



# Federal IT Accessibility Initiative

*"agency partnerships promoting accessibility"*

## Standards for Electronic and Information Technology: An Overview

The Access Board is an independent Federal agency devoted to accessibility for people with disabilities. On December 21, 2000, the Board issued accessibility standards for electronic and information technology under section 508 of the Rehabilitation Act, as amended. The Board also develops and maintains accessibility guidelines for the built environment, transit vehicles, and telecommunications equipment under other laws and enforces design standards for federally funded facilities. Presented here is an overview of the new standards for electronic and information technology and section 508.

### **The Law: Section 508**

In 1998, Congress amended the Rehabilitation Act and strengthened provisions covering access to information in the Federal sector. As amended, section 508 of the Rehabilitation Act requires access to the Federal government's electronic and information technology. The law covers all types of electronic and information technology in the Federal sector and is not limited to assistive technologies used by people with disabilities. It applies to all Federal agencies when they develop, procure, maintain, or use such technology. Federal agencies must ensure that this technology is accessible to employees and the public to the extent it does not pose an "undue burden." The law directs the Access Board to develop access standards for this technology that will become part of the Federal procurement regulations.

The scope of section 508 is limited to the Federal sector. It does not apply to the private sector, nor does it generally impose requirements on the recipients of Federal funds. (However, States receiving assistance under the Assistive Technology Act State Grant program are required to comply with section 508 and the Board's standards, according to the Department of Education, which administers the Act. The Department plans to issue guidance on how the standards apply to the States under the Assistive Technology Act. For further information, e-mail the **Department of Education** or call (202) 205-5666 (voice) or 202-205-5516 (TTY)).

### **Development of Standards**

Shortly after the law was enacted, the Access Board created an advisory committee to develop recommendations on the standards to be developed. In May 1999, the Electronic and Information Technology Access Advisory Committee (EITAAC) completed its work and presented its recommendations to the Board. The committee consisted of 27 representatives from industry, various disability organizations, and other groups with an interest in the issues to be addressed. On March 31, 2000, the Board published proposed standards based closely on the committee's report. The proposed standards were available for public comment for 60 days through publication in the Federal Register. The Board sought information and comment on various issues through questions it posed in a discussion provided in the proposed rule. Over 100 individuals and organizations submitted comments on the standards. Comments were submitted by Federal agencies, representatives of the information technology industry, disability groups, and persons with disabilities. The Board finalized the standards according to its review of the comments and republished them in the Federal Register. The final standards, which will become part of the Federal Acquisition Regulations, will help Federal agencies determine whether or not a technology product or system is accessible.

### **Enforcement and Effective Date**

Section 508 uses the Federal procurement process to ensure that technology acquired by the Federal government is accessible. The law also sets up an administrative process under which individuals with disabilities can file a complaint alleging that a Federal agency has not complied with the standards. This process uses the same complaint procedures established under section 504 of the Rehabilitation Act (which covers access to Federally funded programs and services). It provides injunctive relief and attorney's fees to the prevailing party, but does not include compensatory or punitive damages. Individuals may also file a civil action against an agency. The enforcement provisions of section 508 take effect six months from the date the Board published its final standards. The Board published its standards on December 21, 2000. Therefore, the enforcement provisions of section 508 are effective as of June 21, 2001. (Originally, they were to take effect August 7, 2000, but section 508 was further amended to allow time for compliance after publication of the standards).

By statute, the enforcement provisions of section 508 apply only to electronic and information technology procured on or after the effective date. As a result, section 508 does not authorize complaints or lawsuits to retrofit technology procured before this date to meet the Board's standards. However, even though section 508's enforcement mechanisms apply only to procurement, the law does require access to technology developed, used or maintained by a Federal agency. Further, other sections of the Rehabilitation Act require access to Federal programs (section 504) and accommodation of Federal employees with disabilities (sections 501 and 504); it is possible that Federal agencies will use the Board's section 508 standards as a yardstick to measure compliance with these other sections of the law.

### **"Undue Burden"**

A Federal agency does not have to comply with the technology accessibility standards if it would impose an undue burden to do so. This is consistent with language used in the Americans with Disabilities Act (ADA) and other civil rights legislation, where the term 'undue burden' has been defined as "significant difficulty or expense." However, the agency must explain why meeting the standards would pose an undue burden for a given procurement action, and must still provide people with disabilities access to the information or data that is affected.

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### **The Standards General (Subpart A)**

The standards define the types of technology covered and set forth provisions that establish a minimum level of accessibility. The application section (1194.2) outlines the scope and coverage of the standards. The standards cover the full range of electronic and information technologies in the Federal sector, including those used for communication, duplication, computing, storage, presentation, control, transport and production. This includes computers, software, networks, peripherals and other types of electronic office equipment. The standards define electronic and information technology, in part, as "any equipment or interconnected system or subsystem of equipment, that is used in the creation, conversion, or duplication of data or information."

Subpart A also explains what is exempt (1194.3), defines terms (1194.4), and generally recognizes alternatives to what is required that provide equal or greater access (1194.5). Consistent with the law, the standards exempt systems used for military command, weaponry, intelligence, and cryptologic activities (but not routine business and administrative systems used for other defense-related purposes or by defense agencies or personnel). The standards also exempt "back office" equipment used only by service personnel for maintenance, repair, or similar purposes.

The standards cover technology procured by Federal agencies under contract with a private entity, but apply only to those products directly relevant to the contract and its deliverables. An exception clarifies that the standards do not apply to technology that is incidental to a Federal contract. Thus, those products that are not specified as part of a contract with a Federal agency would not have to comply with the standards. For example, a firm that produces a report for a Federal agency under a contract would not have to procure accessible computers and word processing software even if they were used exclusively for the contract; however, compliance would be required if such products were to become the property of the Federal agency as contract deliverables or if the Federal agency purchased the products to be used by the contractor as part of the project. If a Federal agency contracts with a firm to develop its web site, the standards would apply to the new web site for the agency but not to the firm's own web site.

### **Technical Standards (Subpart B)**

The standards provide criteria specific to various types of technologies, including:

- software applications and operating systems
- web-based information or applications
- telecommunication products
- video and multimedia products
- self contained, closed products (e.g., information kiosks, calculators, and fax machines)
- desktop and portable computers

This section provides technical specifications and performance-based requirements, which focus on the functional capabilities of covered technologies. This dual approach recognizes the dynamic and continually evolving nature of the technology involved as well as the need for clear and specific standards to facilitate compliance. Certain provisions are designed to ensure compatibility with adaptive equipment people with disabilities commonly use for information and communication access, such as screen readers, Braille displays, and TTYs.

#### **Software Applications and Operating Systems (1194.21)**

Most of the specifications for software pertain to usability for people with vision impairments. For example, one provision requires alternative keyboard navigation, which is essential for people with vision impairments who cannot rely on pointing devices, such as a mouse. Other provisions address animated displays, color and contrast settings, flash rate, and electronic forms, among others.

#### **Web-based Intranet and Internet Information and Applications (1194.22)**

The criteria for web-based technology and information are based on access guidelines developed by the Web Accessibility Initiative of the World Wide Web Consortium. Many of these provisions ensure access for people with vision impairments who rely on various assistive products to access computer-based information, such as screen readers, which translate what's on a computer screen into automated audible output, and refreshable Braille displays. Certain conventions, such as verbal tags or identification of graphics and format devices, like frames, are necessary so that these devices can "read" them for the user in a sensible way. The standards do not prohibit the use of web site graphics or animation. Instead, the standards aim to ensure that such information is also available in an accessible format. Generally, this means use of text labels or descriptors for graphics and certain format elements. (HTML code already provides an "Alt Text" tag for graphics which can serve as a verbal descriptor for graphics). This section also

addresses the usability of multimedia presentations, image maps, style sheets, scripting languages, applets and plug-ins, and electronic forms.

The standards apply to Federal web sites but not to private sector web sites (unless a site is provided under contract to a Federal agency, in which case only that web site or portion covered by the contract would have to comply). Accessible sites offer significant advantages that go beyond access. For example, those with "text-only" options provide a faster downloading alternative and can facilitate transmission of web-based data to cell phones and personal digital assistants.

#### **Telecommunications Products (1194.23)**

The criteria of this section are designed primarily to ensure access to people who are deaf or hard of hearing. This includes compatibility with hearing aids, cochlear implants, assistive listening devices, and TTYs. TTYs are devices that enable people with hearing or speech impairments to communicate over the telephone; they typically include an acoustic coupler for the telephone handset, a simplified keyboard, and a visible message display. One requirement calls for a standard non-acoustic TTY connection point for telecommunication products that allow voice communication but that do provide TTY functionality. Other specifications address adjustable volume controls for output, product interface with hearing technologies, and the usability of keys and controls by people who may have impaired vision or limited dexterity or motor control.

#### **Video or Multimedia Products (1194.24)**

Multimedia products involve more than one media and include, but are not limited to, video programs, narrated slide production, and computer generated presentations. Provisions address caption decoder circuitry (for any system with a screen larger than 13 inches) and secondary audio channels for television tuners, including tuner cards for use in computers. The standards also require captioning and audio description for certain training and informational multimedia productions developed or procured by Federal agencies. The standards also provide that viewers be able to turn captioning or video description features on or off.

#### **Self Contained, Closed Products (1194.25)**

This section covers products that generally have imbedded software but are often designed in such a way that a user cannot easily attach or install assistive technology. Examples include information kiosks, information transaction machines, copiers, printers, calculators, fax machines, and similar types of products. The standards require that access features be built into the system so users do not have to attach an assistive device to it. Other specifications address mechanisms for private listening (handset or a standard headphone jack), touchscreens, auditory output and adjustable volume controls, and location of controls in accessible reach ranges.

#### **Desktop and Portable Computers (1194.26)**

This section focuses on keyboards and other mechanically operated controls, touch screens, use of biometric form of identification, and ports and connectors.

### **Functional Performance Criteria (Subpart C)**

The performance requirements of this section are intended for overall product evaluation and for technologies or components for which there is no specific requirement under the technical standards in Subpart B. These criteria are designed to ensure that the individual accessible components work together to create an accessible product. They cover operation, including input and control functions, operation of mechanical mechanisms, and access to visual and audible information. These provisions are structured to allow people with sensory or physical disabilities to locate, identify, and operate input, control and mechanical functions and to access the information provided, including text, static or dynamic images, icons, labels, sounds or incidental operating cues. For example, one provision requires that at least one mode allow operation by people with low vision (visual acuity between 20/70 and 20/200) without relying on audio input since many people with low vision may also have a hearing loss.

### **Information, Documentation, and Support (Subpart D)**

The standards also address access to all information, documentation, and support provided to end users (e.g., Federal employees) of covered technologies. This includes user guides, installation guides for end-user installable devices, and customer support and technical support communications. Such information must be available in alternate formats upon request at no additional charge. Alternate formats or methods of communication, can include Braille, cassette recordings, large print, electronic text, Internet postings, TTY access, and captioning and audio description for video materials.