

# Web Accessibility and Compliance Issues

**W****Shirley Ann Becker***Florida Institute of Technology, USA*

## INTRODUCTION

The impetus for accessible electronic and information technology was driven by federal initiatives with the objective of “bridging the digital divide” (U. S. Department of Commerce, National Telecommunications and Information Administration, 2000). This initiative focused on improving quality and longevity of life, addressing social disparities, promoting small businesses, and providing educational opportunities, among others. As an outgrowth of this initiative, the concept of building an “information society for all” was promoted in the form of universal usability of all electronic and information technology. The long-term goal was to ensure that no one was left behind in terms of inaccessible electronic and information technology.

In 1998, congress amended the Rehabilitation Act of 1973<sup>1</sup> with section 508 to require federal agencies to make electronic and information technology accessible to people with disabilities. Section 508 was enacted to eliminate barriers in electronic and information technology, make available new opportunities for people with disabilities, and encourage the development of technologies that will help achieve these goals ([www.section508.gov](http://www.section508.gov)). The law applies to all federal agencies when they develop, procure, maintain, or use electronic and information technology. Under section 508, agencies must give disabled federal government employees and citizens access to information that is comparable to the access available to others without disabilities.

The Internet and supporting technological advances opened doors for government employees and citizens to access electronic information that in the past were not readily available. However, those with disabilities or normal aging considerations found it difficult if not impossible to use basic technology that nondisabled individuals could use freely (McLawnhorn, 2001). This disparity of access to electronic data and information was addressed by congress when it amended the Rehabilitation Act (1973) with section 508. Congress recognized that the federal government is the largest technology consumer in the U.S.; and as such, it can influence the design and manufacture of accessible technologies and supporting products.

## BACKGROUND

Section 508, which went into effect in June 2001, requires all federal agencies to comply with accessibility standards administered by the Architectural and Transportation Barriers Compliance Board (referred to as the Access Board).<sup>2</sup> These standards ensure that electronic and information technology is accessible to disabled persons to the extent it does not pose an undue burden on an agency. When section 508 went into effect, federal agencies could no longer procure noncompliant electronic and information technology (Charles, 2001). This meant that vendors, who supply hardware, software, Web, telecommunications, and other information technologies, must ensure compliance with section 508 accessibility in order to obtain government contracts.

The Access Board put together the Electronic and Information Technology Access Advisory Committee (EITAAC) in order to develop section 508 standards. The EITAAC is comprised of industry, government, academic, and disability advocacy organizations. The EITAAC (1999) developed generic standards that were organized into three areas including: (1) accessibility of operation and information, (2) compatibility with peripheral devices, and (3) documentation and services associated with electronic and information technology. The committee made recommendations for implementation of section 508, formalized a definition of electronic and information technology for interpreting the statute, and developed recommendations for procurement processes.

The Access Board defines electronic and information technology as, “information technology and any equipment or interconnected system or subsystem of equipment used in the creation, conversion, or duplication of data or information” (U.S. Access Board, 1999). This definition encapsulates telecommunications, information kiosks, transaction machines, Web sites, copiers, faxes, and other multimedia office equipment. It does not include embedded information technology; back office equipment used only by service personnel for maintenance, repair, or similar purposes; or computer hardware and software, equipment, services, and other resources that automatically manipulate, acquire, store, manage, move, control, display, switch, interchange, or transmit data or information (McLawnhorn, 2001).

Table 1. Section 508 technology standards (Federal Register, 2000)

Technical Categories	Subsection
Software applications and operating systems. The criteria primarily focuses on software specifications related to vision disabilities including navigation, animated displays, color and contrast settings, flash technology, electronic forms and others.	1194.21
Web-based information or applications. The criteria used is based on the access guidelines put forth by the World Wide Web Consortium (W3C). The focus of these standards is on accessible, federal government Web sites and private sector Web sites under contract to a federal agency.	1194.22
Telecommunications products. The criteria is designed primarily to ensure access for deaf or hard of hearing persons. The standards require technology that is compatible with hearing aids, implants, and devices for communicating over a telephone, among others.	1194.23
Video or multimedia products. The criteria focuses on video programs, computer generated presentations, and other products that use more than one media. The standards require alternate presentations (user-selectable) for training and informational multimedia productions developed or procured by federal agencies.	1194.24
Self-contained, closed products. The criteria focus primarily on products that have embedded software that cannot readily support assistive technology such as kiosks, copiers, printers, and faxes. As such, assistive technology must be built into the product with requiring assistive technology devices.	1194.25
Personal computers and portable computers. The criteria focus on keyboards and other mechanically operated controls, touch screens, ports, and connectors, among others.	1194.26

Table 2. Statutes and laws related to section 508 of the Rehabilitation Act (1973)

Statute or Law	Description
American with Disabilities Act (ADA) of 1990	American with Disabilities Act (1990) prohibits discrimination and ensures equal opportunity for persons with disabilities in employment, state and local government services, public accommodations, commercial facilities, and transportation ( <a href="http://www.usdoj.gov/crt/ada/pubs/ada.txt">http://www.usdoj.gov/crt/ada/pubs/ada.txt</a> ).
Assistive Technology Act of 1998	The Assistive Technology Act (1998) establishes a grant program, administered by the U.S. Department of Education, to provide federal funds to support state programs addressing assistive technology needs of individuals with disabilities ( <a href="http://www.section508.gov/docs/AT1998.html">http://www.section508.gov/docs/AT1998.html</a> ).
Section 501 of the Rehabilitation Act	Section 501 prohibits discrimination on the basis of disability in federal employment and requires federal agencies to establish affirmative action plans for the hiring, placement, and advancement of people with disabilities in federal employment ( <a href="http://www.section508.gov/index.cfm?FuseAction=Content&amp;ID=17">www.section508.gov/index.cfm?FuseAction=Content&amp;ID=17</a> ).
Section 504 of the Rehabilitation Act	Section 504 prohibits discrimination based on disability in federally funded and federally conducted programs or activities in the U.S. including employment programs ( <a href="http://www.section508.gov/index.cfm?FuseAction=Content&amp;ID=15">www.section508.gov/index.cfm?FuseAction=Content&amp;ID=15</a> ).
Section 505 of the Rehabilitation Act	Section 505 establishes enforcement procedures for title V of the Rehabilitation Act. Section 505 (a) (1) specifies that procedures and rights set forth in section 717 of the Civil Rights Act of 1964 shall be available with respect to any complaint under section 501. Section 505 (a) (2) specifies that remedies, rights and procedures set forth in title VI of the Civil Rights Act of 1964 shall be available to any person alleging a violation of section 504. Section 508 is also enforced through the procedures established in section 505 (a)(2) ( <a href="http://www.section508.gov/index.cfm?FuseAction=Content&amp;ID=18">http://www.section508.gov/index.cfm?FuseAction=Content&amp;ID=18</a> ).
Section 255 of the Telecommunications Act of 1996	Section 255 of the Telecommunications Act (1996) requires manufacturers of telecommunications equipment and providers of telecommunications services to ensure that equipment and services are accessible to persons with disabilities, if readily achievable ( <a href="http://www.fcc.gov/telecom.html">www.fcc.gov/telecom.html</a> ).

Table 1 summarizes each section of the technology standards put forth by the board and as recommended by the EITAAC. The technical categories in the table focus on the functional capabilities covered under section 508. These standards focus on assistive technologies (e.g., screen reader devices) and alternative technologies (e.g., keyboard navigation instead of mouse navigation) that allow access to those with disabilities. Though not specifically described in the table, each standard outlines the technical and information dissemination requirements for the use of electronic and information technologies.

Though section 508's enforcement mechanisms apply only to procurement, both sections 501 and 504 of the Rehabilitation Act (1973) require accommodations for individuals with disabilities. (Table 2 provides definitions of sections 501 and 504 along with other related statutes and laws.) As such, federal agencies cannot use section 508 to avoid accessibility requirements and must provide alternative means of access to information for federal employees and individuals with disabilities. If an undue burden claim prevents procurement of accessible electronic and information technology, then a federal agency must provide alternative means of access ([www.section508.gov](http://www.section508.gov))

4 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: [www.igi-global.com/chapter/web-accessibility-compliance-issues/14183](http://www.igi-global.com/chapter/web-accessibility-compliance-issues/14183)

## Related Content

---

### Role of ICT in Establishing E-Government System for Disadvantaged Communities

Hakikur Rahman (2008). *Information Communication Technologies: Concepts, Methodologies, Tools, and Applications* (pp. 1482-1493).

[www.irma-international.org/chapter/role-ict-establishing-government-system/22751](http://www.irma-international.org/chapter/role-ict-establishing-government-system/22751)

### Evolving Relationship between Law, Offshoring of Professional Services, Intellectual Property, and International Organizations

Amar Gupta, David A. Gantz, Devin Sreecharanaand Jeremy Kreyling (2010). *Global, Social, and Organizational Implications of Emerging Information Resources Management: Concepts and Applications* (pp. 45-68).

[www.irma-international.org/chapter/evolving-relationship-between-law-offshoring/39235](http://www.irma-international.org/chapter/evolving-relationship-between-law-offshoring/39235)

### Collaborative Technology and Dimensions of Team Cognition: Test of a Second-Order Factor Model

Hayward P. Andres (2013). *International Journal of Information Technology Project Management* (pp. 22-37).

[www.irma-international.org/article/collaborative-technology-and-dimensions-of-team-cognition/80403](http://www.irma-international.org/article/collaborative-technology-and-dimensions-of-team-cognition/80403)

### Adaptive Robot Soccer Defence Strategy via Behavioural Trail

Awang Hendrianto-Pratomo, Anton Satria Prabuwo, Siti Norul Huda Sheikh Abdullah, Mohammad Faizul Nasrudin, Muhamad Syafiq Shohaimiand Teddy Mantoro (2012). *Journal of Information Technology Research* (pp. 25-45).

[www.irma-international.org/article/adaptive-robot-soccer-defence-strategy/72713](http://www.irma-international.org/article/adaptive-robot-soccer-defence-strategy/72713)

### Governance of Virtual Networks: Case of Living and Virtual Laboratories

Brane Semolicand Jure Kovac (2010). *Information Resources Management: Concepts, Methodologies, Tools and Applications* (pp. 2283-2297).

[www.irma-international.org/chapter/governance-virtual-networks/54598](http://www.irma-international.org/chapter/governance-virtual-networks/54598)