

THE INTERNET AND THE AMERICANS WITH DISABILITIES ACT: THE EVOLVING "READILY ACHIEVABLE" STANDARD

FRANK J. CAVALIERE*
CARTER WILLIAMS**

I. INTRODUCTION

In January 2002 there were approximately 117 million sites constituting the active Internet universe.¹ People with disabilities, however, are less likely than those without disabilities to be Internet users.² Part of the problem is that most Web sites are not fully accessible to people with disabilities.³ Rectifying this situation will not be an easy task. Retrofitting existing Web sites to make them fully accessible is daunting. There are a variety of legal, political, economic, social, and technological issues adding to the complexity. The current status of the law on this issue is shrouded in confusion and uncertainty. This paper will endeavor to explain the current state of the law, and the macroenvironmental forces that may alter the discussion in the future.

*Professor of Business Law, Lamar University

**Visiting Assistant Professor of Economics and Business Law, Lamar University

¹ See CyberAtlas at

http://cyberatlas.internet.com/big_picture/traffic_patterns/article/0,,5931_975671,00.htm. The staff of CyberAtlas defines an active Web site as one that has actually been surfed during the reporting period. While active Web sites had increased slightly (0.9%) from the previous month, the total Internet universe was reported to have shrunk by 5.3% from December 2001.

² U.S. DEPT. OF COMMERCE, A NATION ONLINE: HOW AMERICANS ARE EXPANDING THEIR USE OF THE INTERNET CHAPTER 7, COMPUTER AND INTERNET USE AMONG PEOPLE WITH DISABILITIES (Feb. 2002) at <http://www.ntia.doc/ntiahome/dn/html/toc.htm>.

³ Even those who are concerned with accessibility find it difficult to create accessible material. The Royal National Institute of the Blind had the following response to a European Union commission report titled *eEurope: An Information Society for All*: "Before we begin with our specific comments on the content of the Directive, we would just like to make two comments about the document itself. Firstly, we were extremely disappointed to find that, ironically, a document with a significant section on accessibility for disabled people, was not in fact accessible to blind and partially sighted people, being available only in PDF format on the Commission Web site. The Commission cannot expect to consult properly with disabled people unless it first takes the basic steps to ensure that its consultation documents can be accessed," available at <http://www.rnib.org.uk/digital/eeurope.htm>.

II. DOES THE ADA REQUIRE PUBLIC ACCESS TO BUSINESS WEB SITES?

On November 4, 1999, the National Federation of the Blind⁴ filed a lawsuit against America Online (AOL)⁵ based on AOL allegedly failing to accommodate the needs of people with disabilities as required by the American with Disabilities Act (ADA).⁶ Specifically, the NFB claimed that AOL had failed to make its service accessible to the blind. In July 2000, the parties reached an agreement to suspend the suit with AOL promising a number of initiatives aimed at making its site compliant in the near future. According to the AOL "accessibility policy":

We . . . believe that the Internet and AOL should be friendly and easy-to-use for all consumers, including those with disabilities. In that spirit, we have developed the America Online Accessibility Policy which expresses our commitment to the development of products and services that are accessible to all users, including those with disabilities.

The fundamental issue in the case was the applicability of the ADA to Web site access. According to the settlement reached by the parties, AOL:

11(i) expressly denies that any of its products, services or online content, including the 'AOL service' alleged in the Action is subject to the ADA; [and] (ii) expressly reserves its right, in response to any action alleging violations of the ADA, or any state or federal statute or regulation relating to the accessibility of places of public accommodation, to assert its defense that the ADA and/or such other state or federal statutes and regulations do not apply to any of AOL's products, services, or online content.⁷

III. STATUTORY GUIDANCE

While the focus of this paper is on the applicability of the ADA,⁸ about which there is much controversy and confusion, some insight may be gained from a review of related

⁴ The National Federation of the Blind Web site is available at <http://www.nfb.org>.

⁵ Nat'l Fed'n of the Blind v. Am. Online, Inc., 99CV12303EFH (D.C. Mass.).

⁶ 42 U.S.C. §12101.

⁷ The settlement is available online at <http://www.nfb.org/Tech/accessibility.htm>.

⁸ It is important, however, to remember that the ADA also protects employment opportunities for the disabled in addition to providing for access to public accommodations. To the extent an employee is disadvantaged at work by an employer's Web site, accommodation would probably be necessary under the ADA, unless it would result in an undue hardship to the employer. This aspect of the ADA has not generated the fear and trepidation inspired by the public accommodation aspect. The universe of employees is finite, disabled employees are already entitled to a variety of workplace accommodations, and employees can be accommodated in a number of ways. Having a Web site deemed a public accommodation, on the other hand, places a duty on the company to meet the needs of an unlimited number of strangers. Advocates for the disabled are adamant in their view that not only does the ADA clearly apply in this setting, but that the government has clearly declared that to be the policy since 1996.

provisions of the Vocational Rehabilitation Act of 1973 (Rehabilitation Act),⁹ which served as a forerunner to 1990's Americans with Disabilities Act. The two acts share the same basic purposes and much of the same language. The major initial difference between the two statutes was the extent of their coverage and effect. The Rehabilitation Act primarily applies to the government and federal contractors¹⁰ and was thus insufficient to prevent discrimination in the private sector.¹¹

A. THE REHABILITATION ACT'S "UNDUE BURDEN" STANDARD

Section 502 of the Rehabilitation Act created the Access Board,¹² originally named the Architectural and Transportation Barriers Compliance Board. On August 7, 1998, President Bill Clinton signed the Rehabilitation Act Amendments of 1998,¹³ which require access to electronic and information technology provided by the Federal government. Under the 1998 Amendments, the Access Board "is responsible for developing accessibility standards for such technology for incorporation into regulations that govern Federal procurement practices."¹⁴ Federal agencies are required to purchase electronic and information technology that is accessible except where it would cause an "undue burden." According to the Board: "Section 508 speaks to various means for disseminating information, including computers, software, and electronic office equipment. It applies to, but is not solely focused on, Federal pages on the Internet or the World Wide Web. It does not apply to web pages of private industry."¹⁵

What is an undue burden, considering that the government's resources are rather extensive? The Act offers little insight, but places the onus on the affected agency to justify the excuse. According to Section (4) Acquisition planning: "In the event that a Federal department or agency determines that compliance with the standards issued by the Access Board under paragraph (2) relating to procurement imposes an undue burden, the documentation by the department or agency supporting the procurement shall explain why compliance creates an undue burden."¹⁶

This undue burden standard sounds similar to the "undue hardship" language contained in both Title VII of the Civil Rights Act of 1964¹⁷ and the ADA. The undue hardship excuse is found in several places in Title VII, most notably with respect to

⁹ 29 U.S.C. § 701.

¹⁰ DAWN D. BENNETT-ALEXANDER & LAURA P. HARTMAN, EMPLOYMENT LAW FOR BUSINESS 63 (2001), at 63: "The Rehabilitation Act . . . applies not only to all entities, programs, and activities that receive federal funds, and government contractors, but also to all programs and activities of any Executive agency as well as the US Postal Service. Federal funding may include grants, loans, contracts, provision of personnel, or real or personal property."

¹¹ *Id.* at 451.

¹² The Access Board's Web site is available at <http://www.access-board.gov/>.

¹³ Section 508 of the Rehabilitation Act of 1973, as amended 29 U.S.C. § 794 (d). The Amendments constituted Title IV of the Workforce Investment Partnership Act of 1998 that establishes a coordinated system of Federal aid programs for vocational education, adult education, and job training at State and local levels.

¹⁴ Available online at <http://www.access-board.gov/about/boardhistory.htm>.

¹⁵ Available online at <http://www.access-board.gov/sec508/guide/act.htm>.

¹⁶ 29 U.S.C. § 794 (d)(a)(4).

¹⁷ 42 U.S.C. § 2000e.

employment discrimination based on religion.¹⁸ The ADA allows an employer to plead the undue hardship excuse to its reasonable accommodation standard based on the employer's particular circumstances.¹⁹

B. "READILY ACHIEVABLE" UNDER THE ADA

The purposes of the ADA are clearly expressed. They are

- 1) to provide a clear and comprehensive national mandate for the elimination of discrimination against individuals with disabilities;
- (2) to provide clear, strong, consistent, enforceable standards addressing discrimination against individuals with disabilities;
- (3) to ensure that the Federal Government plays a central role in enforcing the standards established in this Act on behalf of individuals with disabilities; and
- (4) to invoke the sweep of congressional authority, including the power to enforce the fourteenth amendment and to regulate commerce, in order to address the major areas of discrimination faced day-to-day by people with disabilities.²⁰

The means to achieve these purposes are not unrestrained by common sense, however. To assure that businesses are not unduly burdened to the point of bankruptcy, the Act establishes limitations on employers and public accommodations. With respect to public accommodations, that limitation is based on whether the accommodation is "readily achievable." The Act defines that term as follows:

- (9) Readily achievable. The term readily achievable means easily accomplishable and able to be carried out without much difficulty or expense. In determining whether an action is readily achievable, factors to be considered include
 - (A) the nature and cost of the action needed under this Act;
 - (B) the overall financial resources of the facility or facilities involved in the action; the number of persons employed at such facility; the effect on expenses and resources, or the impact otherwise of such action upon the operation of the facility;
 - (C) the overall financial resources of the covered entity; the overall size of the business of a covered entity with respect to the number of its employees; the number, type, and location of its facilities; and
 - (D) the type of operation or operations of the covered entity, including the composition, structure, and functions of the workforce of such entity; the

¹⁸ 42 U.S.C. § 2000e(j): The term "religion" includes all aspects of religious observance and practice, as well as belief, unless an employer demonstrates that he is unable to reasonably accommodate to an employee's or prospective employee's religious observance or practice without undue hardship on the conduct of the employer's business.

¹⁹ See *infra* note 22 and accompanying text.

²⁰ 42 U.S.C. § 12101(b).

geographic separateness, administrative or fiscal relationship of the facility or facilities in question to the covered entity.²¹

IV. CASE LAW GUIDANCE

There is a split of authority in federal courts of appeal; some require a place of public accommodation to be an actual physical place. At least one, the First Circuit, in the case of *Carparts Distribution Center, Inc. v. Automotive Wholesaler's Association of New England, Inc.*,²² arguably does not. In the *Carparts* case, an AIDS victim and his employer brought an action against the defendant health plan provider, because the provider allegedly lowered the maximum benefits payable for AIDS-related claims after learning of the plaintiff's condition. The district court dismissed the action pursuant to Federal Rule 12(b)(6). The plaintiff appealed alleging valid causes of action under both Titles I and III of the ADA. The Court found Title I to be applicable in the case, and then it turned its attention to the Title III claim.

The district court held that the term "public accommodation" was limited to "actual physical structures with definite physical boundaries which a person physically enters for the purpose of utilizing the facilities or obtaining services therein."²³ The Appeals Court found, in this case of first impression in the First Circuit, that the term was not so limited. The court was influenced by Congress's inclusion in the statute of an illustrative list of public accommodations that includes "travel services."²⁴ Since many travel services conduct their business over the telephone, the court held that "[I]t would be irrational to conclude that persons who enter an office to purchase services are protected by the ADA, but persons who purchase the same services over the telephone or by mail are not."²⁵

The following language, however, takes away some of the vitality from the court's language: "We think that at this stage it is unwise to go beyond the possibility that the

²¹ 42 U.S.C. §12181(9). Compare this language to the language requiring an employer to offer a disabled employee or applicant "reasonable accommodation" unless such accommodation would be an undue hardship on the employer: Sec. 101(10) Undue hardship. (A) In general. The term undue hardship means an action requiring significant difficulty or expense, when considered in light of the factors set forth in subparagraph (B). (B) Factors to be considered. In determining whether an accommodation would impose an undue hardship on a covered entity, factors to be considered include (i) the nature and cost of the accommodation needed under this Act; (ii) the overall financial resources of the facility or facilities involved in the provision of the reasonable accommodation; the number of persons employed at such facility; the effect on expenses and resources, or the impact otherwise of such accommodation upon the operation of the facility; (iii) the overall financial resources of the covered entity; the overall size of the business of a covered entity with respect to the number of its employees; the number, type, and location of its facilities; and (iv) the type of operation or operations of the covered entity, including the composition, structure, and functions of the workforce of such entity; the geographic separateness, administrative, or fiscal relationship of the facility or facilities in question to the covered entity.

²² 37 F.3d 12 (1st Cir. 1994).

²³ *Id.* at 20.

²⁴ 42 U.S.C. 12181 § 301(7) Public accommodation. The following private entities are considered public accommodations for purposes of this title, if the operations of such entities affect commerce: (F) a laundromat, dry-cleaner, bank, barber shop, beauty shop, travel service, shoe repair service, funeral parlor, gas station, office of an accountant or lawyer, pharmacy, insurance office, professional office of a health care provider, hospital, or other service establishment.

²⁵ *Id.* at 22.

plaintiff may be able to develop some kind of claim under Title III even though this may be a less promising vehicle in the present case than Title I."²⁶

In the 1999 Fifth Circuit case of *Hooks v. OKBridge, Inc.*,²⁷ the Clinton Administration supported an expanded interpretation of the ADA to include companies that only do business on the Internet.²⁸ It is doubtful that the Bush Administration will support such an expanded interpretation.

V. AGENCY GUIDANCE

A. JUSTICE DEPARTMENT GUIDANCE

Even a cursory search of this area on the Internet will uncover a Justice Department Opinion Letter that says that the ADA applies to the "cyberspace world" as well as the physical one. This phrase shows up in many pages, many of which also cite an article from the November 1998 issue of *The Internet Lawyer* called, "Is Your Site ADA-Compliant ... or a Lawsuit-in-Waiting?" by Cynthia D. Waddell and Kevin Lee Thomason.²⁹ This article, which addresses law firm sites, takes the stand that law firms are covered public accommodations, and their Web sites are programs or activities covered by the ADA. It discusses the famous opinion letter written on September 9, 1996 by Deval L. Patrick, Assistant Attorney General of the Civil Rights Division. The opinion was written in response to an inquiry from U.S. Senator Tom Harkin, who was writing on behalf of a constituent who had written to him. The three-letter set is available on the Department of Justice Web site.³⁰ The most-quoted section of the September 9 letter states:

Covered entities under the ADA are required to provide effective communication, regardless of whether they generally communicate through print media, audio media, or computerized media such as the Internet. Covered entities that use the Internet for communications regarding their programs, goods, or services must be prepared to offer those communications through accessible means as well.

Less-frequently quoted, however, is the less forceful next paragraph, which states:

²⁶ *Id.* at 26.

²⁷ No. 99-214 (W.D. Tex. Aug. 4, 1999) which was appealed to the Fifth Circuit as No. 99-50891, for which no opinion has been issued.

²⁸ DOJ brief available online at <http://www.usdoj.gov:80/crt/briefs/hooks.htm>. "The statute covers the services 'of' a place of public accommodation, not 'at' the place public accommodation. The definition of a 'public accommodation' is intentionally broad and is not limited to those entities providing on-site services. Moreover, this Court has previously rejected the same interpretation of Title III in a case involving application of the Act to the services of insurance companies. See *McNeil v. Time Ins. Co.*, 205 F.3d 179 (5th Cir. 2000)."

²⁹ Available online at <http://kevinleethomason.com/articles/til-ada-and-homepages.html>.

³⁰ See <http://www.usdoj.gov/crt/foia/tal712.txt>.

Mr. _____ suggests compatibility with Lynx browser as a means of assuring accessibility of the Internet. Lynx is, however, only one of many available options. Other examples include providing the web page information in text format, rather than exclusively in graphic format. Such text is accessible to screen reading devices used by people with visual impairments. Instead of providing full accessibility through the Internet directly, covered entities may also offer other alternate accessible formats, such as Braille, large print, and/or audio materials, to communicate the information contained in web pages to people with visual impairments. The availability of such materials should be noted in a text (i.e., screen-readable) format on the web page, along with instructions for obtaining the materials, so that people with disabilities using the Internet will know how to obtain the accessible formats.

B. EEOC GUIDANCE

Since the EEOC is the agency charged with enforcing myriad employment discrimination laws, a review of its pronouncements in this area may be helpful. The EEOC offers a FAQ³¹ on public accommodations under the ADA:

Q. Are there any limitations on the ADA's barrier removal requirements for existing facilities? A. Yes. Barrier removal need be accomplished only when it is "readily achievable" to do so.

Q. What does the term "readily achievable" mean? A. It means "easily accomplishable and able to be carried out without much difficulty or expense."

Q. What are examples of the types of modifications that would be readily achievable in most cases? A. Examples include the simple ramping of a few steps, the installation of grab bars where only routine reinforcement of the wall is required, the lowering of telephones, and similar modest adjustments.³²

The EEOC's Web site³³ can also be studied as a potential model of Web site accessibility.³⁴

C. ACCESS BOARD STANDARDS

The Access Board issued its accessibility standards on December 21, 2000. They address criteria for making products accessible to people with disabilities, including those

³¹ FAQ stands for "frequently asked questions."

³² See <http://www.eeoc.gov/facts/adaqa2.html>.

³³ See <http://www.eeoc.gov>.

³⁴ See *infra*, The EEOC's Access Policy.

with vision, hearing, and mobility impairments. An important feature of the standards is Web site compatibility with adaptive equipment used by people with disabilities for information and communication access. The standards were based on recommendations from an advisory committee, the Electronic and Information Technology Access Advisory Committee, composed of 27 people representing industry, disability organizations, and other interested groups.³⁵ The standards are available on the Web.³⁶

VI. TECHNOLOGICAL CONSIDERATIONS

A. WEB CONSORTIUM'S WEB CONTENT ACCESSIBILITY GUIDELINES 1.0

The Access Board is not the first body to address accessibility standards. W3C, the World Wide Web Consortium, created in October 1994 to lead the development of the World Wide Web by developing common protocols, issued its own accessibility "guidelines" in 1999.³⁷ The W3C has more than 500 member organizations, worldwide, but, unlike the Access Board, can only suggest that these changes be implemented.

The following are some recommendations from the W3C:

Ensure that moving, blinking, scrolling, or auto-updating objects or pages may be paused or stopped. Some people with cognitive or visual disabilities are unable to read moving text quickly enough or at all. Movement can also cause such a distraction that the rest of the page becomes unreadable for people with cognitive disabilities. Screen readers are unable to read moving text. People with physical disabilities might not be able to move quickly or accurately enough to interact with moving objects.³⁸

B. THE EEOC'S ACCESS POLICY

Prominently displayed at the top of many government Web sites is an "access policy." The EEOC Web site is particularly informative. The EEOC site is designed to allow visitors to select the layout and appearance of the site. The options include: the default style sheet; a no-frills, text-only layout designed for people using screen readers, hand-held devices, and older web browsers; a large font, white text on black, high-contrast layout for people with limited vision who don't use screen readers or Braille terminals; and a large font, black text on white appearance. The EEOC Web site states that it conforms to Level A of the World Wide Web Consortium's Web Content Accessibility Guidelines 1.0.

³⁵ Microsoft, a member of the group, has a letter posted at its Web site accepting appointment at <http://www.microsoft.com/enable/news/msletter.htm>.

³⁶ See <http://www.access-board.gov/sec508/508standards.htm>

³⁷ See <http://www.w3.org/TR/1999/WAI-WEBCONTENT-19990505/#g1-table-markup>.

³⁸ *Id.*

C. LACK OF COMPLIANCE WITH STANDARDS

It has long been a complaint of disability rights groups that neither of the major Web browsers is totally standards-compliant. The new Netscape 6.0 and Internet Explorer version 6.0 are more compliant than earlier versions, but millions of people still use older versions, and they will for some time to come. In addition, the major Web site software programs do not automatically produce compliant Web sites.

D. ACCESSIBILITY PROBLEMS

Different people utilize many different techniques to create Web sites. Similarly, there are many types of disabilities that require different accommodations. CAST, a group that judges Web sites for accessibility lists a number of requirements for a good site. Specifically, a good site must:

1. provide text equivalents for all images and multimedia such as animations, audio, and video;
2. ensure that all information conveyed with color is also available without color;
3. identify headers for data tables and make line-by-line reading sensible for layout tables
4. provide summaries of graphs and charts;
5. identify document language and any changes of the language;
6. organize content logically and clearly, such as with headings, list elements, meaningful links, and navigation bars; and
7. provide alternative content for certain complex features (e.g., applets or plug-ins).³⁹

Additional sources of problems for disabled Web users (including those who use assistive technologies) include: frames, style sheets, non-standard HTML, inconsistent page layout, busy or dark backgrounds, small buttons that are difficult for those with mobility impairments, and the indiscriminate use of Adobe PDF documents (PDF should be reserved for documents that will be downloaded and printed),⁴⁰ to name but a few. A more detailed explanation of accessibility problems and potential solutions is available from the World Wide Web Consortium's Web site.⁴¹

E. ANALYZING YOUR SITE WITH LYNX AND BOBBY

³⁹ See <http://www.cast.org/Bobby/WhatisBobby907.cfm>.

⁴⁰ See *supra* note 3.

⁴¹ See <http://www.w3c.org>.

For those interested in a free computer program that tests Web site accessibility there are Lynx and Bobby. Lynx was one of the first Web browsers. It is text-only, that is, non-graphical. It predated the early graphical Mosaic and Netscape browsers, which popularized the Web with their sound, color, and multimedia capabilities. It is still available for download at a number of places on the Web.⁴² If a site is unintelligible to Lynx, people with disability access programs will have trouble accessing it.

The Center for Applied Special Technology⁴³ offers a handy tool named Bobby, named for the helpful, friendly London police. The Bobby program can be accessed across the Web at www.cast.org/bobby. All the program requires is for a user to enter a URL in the search box, and Bobby will do the rest. While it can point out flagrant problems, it is only a first step in the often-subjective accessibility review process.

VII. SEPARATE (BUT EQUAL?) COMPANION SITES VS. UNIVERSAL DESIGN

The EEOC's Web site utilizes the smorgasbord approach seemingly approved even by the oft-quoted Justice Department letter of September 9, 1996. Some disabilities activists believe that this is the wrong approach.⁴⁴ The use of separate pages for the disabled is viewed by some as a subtle form of segregation, or worse, an admission that the disabled are not worth the extra attention a universally designed site would entail. The Information Technology Industry Council, a group of leading technology companies, has prepared a Voluntary Product Accessibility Template to aid government agencies trying to comply with the dictates of Section 508. According to the template: "A text-only page, with equivalent information or functionality, shall be provided to make a web site comply with the provisions of this part, *when compliance cannot be accomplished in any other way.*"⁴⁵

A site that disability advocates praise for its universal design approach is Useit.com at www.useit.com. The site is produced by the well-known Web writer Jakob Nielsen, author of *Designing Web Usability: The Practice of Simplicity*. The site is clean, graphics-free, fast loading, and accessible. Text-based Web sites are inherently accessible and backwardly compatible for older browsers. As mentioned earlier, the latest browsers from Microsoft and Netscape have been designed with more thought toward accessibility. The persistence of old versions of these browsers, however, creates problems, since these modern guidelines frustrate users of old browser versions. The hope is that the authors of Web authoring programs will make compliance with the W3C standards easy and automatic. Once that happens, providing accessibility at new Web sites should be a fairly simple matter.

VIII. FUTURE ACCESSIBILITY PROGRAMS AND DEVICES

⁴² See, .eg. the popular Ziff-Davis Web site at www.zdnet.com.

⁴³ See <http://www.cast.org>.

⁴⁴ A discussion of the New York Times text-only version available at the W3C Web site offers some insight into this problem, which some disability activists refer to as "cyber-ghettoization," *available at* <http://lists.w3.org/Archives/Public/W3c-wai-ig/2000JanMar/0409.html>.

⁴⁵ See <http://www.itic.org/policy/vpat.html> (emphasis added).

People with disabilities make up a large percentage of the population, and they use computers.⁴⁶ A Web site that is inaccessible to people with disabilities is closing a door on potential visitors and clients, as well as being an invitation to a lawsuit. There are a number of private and non-profit organizations that sell hardware and software to assist disabled Web users. Assistive technologies include speech readers, specialized keyboards and mice, screen magnifiers, and special Braille devices.

A governmental organization that hopes to help promote the development of technologies that aid the disabled is the National Institute of Standards and Technology (NIST).⁴⁷ NIST, a part of the Commerce Department's Technology Administration, was founded in 1901 as the first federal physical science research laboratory. Since its founding, NIST staff and scientists have been involved in the development of many new technologies, from DNA diagnostic chips to smoke detectors. NIST has demonstrated a new Braille reader that should market for less than \$1,000, compared to current models that cost up to \$15,000. The new reader uses a rotating wheel that translates text into Braille, with the wheel rotating underneath the user's fingers. NIST claims that the new device is a big improvement over current models, which can only be read with a single finger.⁴⁸

IX. CONCLUSION

Designing Web sites for universal access by everyone makes sense. According to Tim Berners-Lee, W3C Director and the inventor of the World Wide Web: "The power of the Web is in its universality. Access by everyone regardless of disability is an essential aspect".⁴⁹ Hopefully, the efforts of the federal government, the Web browser titans, AOL and other IT powerhouses--especially the makers of programs used to create Web sites--will result in something akin to universality in the near future.

⁴⁶ Albeit at a lesser rate than the non-disabled. See A NATION ONLINE, *supra* note 2.

⁴⁷ See <http://www.nist.gov>.

⁴⁸ See <http://www.itl.nist.gov/div895/isis/projects/brailleproject.html>.

⁴⁹ See <http://www.w3.org/WAI/>.