

ELECTRONIC REDLINING: RACISM ON THE INFORMATION SUPERHIGHWAY?

CHAD M. KAHL

GRADUATE SCHOOL OF LIBRARY AND INFORMATION SCIENCE
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Electronic redlining is an alleged—some say purposively racist—practice by telecommunication firms which limits access to minority neighborhoods. It purportedly occurs when telecommunication firms bypass poor neighborhoods when offering new telecommunications technologies to more affluent areas. The issue was first raised by a coalition of public-interest groups who examined the Baby Bells’—the regional telecommunication firms created by the break-up of American Telephone and Telegraph’s monopoly in 1984—video dialtone installation proposals to the Federal Communications Commission (FCC) and filed a petition on May 23, 1994 in an effort to receive a clarification of policy and statement opposing segregation. Inequalities in Internet access, the coalition’s allegations, Baby Bell installation proposal case studies, the National Information Infrastructure, and the Telecommunications Act of 1996 are all examined in an effort to fully understand the issue. It has sparked debates over racism and discrimination at the beginning of what many people see as the Information Revolution. Seemingly, existing presidential support of the ideals of the National Information Infrastructure and favorable interpretations of the new Telecommunications Bill will prevent electronic redlining from continuing, but the installation and regulatory process has just begun. Given the importance of the issue, library professionals should push for a sustained effort to ensure regulation against its occurrence.

“I see this as the civil rights issue and the economic rights issue of the 21st century”

—Jeffrey Chester, *Executive Director of the Center for Media Education*
(cited in Stuart, 1995, p. 60)

INTRODUCTION

The term “electronic redlining” is derived from “redlining”, a term used to describe the so-called practices of banks and insurance companies to “draw a red line” around disadvantaged neighborhoods, refusing to offer mortgages or insurance policies (Oxford English Dictionary, 1989, p. 421). Electronic redlining is an alleged—some say purposively racist—practice by telecommunication firms, which limits access to minority neighborhoods. It purportedly occurs when telecommunication firms bypass poor neighborhoods when offering new telecommunications technologies to more affluent areas. This issue is clearly of concern to library professionals, who support universal access of people to all forms of information. Moreover, it has sparked debates over racism and discrimination at the beginning of what many people see as the Information Revolution.

INTERNET INEQUALITIES

Minority access to the Internet is limited due to a variety of reasons. Numbers bear out the problems facing minorities in getting onto the information superhighway. African-Americans and Latinos make less money than do white, non-Hispanic households; this is clearly a disadvantage given the expense of a computer, modem, and on-line access. According to the U.S. Census Bureau, the average household income in 1993 for whites was \$43,285, of which 11.7 percent live in poverty; for African-Americans, \$27,229, of which 30.6 percent live below the poverty line; and approximately \$30,291 for Latinos, of which 30.7 percent live below the poverty line (Dept. of Commerce, 1996, p. 463, 470).

The percentage of households with an income between \$20,000 and \$25,000 which own a computer is about 16 percent. For households with incomes between \$35,000 and \$50,000, the percentage more than doubles to nearly 35 percent (Gonzalez, 1995, p. 7). For those with a household income of greater than \$75,000, the percentage with computers nearly doubles again to 68 percent (Marriott, 1995, p. 50).

Overall, only 30 percent of American households have computers ("A New," 1995, p. 25). As the previously stated numbers illustrate, the lack of availability becomes even greater when these socioeconomic factors are also taken into consideration. As expected, given the income disparity between ethnic groups—although not simply limited to fiscal reasons—African-Americans and Latinos have much less access to computers, at both home and school. Only 12.9 percent of Hispanic households and 13.8 percent of African-American households own a personal computer, compared to 26.9 percent for white households (Evans, 1995, p. 45). In terms of the percentage of population having access to computers in their home, 43 percent of the white population manages, versus 16 percent for African-Americans and 15 percent for Hispanics (Marriott, 1995, p. 50). To understand the impact of those numbers, recent statistics regarding Internet usage show that most occurs by those who own computers at their residence. In a study by the University of Toronto, of those who used the Internet, 91 percent owned their own computer, 76 percent owned a modem and 56 percent accessed it from home (Shade, 1995, p. 216-17). Therefore, the lack of a computer at home makes it much more likely that the information superhighway will be bypassed.

Furthermore, Latino and African-American households may also lack even rudimentary phone service needed for any on-line services. According to the FCC, of the Latino households with an income of less than \$25,000 (66 percent of total Hispanic households), 20 percent lack phone service (Larson & Wilhelm, 1994, p. 2), and in some predominantly black inner-city neighborhoods, 25 percent of the households have no phone service (Gardy, 1995, p. 10). This compares to an overall national ownership rate of 94 percent (Larson & Wilhelm, 1994, p. 3). This is even more evident when considering modem ownership: only 518,000 blacks have modems, compared with 10.1 million whites (Leslie, 1995, p. 62).

Similar concerns exist within the educational system, although access for minorities is much greater in these public institutions. Approximately 52 percent of African-Americans and Hispanics have access to com-

puters at school, versus 62 percent for whites (Marriott, 1995, p. 50). The ratio of computers-to-students is falling every year, however many of the available computers are likely to be older equipment incapable of accessing the Internet. As such, much of this computer availability may do little to improve minority access to the Internet. For instance, according to Quality Education Data, nearly half of the computers (46 percent) owned in 1994 by K-12 classrooms were obsolete Apple IIs (Reinhardt, 1995, p. 58). Currently, only 3 percent of K-12 classrooms are connected to the Internet, and only 35 percent of schools have Internet access (Gonzalez, 1995, p. ii). Of those schools with modem connections, only half allow the students to utilize the outside access, according to a Department of Education report (Marriott, 1995, p. 52).

Increasing these percentages will be difficult and expensive. Schools are not well equipped to handle new telecommunication needs: 46 percent lack sufficient electrical wiring for computers and one-third lack adequate electrical power (Lieberman, 1996, p. A2). In all, only 5-12 percent of classrooms nationwide have phone lines (Reinhardt, 1995, p. 58). According to President Clinton's Advisory Council on the National Information Infrastructure, "connecting all public schools to the Internet by 2000, with about 25 computers per school, would cost some \$11 billion" ("NII Panel," 1996, p. 81).

Many African-Americans and Latinos therefore face tremendous challenges: incapable of affording a computer, modem, subscription to an on-line service or even, in many low-income households, a phone line. However, the obstacles facing minority groups do not simply relate to economics. Often they lack the ability to participate in the decision-making process of the telecommunication companies which provide these services. This is due in a large part to the near absence of minority ownership in the telecommunications industry.

The telecommunications industry is overwhelmingly dominated by non-minority interests, with only a small portion of the over half-trillion dollar industry in the hands of minorities. For instance, according to the United States Department of Commerce, regarding the broadcasting sector of the industry, African-Americans own 193 (1.7%), and Hispanics 120 (1.1%), of the approximately 10,000 commercial broadcast stations (Suarez & Cull, 1995, p. 9). "The broadcasting industry began when people weren't really sensitive to including different population groups. That's a mistake we don't want to repeat with the new technologies" says Jo Ann Anderson of the National Congress for

Community Economic Development (cited in Scott, 1995, p. 55). Those new technologies include personal communications services (PCS) licenses which have been auctioned by the FCC since 1993. Since then, Congress has mandated that minority, women, and small and rural businesses receive business opportunities in this latest generation of wireless communications services. Provisions were created for these 'designated entities,' as they are known, which included a 25% bidding credit, payment plans, and a special entrepreneurs block of the spectrum (Jones, 1995, p. 37).

However, since the Republicans took over Congress, many of these minority-interest programs have come under attack. Congress repealed the original affirmative action PCS mandates, replacing them with a simple monetary standard for any company with less than \$40 million in revenue; special considerations for minorities and women were eliminated (Jones, 1995, p. 37). Moreover, Congress repealed the minority communications tax break, which allowed a company to avoid capital-gains taxes if they sold their broadcast or cable company to a minority-interest group (Bradsher, 1995, p. 39). With these affirmative action programs eliminated or scaled back, most African-American and Hispanic firms simply cannot acquire enough capital to fully fund the purchase of telecommunication firms, nor make the investments necessary to participate in the growth of the information superhighway (Suarez & Cull, 1995).

ELECTRONIC REDLINING

Many minority activists point to the phenomenon of "electronic redlining" to illustrate what occurs when minority interests are not represented in the telecommunications industry. According to Jeffrey Chester, executive director of the Center for Media Education, which co-sponsored a study on the plans of regional telephone companies to wire advanced telecommunications networks for video dialtone, "the pattern is clear—low-income and minority neighborhoods are being systematically underrepresented in these plans" (cited in Lohr, 1994, p. A1, D3). Chester goes on to say that "current trends indicate that this technology will be available only to the affluent . . . [and] that if disadvantaged communities receive access five to 10 years after the initial groundwork, an entire generation of lower-income Americans will fall even further behind the general populace" (cited in Bryant, 1995, p. 47). Minority telecommunication activist groups fear that already disadvantaged groups will be denied access again: prevented from accessing the information super-

highway and prevented from benefiting from its economic advantages.

The study was commissioned by a coalition of the Center for Media Education (CME), the Consumer Federation of America (CFA), the Office of Communication of the United Church of Christ, the National Association for the Advancement of Colored People (NAACP), and the National Council of La Raza. Upon examination of the deployment plans for the installation of video dialtone, a medium which allows video, audio, and data to be transmitted on two-way high-capacity wires, the group "noticed a pattern in the proposals and maps provided by the companies. Specifically, telephone common carriers appear[ed] to be avoiding lower income areas and areas with a high concentration of minority residents in the service plans" (CME et al., 1994).

The coalition hired Dr. Mark Cooper, a leading expert in telecommunications economics and policy, to investigate these charges. Cooper examined at least two applications from each of the four Baby Bell telecommunication firms—Bell Atlantic, US WEST, Ameritech, and Pacific Bell—which targeted larger metropolitan areas. Using data and maps provided by service applicants, marketing data and census information, Dr. Cooper concluded that there is "a clear and systematic pattern of not serving lower income areas, which turn out to be much more heavily minority areas" (CME et al., 1994). This practice included bypassing the urban center of a city, as was found in the case of US West's scheduled deployment in Denver and Ameritech in Chicago, or choosing wealthier counties while ignoring adjoining poorer, higher-percentage minority ones, as was the case in the Washington, D.C. deployment plan (CME et al., 1994). These results prompted the groups to file a "Petition for Relief from Unjust and Unreasonable Discrimination in the Deployment of Video Dialtone Facilities" with the FCC in an attempt to have it "clarify its rules and issue a policy statement opposing discrimination as the networks are built" (Carnevale, 1994, p. B6) and before many of the applications for construction were approved. At the time of the petition, 214 applications had been filed, 18 were pending, and only five experimental ones had already been approved (CME et al., 1994).

The petitioners felt there were a number of fundamental issues that had to be addressed. First and foremost were concerns over loss of "universal service." Universal service was created by Sec. 1 [47 U.S.C. 151] of the "Communications Act of 1934." The Communications Act, which until recently was the backbone of

our telecommunications system, stated that one purpose of the act was “to make available, so far as possible, to all the people of the United States a rapid, efficient, Nation-wide, and world-wide radio communication service with adequate facilities at reasonable charges” (U.S. House of Representatives, 1995, p. 3). This concept of universal service was created to force carriers into providing service for rural and disadvantaged areas even though they would incur losses. The cost was paid for through subsidies taken from the wealthier, typically urban, business and long-distance customers (Ramirez, 1994, p. 6).

This was an even greater issue before the passing of the recent (1996) telecommunications bill. “The traditional regulatory model, in which the Government allows a company to operate as a monopoly in exchange for fulfilling social obligations like universal access, may no longer fit the new competitive market” (Lohr, 1994, p. D3). Furthermore, minority groups are concerned that without government regulation, telecommunications firms will offer services and make capital investments solely based on market concerns rather than guarantee universal access (Evans, 1995; Lohr, 1994). The petitioners feared that “a nation whose economic life relies so heavily on information . . . cannot afford a citizenry, divided by its access to information. Inequitable access could widen the social, political and economic disparity between the wealthy and poor” (CME et al., 1994). They see the ability of the information superhighway to enable distance learning as particularly useful for disadvantaged neighborhoods who have suffered from racist, segregationist policies of prior years. They would have access to ideas and information which had not been allowed to enter minority neighborhoods due to civic and school segregation. By wiring these neighborhoods initially, the minorities would be part of the next revolution from the start forward, rather than being forced to catch up over the course of decades.

Second, the process of redlining would be inherently discriminatory and therefore would violate Section 202 [47 U.S.C. 202] of the Communications Act of 1934 which prohibits discrimination and preferences:

- (a) It shall be unlawful for any common carrier to make any unjust or unreasonable discrimination in charges, practices, classifications, regulations, facilities, or services for or in connection with like communication service, directly or indirectly, by any means or device, or to make or give any undue or unreasonable preference or advantage to any particular person, class of persons, or locality, or to subject any particular person, class of persons, or local-

ity to any undue or unreasonable prejudice or disadvantage (U.S. House of Representatives, 1995, p. 31)

The coalition of public interest groups made this claim because they felt purposive redlining violated two of three main goals set forth by the FCC when it authorized the video dialtone rules.

First, the FCC felt that by promoting competition in the marketplace, all consumers would benefit from technological and service innovation. If a segment of society were excluded from these technologies, then clearly this goal would not be met. Greater diversity of video programming was the second of the three goals that was not being met. If minorities were excluded from receiving dialtone technology, they would also be prevented from receiving new programming. Given the two-way nature of the technology, the ability to easily provide feedback, ensuring greater variance in programming, would be lost as well (CME et al., 1994). Lastly, the FCC hoped that dialtone technology would allow these disadvantaged communities to participate more fully in the democratic process. Through the use of two-way videoconferencing and electronic mail, citizens from all over the country could participate in debates, question political leaders and enjoy the rights of free speech (CME et al., 1994).

BABY BELL INSTALLATION PROPOSAL CASE STUDIES

The debate over the efficacy of charges about electronic redlining can be best examined through case studies. The first prominent case involved US West, the regional Bell telephone company based in Denver. As mentioned earlier, US West was accused of “electronic redlining” in Denver when it skipped over large portions of the center of the city, an area with a heavy concentration of minorities, in the initial deployment plan. Jerry Brown, a spokesperson for US West stated that “to say that we’re going to stay out of areas permanently is dishonest and ridiculous. But we had to start building our network someplace. And it is built in areas where there are customers we believe will use and buy this service. This is a business” (cited in Lohr, 1994, p. D3). US West later released its own report in which it claimed that its deployment plan was equitable. “In Denver, [US West] said 26.71% of people in its service territory are ethnic minorities. In the area proposed for multimedia service, however, 29.32% are ethnic minorities. In a number of other markets, US West figures showed

that minorities will be represented at levels equal to or better than the community at large" ("US West," 1994, p. D6). Critics pointed to Omaha, Nebraska, where only 5.17% of the people served were minorities versus an overall percentage of 14.72. US West said that this area was targeted for building because it was an area of heavy home construction where new equipment, rather than upgrades could be deployed (p. D6).

"At Bell Atlantic, we are sensitive to the need to deploy our network in all areas that we serve. We have repeatedly stated our intention to do so" said Edward Young, vice president and assistant general counsel at Bell Atlantic Corporation (Lohr, 1994, p. D3). Bell Atlantic backed these assertions with their next set of filings to the FCC when they included disadvantaged neighborhoods.

The filings, Bell Atlantic says, put charges of economic redlining to rest by including several poor areas among those slated to receive the advanced networks: "The good thing is that Bell Atlantic has been listening. A few months ago they were only going to serve wealthy areas" ("Bell Atlantic," 1994, p. 12).

In California, Pacific Telesis has taken criticism for its four initial wiring sites. The four—Silicon Valley, San Diego, San Fernando Valley, and Orange County—are among the most affluent areas in the state. Pacific Telesis spokesperson Craig Watts said critics' fears about a race-based agenda are premature and unfounded, "We believe that the ethnic makeup of the areas where we are deploying the new broadband network mirrors the ethnic makeup of California" (cited in Carnevale, 1994, p. B6). He admitted that financial concerns played a role as well, but not in a discriminatory manner, "We plan to do this without raising rates . . . To do that we must bring [the new network] to areas where it will generate some business and revenues, so that we ultimately we can bring it to everyone in the state" (Carnevale, 1994, p. B6). Overall, Watts remarked that installment decisions were made

"where we felt that the most competition would come from cable companies . . . In any widespread service, you have to start somewhere. When you throw a pebble into a pond, the ripples go in all directions. All we can tell them is that we did the best we could, and we're getting to them as quickly as possible" (cited in Bryant, 1995, p. 47).

Starting in May 1994, the company hopes to have half of California wired by 2000 and the rest of the state by 2010. This does little to satiate critics who fear that another generation will be lost in the fifteen years it will take to complete the installation.

Ameritech's video dialtone proposal was announced on January 27, 1994. Its "plan to bring digital video services to customers through optical fiber will start by targeting nearly two dozen Chicago-area suburbs and parts of more than 40 others, but not the city itself" (Van, 1994, p. 3). Overall, it plans on upgrading approximately one million lines each year until the end of the century, at a cost of \$4.4 billion (Van, 1994, p. 3). The plan was reviewed by Tony Pharr, who represented the United Church of Christ and the Communication Task Force for the National Council of Churches. His findings noted that:

The Ameritech proposal, involved 28 communities in Illinois. For the State as a whole, 75 percent of the population is white and 25 percent is non-white. However, in the 28 communities that are included in the Ameritech proposal, 22 had minority population less than 25 percent, and 18 had minority populations less than 10 percent. In only 1 of the 28 communities did non-whites constitute a majority of the residents. In 26 of the 28 communities the median household income was higher than the median income for the state as a whole. The median household income for the entire state of Illinois in 1990 was \$32,252. The average 1990 median income for the 28 communities in the Ameritech proposal was \$46,337 (Love, 1994).

Ameritech disagreed with the coalition's finding and commented that "to make sure its video services can be profitably marketed the company purposely selected areas that are not homogeneous; instead [it] mapped areas that represent broad cross-sections of suburban Chicago and the Midwest" (Arndt, 1994, p. 3). They also noted that there were still traditional avenues for access to the information superhighway, such as cable TV and regular phone lines. Mike Brand, a spokesman for Chicago-based Ameritech summarizes that "their basic contention that this will be the single source of information, is wrong . . . It's no longer a one-wire world" (cited in Arndt, 1994, p. 3).

Clearly, as the case examples show, there are two differing opinions at what is best when it comes to installing technology necessary to take households onto the information superhighway. The coalition argues that cognizant decisions were made by the telecommunications firms to segregate disadvantaged neighborhoods. Telecommunications strongly deny such claims and take one of three positions: 1) they may argue, as in the case of US West, that in most cases they were providing demographically proportional installation plans; 2) they may admit that business decisions played an

important role, but that they also helped to ensure installation for everyone, as in the case of Pacific Telesis and Ameritech; and 3) as in the case of Atlantic Bell, they may alter their plans and provide services to areas which previously had been bypassed. In each case, the telecommunication company admitted no wrongdoing and claimed that it was neither their intent nor practice to segregate, but simply to make the best possible business decisions. In the end, this struggle has become part of a bigger debate over the direction of governmental policy. This policy, contained in the plans for the National Information Infrastructure, the nation's blueprint for the information superhighway, has been further supplemented by recent, seemingly favorable legislative action by Congress, which has guaranteed universal service and authorized discounted telecommunications rates for libraries, K-12 schools and rural health care providers.

NATIONAL INFORMATION INFRASTRUCTURE

The National Information Infrastructure (NII) is the U.S.' blueprint for the development of the information superhighway into the twenty-first century. It is based on five principles: 1) universal access and services; 2) privacy and security; 3) intellectual property; 4) education and lifelong learning; and 5) electronic commerce (National Information Infrastructure Advisory Council [NIIAC], 1995, p. 7). From the start, therefore, the NII has included universal access as one of its five principles, as guaranteed and underscored by the Clinton administration. The inclusion of this principle helps to allay the fears of many who fear electronic redlining. Furthermore, NIIAC has put together a set of seven universal access and universal services principles in its first report, *Common Ground: Fundamental Principles of the National Information Infrastructure*.

1. The national goal for every individual is to have basic levels of access and service capabilities to the NII and the interactive and multimedia infrastructure deployed by 2005.
2. To ensure NII access and service capabilities to all by the year 2000, the second principle involves an effort to connect all community-based institutions—e.g., schools, libraries, and hospitals.
3. “[C]ommercial and competitive initiatives should be the driving force behind the NII, and regulatory disincentives should be removed” (p. 8).

4. Individuals are seen as both consumers and producers, due to the two-way capabilities of the information superhighway.
5. Equal access for persons with disabilities.
6. Free and open access to all levels of government.
7. “If commercial and competitive forces do not achieve the goal of universal access and service, support mechanisms such as incentives and subsidies should be evaluated and implemented as appropriate to meet the goal. Any support mechanism should apply equally in a competitively neutral manner to all market participants” (p. 8).

In principle, the concerns of the coalition fighting electronic redlining would be allayed. However, a number of important considerations remain. As noted before, many of the target dates seem questionable at best, especially when the enormous costs to wire all public institutions, not to mention private homes, are considered in this era of limited spending and balanced budgets. Clearly corporate money cannot be found to make up for all the government shortages encountered in this infrastructure project. Already, much of the wiring done for schools is paid for by private and corporate donations. Furthermore, the private interests have a strong say in these principles, as noted in principles three and seven. Market influences of private industry are given priority in this report. Only if those market influences fail are public-interest/governmental regulatory efforts to be undertaken. This can be evidenced by the complete reliance on private firms, such as the Baby Bells, to rewire consumers' homes.

TELECOMMUNICATIONS ACT OF 1996

On February 1, 1996, Congress passed S.652, the “Telecommunications Act of 1996.” The Act represented the first comprehensive rewrite of United States communications laws since their inception in 1934 and stands as the most sweeping reform of FCC policy enacted in decades. President Clinton signed the Act on February 8, 1996, and its provisions became effective immediately. Once again, access to all regions of the nation was assured by the Act. Furthermore, access for rural and high cost areas was protected in Section 254, “Universal Service”:

consumers in all regions of the nation, including low-income consumers and those in rural, insular, and high cost areas, should have access to

telecommunications and information services, including inter-exchange 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 (Blumenfeld & Cohen, 1996)

Also, Congress voted that elementary and secondary schools and classrooms, health care providers, and libraries should have access to advanced telecommunications services. This portion of the bill, known as the Snowe-Rockefeller-Kerry-Exon provision "authorizes discounted rates for advanced telecommunications services for libraries, K-12 schools, and rural health care providers" ("Telecom Act," 1996, p. 81).

However, there are still concerns for supporters of the coalition efforts. The definition for universal service is ambiguous. Section 254 notes that "universal service is an evolving level of telecommunications services that the Commission shall establish periodically under this section, taking into account advances in telecommunications and information technologies and services" (Blumenfeld & Cohen, 1996). Richard Klingler (1996) noted that "universal service has been a centerpiece of recent legislative proposals, but the Telecommunications Act of 1996 principally leaves the terms and related regulatory requirements undefined and awaiting further definition" (p. 87). As a result, proponents of minority rights in the future are quite anxious and especially worried about when the NII-friendly Clinton/Gore administration leaves office. Currently, the presidential administration has made access to public institutions, and eventually universal access, centerpieces of its communication policies. Given the great debate over this bill, the tremendous amount of money spent by both sides, especially by the telecommunications industry lobby, and the current battle over censorship in the Supreme Court, it is likely that battles are still to be fought over the meaning of language in the bill. Therefore, the battle may have been won by proponents of the disadvantaged, but there still is a war to fight.

CONCLUSION

The dawn of the twenty-first century brings the promise of a new era in humankind, an Information Revolution. Currently, society has the tools which will allow persons from all over the world to have access to ideas, information, and resources previously unavailable to them. The promise is tantalizing to disenfranchised

minorities who have faced discrimination in the past and often had to struggle for years to simply get what others have already attained. Proponents of minority rights argue that electronic redlining is yet another attempt to segregate the disadvantaged through racist policies. The accused vehemently deny such charges and argue that market forces and the state of governmental financing are forcing them to go where the money is, at least in the short term. At this point it becomes a question of "what comes first, the chicken or the egg"? Will immediate access to the information superhighway allow the disadvantaged access to a better future? Or does a better future, 10 to 15 years after everyone else, still hold promise? Hopefully, the existing presidential support of these peoples' concerns, and favorable interpretations of the new Telecommunications Bill, will allow African-Americans and Latinos to have a piece of the pie at the beginning of the line rather than at the end. Was Jeffrey Chester wrong? Hopefully, the universal access ideals of the Telecommunications Act of 1996 and the NII prevent electronic redlining from being an issue for the twenty-first century, leaving it as a relic of the twentieth.

REFERENCES

- Arndt, M. (1994, May 24). Coalition calls phone companies' video plans unfair. *Chicago Tribune*, (Section 3), p. 3.
- Bell Atlantic files more video applications. (1994). *Broadcasting & Cable*, 124(25), 12.
- Blumenfeld & Cohen, Technology Law Group. (1996). *Telecommunications Act of 1996* (An index to the Act). Washington, DC: Law Group. Available from <http://www.technologylaw.com/techlaw/act_index.html>
- Bradsher, K. (1994, March 25). Senate votes to end minority broadcast and cable tax break. *The New York Times*, p. 39.
- Bryant, H. (1995). Will there be red-lining in cyberspace? *Black Enterprise*, 26(July), 47.
- Carnevale, M. (1994, May 24). Coalition charges four phone firms with 'redlining' in adding networks. *Wall Street Journal*, p. B6.
- Center for Media Education, Consumer Federation of America, Office of Communication of the United Church of Christ, National Association for the Advancement of Colored People, & National Council of La Raza. (1994). *Petition for relief from unjust and unreasonable discrimination in the deployment of video dialtone facilities* (Petition to The Federal Communications Commission). Available from the Center for Media Education homepage <<http://www.epn.org/cme/future/redline.html>>
- Department of Commerce. (1996). *Statistical Abstract of the United States, 1996* (116th ed.). Washington, DC: Government Printing Office.
- Evans, V. T. P. (1995). Blackout: Preventing racial discrimination on the net. *Library Journal*, 120, 44-46.
- Gardy, A. (1995, March 12). Forging links between inner cities and the Internet. *The New York Times*, p.10.
- Gonzalez, E. (1995). *Connecting the nation: Classrooms, libraries, and health care organization in the information age*.

- Washington, DC: National Telecommunications & Information Administration.
- Jones, J. (1995). The Continuing PCS mess. *Black Enterprise*, 26(September), 37-38.
- Klingler, R. (1996). *The New information industry: Regulatory challenges and the first amendment*. Washington, DC: Brookings Institution Press.
- Larson, A., & Wilhelm, A. (1994). *Latinos and the information superhighway* (Policy Brief). Claremont, CA: The Claremont Graduate School, The Tomas Rivera Center Policy Brief. Available from <http://www.cgs.edu/inst/trc_super1.html>
- Leslie, C. (1995, July 31). Cybersoul not found. *Newsweek*, 126, 62-63.
- Lieberman, D. (1996, March 27). New media bring world into classes. *USA Today*, pp. A1-A2.
- Lohr, S. (1994, May 24). Data highway ignoring poor, study charges. *The New York Times*, pp. A1, D3.
- Love, J. (1994, March 17). *Anti-redlining amendment added to cable/telco legislation* (Information Policy Note). Available from Taxpayer Assets Project gopher site <gopher://gopher.cpsr.org:70/11/taxpayer_assets/Anti-Redlining_Amendment_in_Ca>
- Marriott, M. (1995, February 27). The Have and have-nots. *Newsweek*, 124, 50-53.
- The National Information Infrastructure Advisory Council [NIIAC]. (1995). *Common ground: Fundamental principles for the National Information Infrastructure*. Washington DC.
- A New divide between have and have-nots? (1995, Spring). *Time*, 145, 25-26.
- NII panel urges schools and libraries to go online. (1996). *American Libraries*, 27(2), 8.
- Oxford English Dictionary* [2nd ed.]. (1989). Oxford, UK: Oxford University Press.
- Ramirez, A. (1994, January 23). Providing for the have-nots of the new information age. *The New York Times*, (Section 4), p. 6.
- Reinhardt, A. (1995). New ways to learn. *Byte*, 20(March), 52-72.
- Scott, M. (1995). Quest to own the information highway. *Black Enterprise*, 25(June), 55.
- Shade, L. R. (1995). Wired in the ivory tower: Access and copyright issues surrounding the internet and higher education in North America. *Education for Information*, 13(September), 221-228.
- Stuart, R. (1995). Hi-Tech redlining: African-Americans risk becoming 'road-kill' on the emerging information superhighway. *Emerge*, 6(November), 60-66.
- Suarez, R. & Cull, R. (1995). *Capital investment and investment in minority business enterprises in the telecommunications industries*. Washington, DC: National Telecommunications & Information Administration.
- Telecom act draws mixed reviews from librarians; ALA files challenge. (1996) *American Libraries*, 27(3), 8-9.
- U.S. House of Representatives. (1995, February). *Compilation of selected acts within the jurisdiction of the Committee on Commerce: Communication laws* (Committee on Commerce Print 104-C). Washington, DC: Government Printing Office.
- US West releases data to refute bias charges. (1994, June 3). *The Wall Street Journal*, p. D6.
- Van, J. (1994, February 2). Ameritech fiber links going to suburbs first. *Chicago Tribune*, (Section 3), p. 3.