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Second Addendum: Proposed Access Standards for Electronic and Information Technology

July 3, 2000

Second Addendum: Proposed Access Standards for Electronic and Information Technology Under section 508 of the Rehabilitation Act Amendments, the Access Board published proposed standards for electronic and information technology on March 31, 2000. This proposal, which is available for public comment until May 30, 2000, is on the Board's web site at or can be ordered by calling 1-800-USA-ABLE (voice), 1-800-993-2822 (TTY).

The Board's proposed standards were published in the Federal Register on March 31, 2000 and were made available for public comment for 60 days. The Board seeks information and comment on various issues through questions it has posed in a discussion provided in the proposed rule. After this comment period, the Board will review the comments received, revise the standards as necessary, and republish them in final form 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.

Submitting Comments

Comments can be submitted by e-mail, mail, or fax as instructed in the proposal by May 30, 2000. E-mail comments should be sent to section508nprm@access-board.gov and must include the sender's name and address in the text to receive consideration. Comments will be available for inspection at the Board's offices during regular business hours.

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Practice Areas

Bid Protests
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Health Care Contracting
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The Proposed Standards

Scope and Coverage (Subpart A - General)

The standards define the types of technology covered and set forth provisions that establish a minimum level of accessibility. The application section outlines the scope and coverage of the standards. This section 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).

Accessibility Standards (Subpart B)

The proposal provides technical criteria specific to various types of technologies 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. Also covered is compatibility with adaptive equipment people with disabilities commonly use for information and communication access.

General Requirements (1194.21)

Specifications are provided that address built-in features where provided as part of any type of covered product. Provisions would specify that:

- color coding not be the only means of identifying visual elements so that people with limited vision or color blindness can distinguish them;
- free-standing equipment, such as copiers, meet reach ranges and space allowances so that they are accessible to people with disabilities, including those who use wheelchairs;
- flashing visual components have a maximum flash rate (2 Hertz) to prevent seizures in people with photosensitive epilepsy;
- timed responses, such as those often used with interactive menu-driven systems, allow additional time as needed;
- where biometric forms of user identification or activation, such as fingerprint or retina scans, are used, an alternative method to biometric forms is also available; and

- touch-operated controls, where provided, not necessitate body contact or closeness so that people with prosthetics or assistive devices, such as headsticks, can access them.

Component Specific Requirements (1194.23)

The proposal includes criteria specific to certain types of features or products, including:

- controls, keyboards, and keypads
- software applications and operating systems (non-embedded)
- web-based information or applications
- telecommunication functions
- video or multi-media products
- information kiosks and transaction machines

The criteria for controls, keyboards, and keypads address tactile and operating features that provide access for people with vision impairments or with limited dexterity or motor control.

Software and Web-Based Information or Applications

Most of the specifications for non-embedded software and web applications 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. Some provisions derive from certain assistive products used by people with disabilities to access computer-based information. These include 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.

Web Sites

The standards would 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). The standards would not prohibit the use of web site graphics or animation. Instead, the standards aim to ensure that such information is also available in a format that is accessible to people with vision impairments. 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. Accessible sites offer significant advantages that go beyond access. 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 Functions

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 and product interface with hearing technologies.

Video or Multimedia Products

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 would require captioning or video description for certain multimedia productions developed or procured by Federal agencies. This requirement is intended to apply only to those shown multiple times and to varied audiences which may include people with hearing or vision impairments. It would not apply to those intended to be shown singularly (not on a repeated basis) to limited audiences, such as internal staff, that may not include any persons with hearing or vision impairments. (However, the Federal agency would nonetheless be required to accommodate any staff members who did have such an impairment under section 501 or 504 of the Rehabilitation Act even though the videotape did not have to be captioned). The standards also provide that viewers be able to turn captioning or video description features on or off.

Information Kiosks and Transaction Machines

This section covers information kiosks, automatic teller machines (ATMs), and other types of transaction machines. The standards would require: that access features be built into the system (so users don't have to attach an assistive device to it); a mechanism for private listening (handset or a standard headphone jack); allowing user interruption where audio output is provided; and adjustable volume control where voice output is provided. However, the proposal calls attention to guidelines for facilities that the Board is currently updating under the Americans with Disabilities Act (ADA) and Architectural Barriers Act (ABA). Those proposed guidelines provide new criteria for ATMs and fare vending machines which are more descriptive in specifying access for people with vision impairments. The Board may broaden coverage of those facility guidelines to cover other types of devices, such as point-of-sale machines and information kiosks, among others. Such action may influence the substance of this section of the technology standards in the final version.

Compatibility with Assistive Technology (1194.25)

Provisions of this section seek to ensure compatibility with assistive technologies people with disabilities use, such as screen readers, Braille displays, and TTYs. Since any specific product cannot necessarily be made accessible to all disabilities, it must be able to accommodate assistive technology. For example, all computers are not expected to be equipped with a refreshable Braille display, but they are expected to be compatible with such equipment. These provisions address information pass through, external electronic access to all information and control needed for real time operation, and connection points for external audio processing devices.

Functional Performance Criteria (1194.27)

The performance requirements are intended for overall product evaluation and for technologies or components for which there is no specific requirement under other sections. 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 C)

The standards also address access to all information, documentation, labeling, 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 modes of communication, can include Braille, cassette recordings, large print, electronic text, Internet postings, TTY access, and captioning and audio description for video materials.

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Addendum: Applicability Of Section 508 Of The Rehabilitation Act To Web Sites

Third Addendum: Access Board Receives Over 100 Comments On Proposed Standards For Electronic And Information Technology

Fourth Addendum: Access Board Issues Final Accessibility Standards For Electronic And Information Technology

Fifth Addendum: Congressman Davis Requests GSA To Issue Guidance Confirming Prohibition On Agency Requirement Of Contractor Certifications Of Section 508 Compliance