; *Hearing on the Internet Freedom and Broadband Deployment Act of 2001 Before the House Comm. on Com.*, Apr. 25, 2001, available at LEXIS, News Group File (statement of Charles McMinn, Co-Founder and Chair, Covad Communications Co.) [hereinafter McMinn testimony]; Weinberg, *supra* note 12, at 77; Matt Stump, *Fiber America*, BROADBAND WK., Apr. 2, 2001, at 50; Matt Stump, *Fiber Vendors Focus on Intelligence*, BROADBAND WK., Apr. 2, 2001, at 16; see also Joshua L. Kwan & Jennifer Files, *Struggling Telecom Firms Wait for the Next High Tide*, SAN JOSE MERCURY NEWS, June 4, 2001, available at LEXIS, News Group File; Richard Martin & Aaron Pressman, *Kennard Sticks Up for Small Telcos*, INDUSTRY STANDARD.COM, May 23, 2001, available at LEXIS, News Group File; Jason Krause, *Dawn of the Big Bells*, INDUSTRY STANDARD.COM, Apr. 20, 2001, available at LEXIS, News Group File.

<sup>14</sup> It is not clear that such challenges would be successful. In at least one instance, payments into the universal service fund were deemed not to constitute a tax, but a fee, because it is a payment in support of a service—managing and regulating the public telecommunications network—that confers special benefits on the payees. See *Texas Office of Pub. Util. v. FCC*, 183 F.3d 393, 427 n.51 (5th Cir. 1999) (citing *Nat'l Cable Television Ass'n v. United States*, 415 U.S. 336, 340 (1974)); cf. *Rural Telephone Coalition v. FCC*, 838 F.2d 1307, 1314 (D.C. Cir. 1988) (“It is the nature of the rate action, rather than the

Exacerbating these concerns will be the firms in the related software, equipment and Internet Service Provider industries. They will be strenuously arguing that commerce on the Internet should not be taxed,<sup>15</sup> that further tax exemptions are necessary to accelerate the network build-out and, coincidentally, to assure them of continuing growth in software and equipment sales revenues.<sup>16</sup> This will give rise to arguments that the 1996 Act and the resulting policies, as implemented, are unfair. While the telecommunications, software, equipment and ISP firms' arguments are not new,<sup>17</sup> the economic downturn, its adverse impact on the original pro-market policy initiative, the continued reluctance to tax the Internet, and a more laissez faire philosophy in the Bush administration, may result in these arguments garnering greater support.

The danger the downturn presents for efforts to close the divide are several. First, if one can successfully argue that the divide no longer exists, or is substantially diminished such that the market can effectively address it, then the pressure to include dial-up and/or broadband in the definition of basic service diminishes. Second, if there is no need to include dial-up and broadband, there will be no need to alter deployment plans that only target high-end customers, nor would there be a need to subsidize access to advanced services for those currently unserved. Hence there would be no increased cost of competition to fall "unequally" upon the current group of remaining competitors. Third, a significant amount of the pressure to establish equitable deployment time tables could be dismissed as unnecessary, as would an effort to assure affordable access for those less able to pay the full cost. For these

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identity of the party challenging it, that controls the decision whether the rate is a taking.").

<sup>15</sup> The collection of state and local sales taxes for Internet transactions is so controversial that it stymied a commission appointed by Congress to solve the problem. See Robert D. Atkinson & Shame Ham, *Digital Politics: A Field Guide to the Camps and Contours of the Internet Policy Debates*, NEW DEMOCRAT, May/June 2000, at 6. "Old Economy Regulators" want sales taxes to be collected to maintain their revenue. See *id.* "Brick and Mortars"—companies, professional groups, and unions that gain their livelihood from old-economy, face-to-face business transactions—want sales taxes imposed so as not to erode their competitive position. See *id.* "Dot Coms"—start-up businesses that seek to revolutionize the sale of goods and services through digital technologies—do not want the burden of collecting taxes for thousands of jurisdictions (and do not want to lose their price advantage). See *id.* "Pro-Technology Conservatives" and "Cyberlibertarians" oppose Internet sales taxes on principle. See *id.* "Social Engineers"—liberals who believe the Internet is empowering but who worry that its growth is having unintended and sometimes dire consequences for society—favor not only sales tax collection, but also special Internet access taxes to subsidize access for the poor and minorities. See *id.*

<sup>16</sup> See Jeff A. Taylor, *Balance Sheet*, REASON, Jan. 2001, at 13.

<sup>17</sup> See *id.*

reasons, it is essential to affirm the divide's continued existence and to establish the relationship between its various definitions.

In addition, it is essential that all stakeholders take a serious and sober look at just how availability and access are to be financed in the future. If the majority of the information industry is most likely to benefit from an advanced network (broadband) build-out,<sup>18</sup> then perhaps that majority should be involved in underwriting targeted subsidies, tax exemptions and low-cost loans to facilitate timely deployment of affordable access. In all fairness, it should not fall to one segment of the industry, or firms within one segment (and their subscribers), to foot the bill for expansion of advanced networks and services in the nation when all will benefit.

This Article first addresses the question of whether there is a digital divide in the United States, and concludes that there are multiple divides residing in particular segments of American society. The Article then briefly discusses the balance between competition and market failure offset, which Congress established in the 1996 Act, and the current economic downturn in the high-tech industry. It concludes that the economic downturn may serve as the occasion and motivation for defining the digital divide and reducing targeted subsidies, which will in turn reduce the cost of competition. Finally, the Article provides recommendations for how this outcome might be avoided. First, it proposes that the digital divides be affirmed. Second, it proposes that a consensus on measurement and documentation of the divides be reached. Third, it argues that the information industry, as beneficiary of the advanced network build-out, should provide meaningful contributions to the explicit subsidy programs to close the divides. Finally, it proposes that criteria be established for determining when the divide has been closed, and when explicit subsidies can be reduced, if not eliminated.

## I. DEFINING THE DIGITAL DIVIDE

### A. *Causes, Manifestations and Consequences*

#### 1. Causes

Some definitions of the digital divide focus on its causes, others on its manifestations, and still others on its consequences. For instance, the divide has been defined as the gap in technology

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<sup>18</sup> See Jeffrey A. Eisenach, *Lost In Cyberspace? Does the Bush administration get the New Economy?*, AM. SPECTATOR, available at <http://www.gilder.com/amspec/gilderarchives/June01> (June 2001).

ownership and Internet usage caused by the inability to afford access to computers, cable modems, dial-up or advanced networks and the attendant services or content. This definition ultimately leads to the identification of inequitable wealth distribution as a primary cause of the divide.<sup>19</sup>

However, a definition premised on affordability does not address the full scope of the divide. For even if there is sufficient wealth in the form of discretionary income, if the wiring, equipment and/or networks and services are not available, access remains impossible. Denied or extensively delayed deployment of advanced network capabilities to inner city and rural populations is a primary example of the lack of availability as a cause of the divide.<sup>20</sup>

Even affordability and availability are insufficient if one acquires access to technology that is difficult or impossible to use because it was not built with the users' needs in mind. The difficulties experienced by some Americans with disabilities seeking to use computer graphical user interfaces provide one apt example.<sup>21</sup> Cultural and language based difficulties exist as well.<sup>22</sup> Thus, the

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<sup>19</sup> Currently, economic inequality in the United States is the greatest among advanced capitalist countries. The Bush tax cut would widen the gap between rich and poor, one that has grown enormously since the early 1970s. See David Mermelstein, *The Nation; The Economy; Bush's Tax Logic: If A, Then B, Even When C*, L.A. TIMES, Mar. 18, 2001, at M2; see also Congressional Progressive Caucus News Conference, *American People's Dividend: An Alternative Tax Cut*, FED. NEWS SERV., Feb. 9, 2001, available at LEXIS, News Group File ("[T]his country has the most unfair distribution of wealth and income of any major country on earth . . .") (quoting Rep. Bernie Sanders (I-VT)).

<sup>20</sup> See *Hearing on Broadband Technology Before the Senate Subcomm. on Com., Sci., and Transp.*, Mar. 28, 2000, available at LEXIS, News Group File (testimony of Bob Rowe, Commissioner, Mont. Public Serv., President, Nat'l Assn. of Regulatory Utility Commissioners) [hereinafter Rowe testimony].

<sup>21</sup> See *Hearing on the Applicability of the A.D.A. to Private Internet Sites Before the House Comm. on the Judiciary*, Feb. 9, 2000, available at LEXIS, News Group File (testimony of Dr. Steven Lucas, Sr. Vice President, Industry Gov. Relations, Chief Information Officer, Privaseek, Inc.) [hereinafter Lucas testimony].

<sup>22</sup> The absence of Internet information in a language accessible by members of the American citizenry has been cited as a significant deterrent to closing the digital divide. See Mickey Revenaugh, *Beyond the Digital Divide: Pathways to Equity; Industry Trend or Event*, TECHNOLOGY & LEARNING, May 2000, at 38 (citing a study by the Children's Partnership estimating that approximately seventy-five percent of the information on the Internet is only in English); see also Hamisah Hamid, *ICT Risks Widening of Digital Divide*, BUS. TIMES (Malaysia), Mar. 29, 2001, at 7.

The absence of information in multiple languages has been identified as a significant limitation of government websites that frustrates attempts by non-English speaking citizens to access information to which they are entitled. See Alan Balutis, *E-Government 2001, Part II: Evolving Strategies Action*, PUBLIC MANAGER, Sept. 2001, at 41; see also Darrell West, *Federal Web Sites Need Some Work; House and Senate Pages Rank Among the Worst, According to Brown University Study*, ROLL CALL, Oct. 16, 2000, available at LEXIS, News Group File.

The recognition that language can pose problems for Internet access has prompted some business to develop bilingual content websites. See *Bluelight.com Teams with Kmart, Yahoo! and Spinway to Unveil Totally Free Internet Service en Espanol*, BUS. WIRE, Sept. 18, 2000, available at LEXIS, News Group File; Lee Romney, *Company Town; Univision Adds Site to*

technology must not only be affordable and available, but accessible.

## 2. Manifestations

Definitions of the divide based on wealth, physical proximity and equitable utility still do not encompass the full scope of definitions proliferated over the last decade. The divide has also been defined by its manifestations. That is, how do we determine that the divide exists? The "digital divide" is the recently documented disparity in access to and/or usage of telephones, computers, modems, networks and information experienced between various segments of American society. It has been defined in terms of race and ethnicity, income, education, gender, head of household, employment, geography and size of business.<sup>23</sup> One of the "oldest" ways of describing and defining the divide is by identifying the disparities in computer ownership and Internet access between Americans of predominantly Native, African, Hispanic, Asian and European descent. Defined in this manner, the divide concerns the difference in computer and Internet access between African, Hispanic and Native Americans on the one hand, and Asian and European Americans on the other.<sup>24</sup>

However, when income is emphasized, the disparity in access between Americans diminishes substantially in households having incomes of \$75,000 or more per year.<sup>25</sup> The disparity is increasingly acute as one drops further below \$25,000.<sup>26</sup> Similarly, the disparity in access is not as pronounced among Americans with a college degree regardless of descent as it is among Americans with

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*Bridge the Divide*, L.A. TIMES, June 29, 2000, at C1. The necessity to address the language needs of non-English speaking populations has prompted the development of responsive speech translation technology. See Lee Ting Ting, *The Emergence of Speech Technology*, NEW STRAITS TIMES (Malaysia), May 3, 2000, at 22.

<sup>23</sup> See Seymour E. Goodman et al., *Wiring the Wilderness in Alaska and the Yukon; Technology Information*, COMM. OF THE ACM, June 1, 2001, at 21; see also Katie Burns, *New Study Reports 'Digital Divide' in San Diego*, NORTH COUNTY TIMES, Feb. 11, 2001, available at <http://www.nctimes.net/news/2001/20010211/c.html>; *Hearing on Economic Development in Rural America—Small Business Access to the Broadband Before the House Comm. on Small Business*, available at <http://www.house.gov/smbiz/hearings/107th/2001/010517b.stark.html> (May 17, 2001) (testimony of Nancy Stark, Director, Community and Economic Development, National Center for Small Communities) [hereinafter Stark testimony].

<sup>24</sup> See U.S. DEP'T OF COMMERCE: *FALLING THROUGH THE NET: DEFINING THE DIGITAL DIVIDE*, available at <http://www.ntia.doc.gov/ntiahome> (Nov. 1999) [hereinafter *FALLING THROUGH THE NET*].

<sup>25</sup> See Pia Sarkar, *More than Half U.S. Homes are Wired*, SAN FRAN. CHRONICLE, Sept. 6, 2001, at C1; see also Kris Axtman, *Houston to Make Computing a Right not a Privilege*, CHRISTIAN SCIENCE MONITOR, Aug. 22, 2001, at 2; Senators George Allen (R-VA) and John Warner (R-VA), Press Conference at the Capitol (Mar. 8, 2001), available at LEXIS, News Group File.

<sup>26</sup> See *FALLING THROUGH THE NET*, *supra* note 24.



less education.<sup>27</sup> It is argued that the gender disparity seems to have all but been eliminated except when cross-referenced with income and head of household. Households led by female heads lag far behind both households led by males and dual head households.<sup>28</sup>

For businesses in Silicon Valley, the divide is manifest in the dearth of Americans, particularly those of predominantly African and Hispanic descent employed in the Valley's software, equipment and network firms.<sup>29</sup> This disparity is a harbinger of greater problems to come unless all of America's children, regardless of income, gender or descent, are provided with the opportunity to acquire the requisite skills to create, build, manage and interface with broadband technologies.<sup>30</sup>

Disparities in network access between inner city and rural areas on the one hand and affluent urban or suburban areas on the other, as well as disparities between small and large businesses, have recently become matters of increasing concern.<sup>31</sup> These disparities are based on the current absence of DSL and cable modem deployment in inner city and rural areas of the nation, and the likelihood that DSL and cable modem offerings may be untimely deployed or not deployed at all.<sup>32</sup> Finally, there are those who discuss the divide in terms of its potential future manifestations.<sup>33</sup>

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<sup>27</sup> See *id.*

<sup>28</sup> See *id.*

<sup>29</sup> See *id.*

<sup>30</sup> See *3Com CEO Eric Benhamou Provides Keynote Address on Digital Divide for Commonwealth Club of Silicon Valley*, BUS. WIRE, July 19, 2000, available at LEXIS, News Group File ("Computers and high-speed access in all areas is essential. But true empowerment only comes with education and training, the information literacy that enables one to make the most of the technology.") [hereinafter *3Com Keynote*].

<sup>31</sup> See Robert Dodge, *Minority Businesses Tackle Digital Divide*, DALLAS MORNING NEWS, Oct. 15, 2000, at 1H.

<sup>32</sup> In its most recent report on the deployment of advanced telecommunications capability (released in Aug. 2000), [the] FCC identified certain categories of Americans who may have difficulty obtaining access to advanced services. These categories include low-income consumers, those living in sparsely populated areas, minority consumers, Native Americans, persons with disabilities, and those living in U.S. territories. In particular, the FCC concluded that several barriers might hinder the ability of low-income, inner-city residents to obtain advanced services. Such barriers include the poor quality of the telecommunications plant or of the inside wiring in multiple-tenant buildings, the relatively high price of advanced services, the lower rates of computer ownership among inner-city residents, and the lack of marketing by providers of advanced services to low-income populations. [The] FCC also found that for the majority of Americans who live in rural areas, lowest-cost access to advanced services was not readily available . . . .

GAO Report, *supra* note 1, at 10.

<sup>33</sup> "Often times, I hear the Digital Divide reduced to a single dimension. Some point to the discrepancy in income as the defining issue, others point to race or gender, and still others geography . . . ." *3Com Keynote*, *supra* note 30. "Encompassing all of these is the

These include potential disparities in access to opportunities for political participation, commerce, and services, as governments, businesses and financial institutions move from brick and mortar to point and click.

What is one to make of this plethora of manifest disparities? The obvious conclusion to be reached is that there are a number of ways in which the digital divide currently manifests itself in American society. They are real rather than manufactured or imagined, they are not mutually exclusive, and each must be addressed if all segments of our society are to be full-fledged participants.

### 3. Consequences

The potential consequences of failing to close the divide include a number of concerns raised by stakeholders and commentators. Children without access to technology in their schools and homes will be less likely to possess the critical computer and Internet-based skills necessary to efficiently exercise citizenship, manage assets, receive online medical services, or qualify for many twenty-first century employment opportunities.<sup>34</sup> It has been projected that as many as fifty million adults may soon find themselves “functionally illiterate” because of their inability to use information technology.<sup>35</sup> As a result, we will perpetuate the inequality in the distribution of wealth, government services, employment opportunities and quality of life. Even with access, the training and expertise necessary to take advantage of access may be lacking.<sup>36</sup>

In addition, the current dearth of Americans qualified to take the high-tech jobs available to be filled may not be reduced,<sup>37</sup> further exacerbating the digital divide in high-tech employment.

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most important parameter of all—education. We cannot point to just one of these at the expense of the other because all are valid.” *Id.*

<sup>34</sup> See Rep. Ruben Hinojosa, *All Students Need Equal Access to Technology*, Roll Call, Feb. 26, 2001, available at LEXIS, News Group File.

<sup>35</sup> *50 Million Face Threat: No Net Link*, DESERET NEWS (Salt Lake City), Oct. 2, 2000, at A2 (“As many as 50 million U.S. adults are in danger of becoming functionally ‘illiterate’ in coming years because they lack knowledge of or access to the Internet . . .”).

<sup>36</sup> See *Influence, LLC Launches Foundation to Empower Teachers in Urban Elementary Schools*, PR NEWSWIRE, Oct. 23, 2000, available at LEXIS, News Group File; *Press Conference Brookings Institutional P2K National Issues Forum Moderated by Michael Armacost*, Oct. 10, 2000, available at LEXIS, News Group File; *Educators Cite Technology Training and Ineffective Internet Filters as Major Roadblocks to Close Digital Divide*, PR NEWSWIRE, Sept. 28, 2000, available at LEXIS, News Group File.

<sup>37</sup> See generally Jo-Ann Johnston, *Tech Recruits Tough to Find Too Few Qualified Workers a Roadblock to Growth for Area’s Software Start-ups*, TIMES UNION (Albany), July 2, 2000, at D1; Robert W. Gee, *On East Austin’s Willow Street, the Digital Age is Only Now Starting*, AUSTIN AM. STATESMAN, June 23, 2000, at H1; *Digital Divide*, CAPITAL TIMES (Madison), Apr. 21, 2000, at 2D; Craig Gordon & Pradnya Joshi, *A White Man’s World: Diversity in Management/Hitting A Silicon Ceiling/Companies Say Labor Shortages Stalls Minority Recruitment*, NEWSDAY (New York), Apr. 12, 2000, at A4; Juan Williams, *Talk of the Nation: New Poll By National Public Radio, The*

States, cities and counties that do not possess high speed, Internet accessible networks and equipment are less likely to experience economic growth and prosperity as businesses select location based on network availability,<sup>38</sup> and as more commerce moves online. Businesses without access to high-speed Internet accessible networks will be at a competitive disadvantage in the markets where they operate without advanced network technologies.

Finally, the movement from “brick and mortar” to “point and click” may create another “tax” on people in areas in which businesses and governments are less efficient at product and service delivery because of limited access to advanced networks. Because of market inefficiencies, those most in need and unable to afford it have the least access and are charged the most. Similar phenomena have been occurring in the inner cities and rural areas for years.

### B. *The Good News: Some of the Gaps are Narrowing*

Many researchers have concluded that early disparities in access were a function of differences in disposable income and the cost of computer ownership.<sup>39</sup> Some rely mainly on actual and projected computer ownership statistics regarding African and Latino Americans as evidence that this divide is narrowing.<sup>40</sup> In addition, some researchers conclude that lower computer prices, coupled with income growth and greater interest in computers by

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*Kaiser Family Foundation and Harvard's Kennedy School of Government* (Nat'l Pub. Radio broadcast, Feb. 29, 2000).

<sup>38</sup> See *Hearing on 2002 Farm Bill Before the House Comm. on Agric.*, July 19, 2001, available at LEXIS, News Group File (testimony of Bob Phillips, III, President and CEO, National Rural Telecommunications Cooperative) [hereinafter Phillips testimony]; Candee Wilde, *Wrong Side of the Tracks – Broadband-starved Businesses Have Fallen Through the Cracks of a New Digital Divide*, TELE.COM, Dec. 11, 2000, available at LEXIS, News Group File; Lesley Stedman, *Settlement is Reached in Ameritech Rate Case*, THE COURIER-JOURNAL (Louisville), July 13, 2000, at 1A; Sharon Pian Chan, *Tacoma Emerges as a Tech Center*, SEATTLE TIMES, May 30, 2000, at C1; *US West Launches Major Out-Of-Region Broadband Initiative in California*, PR NEWSWIRE, May 10, 2000, available at LEXIS, News Group File; Ruth Cochran-Escamilla, *The Unmet Need For High Speed Data As Telecoms Lay Lifelines to the Future, Small South Texas Towns Fear Being Left Behind*, CORPUS CHRISTI CALLER-TIMES, Feb. 6, 2000, at L2.

<sup>39</sup> See Crandall, *supra* note 1, at 38; GAO Report, *supra* note 1, at 12.

<sup>40</sup> See Eric Cohen, *United We Surf; The Clinton Administration and the Business Community are Eager to Solve a Problem – the “Digital Divide” – That Doesn't Exist*, WKLY. STANDARD, Feb. 28, 2000, at 26 (citing Commerce Department and Forrester Research statistics on computer ownership in 1994 and 1998). Cohen states that in 1994, whites were 2.6 times as likely as blacks to own computers, but in 1998, they were only twice as likely. See *id.* Thus, Cohen contends, the divide is closing. See *id.*; see also Jube Shiver, Jr., *Big Bandage for A Narrowing Internet Gap*, L.A. TIMES, Jan. 29, 2000, at A1 (citing studies by Forrester Research, which reported that the Internet access gap had all but closed; the Tomas Rivera Policy Institute, which showed Latinos purchasing computers at twice the rate of whites; and the April 1998 issue of Science Magazine, which indicated that nearly twice as many African Americans as whites planned to purchase home computers in the six months following the survey).

poor and non-white households, have closed a good deal of the divide.<sup>41</sup> The researchers suggest that given these alleged developments, market solutions will continue to close the divide.<sup>42</sup> The implication is that nothing else need be done.

At least two reports have noted that the presence of minorities and women on the web has grown substantially.<sup>43</sup> While those with the greatest access to the Internet are still early-adopting, upscale Americans, the web surfers spending the most time online at home tend to be working-class, African Americans who use the web for chat, e-mail, entertainment and visiting sweepstakes sites.<sup>44</sup> Nevertheless, at least one report concluded that there are still some notable demographic differences when it comes to access, and the most dramatic continuing disparities have to do not with race, but with income and age.<sup>45</sup>

Therefore, as one report concludes, "the challenge for policymakers over the long run will be to determine whether any continuing disparities in the availability and use of the Internet among different groups of Americans threaten to deepen the socio-economic divisions within our society."<sup>46</sup> At least one commentator suggests that progress in narrowing the divide may be reversed, and that the divide may widen under the current policies of the Bush administration.<sup>47</sup>

<sup>41</sup> See Crandall, *supra* note 1, at 38.

<sup>42</sup> See *id.*

<sup>43</sup> See Michael J. Weiss, *Online America*, AM. DEMOGRAPHICS, Mar. 2001, at 55 (reporting that American "Netizens [are] nearly as diverse – and quirky – as consumers offline"); Kevin Featherly, *Despite Dot-Com Bombs, Net Populations Booms—Report*, NEWSBYTES, at <http://www.newsbytes.com/news/01/162136.html> (Feb. 18, 2001).

<sup>44</sup> See Featherly, *supra* note 43 (citing Pew research that concluded that during 2000, there was growth in Internet usage among women, minorities, people with incomes between \$30,000 and \$50,000, and people with varying levels of education). Pew concluded "the increase in online access by all kinds of Americans highlights the fact that the Internet population looks more and more like the overall population of the United States." *Id.*

<sup>45</sup> See *id.* One analyst found that the digital divide between the Internet "haves" and "have-nots" varies in the United States on a state-by-state basis. See *The Digital Divide Runs Deepest in the South*, BUS. WIRE, July 28, 2000, available at LEXIS, News Group File. She also reports that ethnicity is not the real driver of the divide, but rather differences in income, age, education, and "technology optimism." See *id.* Seven of the ten states with the lowest median incomes for African Americans are "deeply divided" states. See *id.* Minorities in these states are the least educated, with whites nineteen percent more likely than African Americans, and thirty-two percent more likely than Hispanics to have graduated from college. See *id.* The analyst concludes, "Falling PC prices have not lessened the digital divide, so policymakers should subsidize convenient access in schools, libraries, and other public places . . . and federal funds should be directed specifically to the 16 states identified as deeply divided." *Id.*; see also Scott Nance, *Place-A Factor in Internet Usage*, NEW TECH. WK., Aug. 14, 2000, available at LEXIS, News Group File.

<sup>46</sup> GAO Report, *supra* note 1, at 7.

<sup>47</sup> See Robert A. Jordan, *Digital Divide's Cutting Edge*, BOSTON GLOBE, Mar. 18, 2001, at H4.

In 1998, for example less than 12 percent of African-Americans and Hispanics

C. *The Bad News: Many Gaps Remain*

Despite a narrowing of the gaps, at least one other study found a significant lack of participation among low-income minorities in five cities in the Northeast.<sup>48</sup> The survey research determined that of low-to-moderate-income residents (those having less than \$40,000 of household income per year), fewer than half (forty-two percent) of respondents had computers in their homes, and only thirty-two percent were connected to the Internet.<sup>49</sup> In contrast, more than three-quarters (seventy-seven percent) of those households with incomes over \$40,000 use a computer in the home, and sixty-one percent are very comfortable using the Internet.<sup>50</sup> This survey's results support arguments that the digital divide is not only an income-based problem, but one based on race and educational levels.<sup>51</sup> Another study suggests that gaps between African and Latino Americans on the one hand, and European Americans on the other, in income, education and technical proficiency remain quite profound in sixteen states, thereby exacerbating the digital divide.<sup>52</sup> States in the southern region of the United States lag far behind the rest of the nation in closing the divide between African Americans and European Americans.<sup>53</sup>

While some surveys suggest that the gap in computer ownership and Internet access may be narrowing between African, Asian and Latino Americans on the one hand and European Americans

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had online access, while more than 30 percent of white Americans did. Last year, according to the survey, 23 percent of African-Americans and Hispanics had online access—a nearly 100 percent increase from 1998 – and 46 percent of white Americans had access, a 50 percent increase in two years. A key reason for this sharp increase, particularly for African Americans, was the National Telecommunications Information Administration, the Clinton-Gore program that, through the Commerce Department, helped to bring computer and Internet access particularly to poor and urban areas. But the Bush-Cheney administration has decided to drastically cut the Commerce Departments' budget that financed the NTIA and other programs aimed at closing the 'digital divide'. As a result, critics argue, the divide will widen and in turn broaden the divide between the haves and the have-nots.

*Id.*

<sup>48</sup> See *Survey Shows Inner-City Residents Lack Familiarity With the Internet But Are Eager to Learn*, BUS. WIRE, at <http://ptg.djnr.com/ccroot/asp/publib/story.asp> (Jan. 15, 2001).

<sup>49</sup> See *id.*

<sup>50</sup> See *id.*

<sup>51</sup> See *id.*

<sup>52</sup> See Nance, *supra* note 45; see also *The Digital Divide Runs Deepest in the South*, *supra* note 45.

<sup>53</sup> A study by the Forrester Research, Inc., notes, "parts of the United States are making good progress in giving communities access to the Internet, but large sections of the South and Southwest are vastly underserved." Shawn P. McCarthy, *Will the U.S. Cross a Digital Divide with Network Computers?*, GOV'T COMPUTER NEWS, Sept. 25, 2000, at 46. For example, in Arkansas and West Virginia, fewer than ten percent of African-American households are online compared to twenty-nine percent of Caucasian households. See *id.*

on the other, sizeable disparities remain.<sup>54</sup> There are still major disparities in computer ownership and Internet access in at least thirty-two percent of the nation's states. There is still a substantial disparity between Americans earning \$25,000 per year and those earning more. There is still a major disparity between single-female-headed households and other American households. There is still a substantial disparity between dial-up access and broadband deployment in rural areas of the nation as compared to affluent urban and suburban areas. There are still sizeable discrepancies in access between small businesses and large businesses. There is still a major gap in education and high-tech skill levels between African, Asian and Latino Americans on the one hand, and European Americans on the other. In short, there is still a divide and it is substantial.

#### D. "Tell Your Kid to Wait"

In a fair society, all individuals would have equal opportunity to participate in, or benefit from, the use of computer resources regardless of race, sex, religion, age, disability, national origin or other such similar factors.<sup>55</sup> It has been argued by some critics of the nation's efforts to close the digital divide that the efforts are superfluous or wasteful because the digital divide will close "on its own" in five to ten years.<sup>56</sup> Given the size and number of disparities nationwide, a response to governmental claims of "Don't Worry, Be Happy," would leave significant portions of American people, households, communities, schools, hospitals and businesses without access at a time when service and commerce migration onto the Internet is accelerating and computer literacy is becoming as important as reading and writing.<sup>57</sup> Given the disadvantage a five to ten year delay in access would cause, it is not surprising that Larry Irving, the former Assistant Secretary of Commerce, and architect of much of the Clinton administration's

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<sup>54</sup> For instance, a recent study of San Diego County reported that the gap between Caucasians and Hispanics in computer ownership and Internet access is wider in the county than in the rest of the country, but that the county as a whole is more wired than the rest of the country. See Burns, *supra* note 23. The study was conducted over a period of six months and included a survey of 1,000 county residents and a comparison to similar research, including a national study in 2000 by the U.S. Commerce Department. See *id.*

<sup>55</sup> See ACM CODE OF ETHICS AND PROFESSIONAL CONDUCT, at <http://www.cam.org/constitution/code.html> (Oct. 16, 1992); see also Ben Shneiderman, *Universal Usability; Technology Information*, COMM. OF THE ACM, May 1, 2000, at 85.

<sup>56</sup> See *Sunday Morning* (CBS television broadcast, Mar. 19, 2000) (airing the story "The Digital Divide: Exploring Differing Opinions on Discrepancies in Computer Literacy") [hereinafter *CBS Sunday Morning*].

<sup>57</sup> See *id.*

efforts to bridge the divide, would say in response to a suggestion that portions of the nation wait:

Ask those folks who say that poor white kids, kids in the inner city, kids in the barrio, kids in the Native American community . . . should wait. Ask them if their kid would wait . . . . If it's okay for a kid to wait, take your computer and ship it off to some kid in one of those neighborhoods. Let your kid wait.<sup>58</sup>

## II. THE TELECOMMUNICATIONS ACT OF 1996 AND THE CURRENT ECONOMIC DOWNTURN IN THE HIGH-TECH INDUSTRY

In the Telecommunications Act of 1996, Congress struck a balance between its twin goals of facilitating competition and assuring universal access via affordable services.<sup>59</sup> Under the Act, competition is the preferred means of assuring affordable access to telecommunications networks and services.<sup>60</sup> However, where reliance on marketplace competition is insufficient to assure affordable access, Congress continues to use targeted subsidies to underwrite the provision of basic telephone service via universal service, Linkup and Lifeline, and to advance telecommunications networks via the E-Rate.<sup>61</sup>

### A. *Financing Efforts to Close the Digital Divide*

The subsidies are currently financed through charges collected by carriers from their customers.<sup>62</sup> These charges are then remitted to the FCC.<sup>63</sup> From the beginning, efforts to finance ac-

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<sup>58</sup> *Id.*

<sup>59</sup> See 47 U.S.C. § 151 (2001). The FCC was created in order to "make available, so far as possible, to all the people of the United States . . . a rapid, efficient, nationwide, and worldwide wire and communication service with adequate facilities at reasonable charges." *Id.* Concomitant with its universal service mandate, the FCC is required to keep local telephone markets opened to competition. See *id.* § 251-253; *AT&T Corp. v. Iowa Utils. Bd.*, 525 U.S. 366, 371 (1999) (holding that the government has rulemaking authority under the Telecommunications Act of 1996 and has jurisdiction to design a pricing scheme); *Texas Office of Pub. Util. Counsel v. FCC*, 183 F.3d 393, 406, 412 (5th Cir. 1999). Thus, the FCC is required by law to see to it that both universal service and local competition are realized.

<sup>60</sup> See 47 U.S.C. § 251-253.

<sup>61</sup> See Larry Abramson & Bob Edwards, *Dispute Over E-Rate Program* (Nat'l Pub. Radio broadcast, Nov. 24, 1998), available at LEXIS, News Group File.

<sup>62</sup> See *In re Access Charge Reform*, 15 F.C.C.R. 12962, app. B, at 56 (2000) (requiring price cap Incumbent Local Exchange Carriers to recover universal service costs through end user charges). A local exchange carrier provides local telephone service within particular geographical calling areas called local access transport areas. See *Comsat Corp. v. FCC*, 250 F.3d 931, 934 n.1 (5th Cir. 2001) (citing *Ass'n of Comms. Enter. v. FCC*, 235 F.3d 662, 664 (D.C. Cir. 2001); 47 U.S.C. § 153 (2001)). Incumbent Local Exchange Carriers are those local exchange carriers historically granted exclusive franchises to provide local service. See *id.*

<sup>63</sup> See *In re Federal-State Joint Board on Universal Service*, 12 F.C.C.R. 8776 (1997), cited

cess for poor, inner city and rural Americans to basic phone service, and efforts to finance access for schools, libraries and rural health care providers to advanced network technology have been met with resistance. For instance, since the implementation of E-Rate, its cost and utility have been questioned.<sup>64</sup> In addition, assumptions about how the E-Rate subsidies will be financed have not been borne out. The long distance companies that agreed to offset E-Rate costs with savings garnered from reductions in access fees instead elected to pass on the costs of subsidies directly to their subscribers.<sup>65</sup> This in turn has caused complaints from consumer groups and Congress.<sup>66</sup> In addition, some carriers have charged customers pass-through rates in excess of the actual cost of subsidies for the E-Rate and Link-Up and Life-Line services.<sup>67</sup> The Commission is currently deciding how to address this practice.<sup>68</sup>

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in *Evanns v. AT&T*, 229 F.3d 837, 839 n.2 (9th Cir. 2000), *cert. denied*, 121 S. Ct. 2262 (2001).

<sup>64</sup> See Abramson & Edwards, *supra* note 61. Some have questioned whether access to technology would improve performance enough to justify spending money on technology rather than access to quality teachers, safe schools, and a conducive learning environment. See *id.*

<sup>65</sup> See *Big 3 to Boost Long-Distance Phone Charges*, L.A. TIMES, July 2, 1999, at 1; Molly Ivins, *A Busy Signal for Consumers*, BUFF. NEWS, Mar. 17, 1999, at 3B.

<sup>66</sup> In 1998, long distance companies were alleged to have saved more than \$1 billion in access fees, including the cost of wiring schools and libraries, and yet elected to implement rate increases to pay for the E-Rate program. See Abramson & Edwards, *supra* note 61. The FCC encountered significant consumer and congressional opposition to its efforts to establish a fund of \$2.25 billion on the program in fiscal year 2000. See Carol L. Bowers, *Schools, Politics and the Internet*, UTILITY BUSINESS, June 1999, available at LEXIS, News Group File. It even reduced the size of the fund to \$1.66 billion in an attempt to appease lawmakers who thought the fund was too big. See *id.* A subsequent attempt to restore the fund to the original amount met with fierce opposition.

Companion bills were introduced by key Republican leaders, such as the former House Telecommunications Subcommittee Chairman Billy Tauzin (R-LA) and Senate Communications Subcommittee Chairman Conrad Burns (R-MT). The bills, if enacted, would have changed the source of funding for the program and capped its cost at a figure lower than \$2.25 billion. Specifically, the two bills would have reduced the three percent excise tax to one percent, and shifted that money directly to a schools and libraries project.

*Id.*

<sup>67</sup> See Kalpana Srinivasan, *FCC Considers Plan to Limit Phone Fees*, COMMERCIAL APPEAL (Memphis), May 9, 2001, at C1.

<sup>68</sup> See *id.*

[T]he commission requires telecommunications carriers to contribute 6.9 percent of their interstate and international revenues to a pot of money used to keep phone connections affordable in low-income and high-cost areas. That fund also helps wire schools and libraries to the Internet. About \$5 billion is collected for the subsidies, and each quarter, the commission re-evaluates the amount it charges the industry. It's up to phone companies to decide how and what amount to recover from their customers. Most carriers collect from consumers by assessing them a percentage of their total long-distance charges. But this percentage can be significantly higher than what the government asks of the phone companies, the FCC said in its proposal. For example, WorldCom, the nation's second largest carrier, . . . started charging residential consumers 12 percent of their monthly long-distance total as a line-item charge. AT&T, the



B. *Upsetting the Balance Between Competition and Subsidized Access*

Interexchange, ILEC, and CLEC reluctance to adhere to or accept without contest the new universal service finance regime was prompted by the new economics of the competitive marketplace.<sup>69</sup> The transition from monopoly to competition had already forced interexchange carriers to compete for key customer groups at lower rates.<sup>70</sup> The post-1996 market landscape has forced incumbent local exchange carriers to invest in new DSL-related plants sooner than planned, while reducing rates for high-end business and residential customers,<sup>71</sup> even as many of their network elements are required to be provided at cost to competitors.<sup>72</sup> Both IXC and ILECs are forced to invest in network plant build-out in anticipation of adjacent market competition.<sup>73</sup>

Competitive local exchange carriers find the regulatory window of opportunity upon which they relied to justify market entry and financing is closing fast.<sup>74</sup> The ILECs are beginning to successfully maneuver the § 271 requirement to demonstrate that their local markets are open to competition so that they may enter the long distance market.<sup>75</sup> The FCC, state public utility company ("PUC") and Department of Justice have approved Verizon's entry into New York's and SBC's entry into Texas' long distance markets.<sup>76</sup> Meanwhile, congressional legislation proposes to remove the requirement that an ILEC's local market be open to competi-

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nation's top long-distance business, and No. 3 carrier Sprint both require residential customers to pay 9.9 percent of their bill. 'They've' been using these new line items and inflated charges to mask higher long-distance pricing so they can still advertise a lower per-minute rate,' said Gene Kimmelman of Consumers Union.

*Id.*

<sup>69</sup> See Krause, *supra* note 13.

<sup>70</sup> See *id.*

<sup>71</sup> See *id.*

<sup>72</sup> See *Policy Seers Say Phone Future has Smaller State Roll, Broadband Duopoly, No AT&T or Clecs*, STATE TELEPHONE REG. REP., Aug. 3, 2001, available at LEXIS, News Group File; *Telric and Unbundling Rules Said to Inhibit Broadband Growth*, COMM. DAILY, July 27, 2001, available at LEXIS, News Group File; Fred O. Williams, *Feisty Companies Try Hard to Compete Against Giant Verizon*, BUFF. NEWS, June 17, 2001, at B9; *Struggling Telecom Firms Wait for the Next High Tide*, SAN JOSE MERCURY NEWS, June 4, 2001, available at LEXIS, News Group File; Richard Martin & Aaron Pressman, *Kennard Sticks Up for Small Telcos*, INDUSTRY STANDARD.COM, May 23, 2001, available at LEXIS, News Group File.

<sup>73</sup> See Krause, *supra* note 13.

<sup>74</sup> See *Hearing on the Internet Freedom and Broadband Deployment Act of 2001 Before the House Comm. on Com.*, Apr. 25, 2001, available at LEXIS, News Group File (statement of James W. Cicconi, General Counsel and Executive Vice-President, AT&T Corp.) [hereinafter Cicconi testimony]; Simon Romero, *Telecom Start-Up Will Cut Jobs and Halt Expansion*, N.Y. TIMES, Apr. 6, 2001, at C2; Jeffrey Eisenach, *Rescue Opportunity at the FCC*, WASH. TIMES, Feb. 4, 2001, at B4.

<sup>75</sup> See Cicconi testimony, *supra* note 74.

<sup>76</sup> See *id.*

tion in data transmission before the ILEC would be allowed to enter the market for long distance transport of data. Wall Street and the venture capital markets, responding to the change in regulatory winds, ILEC intransigence, slow returns on investment, and questionable CLEC business plans, are now pulling the plug on financing.<sup>77</sup> This last set of developments has had a significant role in the current economic downturn in the high-tech software, semiconductor and equipment markets.

For these reasons, early opposition to increasing the types of network access and services to be considered part of universal service is not likely to diminish. Similarly, opposition to regulatory efforts to require carriers to levy charges for universal service and the E-Rate as part of, rather than separate from, network and service charges levied by carriers is not likely to diminish. If anything, this opposition is likely to increase as legislators, regulators, members of the public, and Silicon Valley begin to push for broadband network services to be included within the definition of basic service subject to universal service support.

Under these circumstances, determining whether and to what extent a digital divide continues to exist is critical. If the divide is deemed not to exist, or diminishing because of the current pace of computer ownership, falling Internet access prices, and broadband deployment, it may be argued that there is no need to include broadband within the definition of basic service subject to universal service support. Further, it can be argued that there may be a diminishing need for continuing the E-Rate discount to schools and libraries and the high-cost area support to rural and insular areas. While such arguments are understandable, they are extremely short-sighted and ill-advised.

Congress, the courts, scholars and commentators have recognized the essential value of affordable network access to the nation. The network's value to its users increases as more users gain access to the network.<sup>78</sup> The migration of substantial commerce to the Internet in the wake of the rapidly increasing percentage of Ameri-

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<sup>77</sup> See McMinn testimony, *supra* note 13; Weinberg, *supra* note 12, at 77.

<sup>78</sup> For a discussion of network "effects" or "externalities," see Varun Grover & James T.C. Teng, *E-Commerce and the Information Market*, COMMUNICATIONS OF THE ACM, Apr. 1, 2001, at 79. See also Richard A. Posner, *Antitrust in the New Economy*, E-COMMERCE LAW REP., Dec. 2000/Jan. 2001, at 8; John McQuaid, *Brave New World; As Internet Changes Economy, Experts Debate; Does Rule Book Need a Facelift, Also?*, TIMES-PICAYUNE (New Orleans), Oct. 31, 2000, at 5; Alan E. Wiseman, *Economic Perspectives on the Internet*, POLICY PAPERS, July 31, 2000, available at LEXIS, News Group File; Grover Varkun & Pradipkumar Ramanlal, *Six Myths of Information and Markets: Information Technology Networks, Electronic Commerce and the Battle for Consumer Surplus*, MIS Q., Dec. 1, 1999, at 465.

cans online bears this out.<sup>79</sup> In addition to its value to commerce, the Internet, layered atop and interconnected with the public-switched and cable networks, provides critically valuable enhancements to the provision of medical, financial, educational, employment and government services.<sup>80</sup> Deferred access dooms the unconnected to a diminishing second class existence in an information rich economy and “democracy” where access and technology literacy are the lynchpins of personal empowerment and economic success.<sup>81</sup> The social cost of addressing those left behind is likely to be substantial in terms of lost education, employment and tax revenues, as well as in monies allocated to address the social fallout. Increased school drop out rates, renewed demands for welfare from an increasingly disenfranchised poor, expansion of a permanent criminal underclass and proliferating prisons would be some of the most likely immediately visible results. The cost to the nation’s competitive stature vis-a-vis the world could prove substantial as well. The nation would be forced to continue the import of skilled labor and over time, if the price of scarce skilled labor continued to grow, it could face the immigration of companies and the transfer of skilled jobs overseas. We would then be exporting jobs and technology know-how, while importing unemployment.

### III. A PROPOSAL FOR A BALANCED POLICY

As a consequence, it seems seriously shortsighted to declare the divide closed, or propose continued deferment of network availability and access to substantial communities and regions of the country in light of evidence to the contrary. However, it is equally shortsighted to insist that we finance network plant deployment by merely increasing the amount that companies and their end users pay to subsidize an expanded universal service program. Moreover, it is ineffective to propose tax incentive programs and

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<sup>79</sup> An Arbitron and Coleman Study, “The Broadband Revolution: How Superfast Internet Access Changes Media Habits in American Households” found that “the average American spends 33 percent of his or her typical media day with television, followed by radio (28 percent) and the Internet (11 percent). In broadband homes, however, the Internet’s share of media time surges to 21 percent, equivalent to television (24 percent) and radio (21 percent).” *In Broadband Households, the Internet Has Nearly Caught Up with TV and Radio in Battle for the Consumer’s Time*, BUS. WIRE, Sept. 22, 2000, available at LEXIS, News Group File.

<sup>80</sup> See John C. Leatherman, *Internet-Based Commerce: Implications for Rural Communities*, POLICY PAPERS, Sept. 1, 2000, available at LEXIS, News Group File.

<sup>81</sup> See *Persisting Digital Divide Puts Millions of Americans at Economic, Social, and Political Disadvantage*, ASCRIBE NEWSWIRE, Oct. 11, 2000, available at LEXIS, News Group File (citing a study by the Consumer Federation of America and the Consumer Union entitled, “Disconnected, Disadvantaged and Disenfranchised”).

low-cost loans to underwrite broadband deployment to rural areas and inner cities without an insistence on well-considered business plans establishing the current demand, a credible forecast for demand growth, and criteria for a reasonable return on society's investment. While it is reasonable, indeed required, that we factor the benefits of network effects into any determination of the return on investment, without the discipline of measurable benchmarks, we will be left to argue endlessly about whether our goals have been achieved. Such an oversight could lead to the establishment of a "permanent entitlement" or to a failure to adequately address the problem. The potential for the first result is a major reason why some businesses and economists argue for a strict marketplace approach. The potential for the second result is the concern of many in the public interest community who sincerely question the strength of the national commitment to assure equitable access.

Between the two poles of the debate lies the potential solution. The answer is not to succumb to the philosophical or political platitudes of either side. If we are to make such an investment, it must be made by all potential beneficiaries, it must be subject to measurement, and it cannot be open ended. It is imperative that Congress, the Department of Commerce, the state public utility commissions, the Joint Board and FCC develop a clear, fair, and reasonable set of measurable benchmarks and criteria for determining the existence, scope and continuing gaps of the digital divide. Further, it is imperative that these entities, in conjunction with the public and business stakeholders, develop clear deployment goals and timetables with measurable benchmarks (or clear criteria upon which to base a finding of whether deployment has been equitable), enforcement sanctions against redlining, and a presumption favoring sunset of the program within two investment cycles (roughly fourteen years)—absent evidence that the divide remains.

Clear goals, measurable benchmarks, and a presumption favoring sunset of the program, constitutes a good start but it is not enough. The companies seeking to take advantage of the opportunities that the nation's investment will afford must recognize that we are making an investment which benefits them as well. This means that those in the equipment and software industries who stand to benefit from accelerated deployment<sup>82</sup> must invest in the network's build-out to provide and operate the network infrastructure. Firms seeking to benefit from markets opened by regulation

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<sup>82</sup> See Eisenach, *supra* note 18.

must provide more than the promise of eventual competition and lower prices in currently underserved markets. If they must continue to rely on access to the physical plant of others and do not elect to provide broadband network build-out to underserved communities, they should still contribute to the universal service fund because they benefit from the network and network effects as well. Traditional telephone and cable network providers must contribute to the fund because they too will be long-term beneficiaries of not only the network effects, but of tax and loan incentives or subsidies as well. Finally, the Internet based retailers that receive the benefit of untaxed Internet transactions should also contribute.<sup>83</sup> If all who would benefit also invest, much of the unfairness and the reluctance it engenders could be avoided. The burden on any industry segment would remain relatively small, and the impact on ensuing competition would be diffused.

Even if we were to implement the solution proposed above, it is important to recognize that we will be establishing broad public policy and a substantial investment based on the compilation of technologies, industries, and markets as they exist today. This proposal does not account for further changes or upgrades in existing technology, nor does it address what new issues of equity might arise should a revolutionary technology or application present itself and destabilize the broadband market. In this regard, the Telecommunication Act's requirement that the FCC engage in a periodic assessment of broadband should remain in force.

#### CONCLUSION: CUTTING THE GORDIAN KNOT

At present, we have infrastructure and access needs that are pressing for reasons of short- and long-term social equity, economic growth, and national competitiveness. The short-term cost of deployment and the long-term cost of maintenance measured against the twin threats of technological innovation and competi-

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<sup>83</sup> See Ian Springsteel, *Awaiting the Internet Tax Man*, CFO MAG., Sept. 1, 1999, at 113; Heather Pauly, *An Unbalanced Retail Equation; States Worry About Web's Drain on Tax Revenue*, CHI. SUN-TIMES, Aug. 30, 1999, at 48. Congress placed a moratorium on new state-imposed taxes on Internet transactions. See Moira Cotlier, *As Web Tax Moratorium Runs Out, Confusion Grows*, CATALOG AGE, Apr. 2001, available at LEXIS, News Group File. However, with the moratorium ending this year, many states are seeking to impose taxes on Internet transactions. See David Phinney, *Governors Stake Positions on Taxing Cyberspace*, STATES NEWS SERV., available at LEXIS, News Group File; Edward Fitzpatrick, *R.I. Joins Ranks of States Seeking to Tax Web Sales*, PROVIDENCE JOURNAL-BULLETIN, July 30, 2001, at A1. Part of the reason for the renewed impetus is the fact that online purchasers have not been paying the taxes on the transactions even though they are required to. See Reid Kanaley, *Many Ignoring Net Sales Taxes*, DALLAS MORNING NEWS, June 9, 2001, at 2F. A significant push also comes from brick and mortar retailers who, unlike their online brethren, must pay taxes. See Jodie Jacobs, *Tilted Retail Terrain; Shops Seek Tax Parity*, CHI. TRIB., Mar. 18, 2001, at D5.

tive market entry have prompted the industry stakeholders to balk. This balk takes the form of slowed infrastructure deployment, regulatory stalling maneuvers, and legislative initiatives and counter-initiatives to purchase economic advantage or forestall economic loss. The current impasse is further complicated by the transition between political ideologies, which sometimes accompany changes in presidential administrations and political parties.

As a consequence, social equity, economic growth, and national competitiveness are placed at risk and ultimately suffer. To this point, the debate over how to address the divide has been largely cast in “we” versus “they” terminology. On something as fundamental as the evolving public switched/broadband network, a more national perspective is required. This article’s basic proposal is that since we will all benefit from the network’s build-out, we should all invest. The network is an evolving national asset critical to our democracy, national defense, education, economic competitiveness, and physical well-being. It belongs to all of us, and all who can bear some measure of responsibility for its expansion should do so.