

Section 508

Handbook AS-508

June 2004
Transmittal Letter

- A. Purpose.** Using technology to enhance value is an integral part of the Postal Service's Transformation Plan. As we increase our reliance on information systems to help us manage information, improve service, manage costs, and carry out our mission more efficiently, we have a greater responsibility than ever to provide full access for our customers, our employees, and those we do business with — including people with disabilities.

This handbook explains the requirements of Section 508 of the Rehabilitation Act and sets forth, in broad outline, the Postal Service's policies on how to comply with them. All functional organizations can use the information in this handbook to understand, achieve, and maintain Section 508 compliance.

Handbook AS-508-A, *Section 508 Technical Reference Guide*, presents these policies in greater technical detail.

- B. Scope.** The guidelines in this handbook affect Postal Service employees, customers, suppliers, and business partners. Given the broad scope of this law and its pervasive impact on information technology, collaborative efforts are needed for its achievement. Consequently, the audience for this Handbook spans the entire corporation. Although managers of functional organizations within the Postal Service have direct responsibility for complying with Section 508 within their areas of responsibility, the coordinated efforts of cross-functional teams are vital to realize the mandates of the law.
- C. Availability.** This handbook is available online only and may be accessed both from the Internet and from the Postal Service intranet.

From the *usps.com* homepage, click on *All Products & Services*, then on *Publications*, then on *Postal Periodicals and Publications*. Choose *Handbooks*.

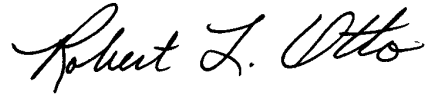
It is also available on the Postal Service PolicyNet Intranet Web site:

- Go to *http://blue.usps.gov*.
- Under "Essential Links" in the left-hand column, click on *References*.
- Under "References" in the right-hand column, click on *PolicyNet – Text*.
- Then click on *HBKs*.

D. Comments and Questions. Send your comments, questions, or additional information about the handbook via e-mail to:

section508@email.usps.com. Use "AS-508" in header.

E. Effective Date. This handbook is effective immediately.

A handwritten signature in black ink that reads "Robert L. Otto". The signature is written in a cursive style with a large, prominent "R" and "O".

Robert L. Otto
Vice President
Information Technology

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1 Introduction

1-1 The Postal Service's Mission in the 21st Century

The core mission of the Postal Service™ is to “bind the nation together through the personal, educational, literary, and business correspondence of its people.” Aided by technology, electronic communication has become both a supplement to the traditional paper-based exchange of ideas and a communication channel for access to the Postal Service itself. In light of the need to include people with disabilities in the work of the Postal Service, Section 508 of the Rehabilitation Act requires that all Postal Service information be accessible to all citizens and to all Postal Service employees. In an age where technology is opening new doors for everyone, persons with disabilities should not encounter technology as a barrier. Technology must be of assistance to all people and provide uniform communication to all.

1-2 Removing Barriers

Despite the general goodwill of technology designers, some sophisticated devices that have been developed to enhance communication have inadvertently become barriers for people with disabilities. For example, Web sites with unexplained graphics can be incomprehensible to blind people. Small print intended to reduce the size of documents is hard to read for people with limited vision. Complex phones intended to simplify a job do not always support TTY (teletypewriter) access for deaf people and may represent a barrier for someone with dexterity or cognitive problems. Compression techniques that enable video to travel through the Internet can disrupt the synchronization needed for captioning for people who are hearing impaired.

Section 508 gives guidance to create accessibility by providing both clear statements of the challenges posed by different types or classes of technology and the approaches needed for universal access. Some of the guidance is clear and easy to accomplish. Some of the approaches require deep awareness of disability issues and a sophisticated understanding of both traditional technology and assistive device technology. And, in some instances, best practices that enable full access require a fresh approach to established techniques.

1-3 An Ongoing Postal Service Commitment

Before June 2001, when Section 508 took effect, the Postal Service formed a Program team to define our strategy, to create guidance that specified our techniques to build accessible technology, and to begin the process of institutionalizing the knowledge and skills needed to insure compliance with the law.

Just as the physical environment required legislation to make wheelchair access a part of building codes, the clear mandate for accessible electronic technology has required Section 508. Just as builders took several years to gain a functional understanding of physical accessibility, a period of transition has been part of our conversion to full information technology accessibility compliance.

All software purchased or created by the Postal Service since the law took effect is as compliant with Section 508 standards as possible.

2 About This Handbook

The intent of this handbook is to help you to understand and implement Section 508 accessibility standards. In the absence of explicit Postal Service direction or policy related to a general requirement or technical standards, refer to Section 508 itself.

This handbook helps you do the following:

- Gain a better understanding of the general requirements of Section 508.
- Know the specific technical requirements of electronic and information technology (EIT) standards and related provisions.
- Know how they translate into Postal Service requirements.

Federal agencies, industry, and the general public interested in Postal Service Section 508 activities may also find this book useful.

2-1 Policy

The Postal Service complies with Section 508 of the Rehabilitation Act. This ensures that the development, procurement, maintenance, or use of electronic and information technology (EIT) enables our customers and employees with disabilities to have equivalent access to Postal Service information and interactive services comparable to that of persons without disabilities.

2-2 Postal Service Functional Organizations and Personnel

This handbook applies to Postal Service functional organizations and personnel who do the following:

- a. Have job responsibilities that relate to any aspect of Postal Service electronic and information technology systems.
- b. Determine or maintain policies related to Section 508.
- c. Promote Postal Service information technology-based products and services.

2-3 Suppliers

This handbook also applies to suppliers, contractors, and business partners, throughout the IT life cycle, including the design, supply, and development phases of Postal Service electronic and information technology.

2-4 Enterprise Architecture and Information Infrastructure

This handbook applies to the entire Postal Service enterprise architecture, which provides the framework for our business solutions and supports our information technology infrastructure. The *Information technology infrastructure* includes both text and data and the technology used to present them.

All Postal Service applications must be registered in the Enterprise Information Repository (EIR) at <http://eir>. The information in the EIR will be used to report compliance and includes any related Section 508 noncompliance issues.

3 Full Integration: The Steward Model

Accessibility is not something added on to developed technology. It is a requirement that is acknowledged and designed during the concept and planning stages of a technology-based solution.

To insure the continual flow of education and policy updates, the Postal Service will adopt an understanding of the law and its implementation within functional organizations and Supply Management. This requires collaboration among the Chief Technology Officer, Information Technology managers, and all portfolio program managers in a decentralized governance model.

3-1 Roles and Responsibilities

This section describes the Postal Service roles and responsibilities related to complying with Section 508 legal requirements.

3-2 Vice President/Chief Technology Officer

As designated by the Postmaster General, The Vice President/Chief Technology Officer (VP/CTO) leads the Postal Service Section 508 effort. The VP/CTO does the following:

- a. Establishes a Postal Service information technology infrastructure that both responds to corporate business needs and enables compliance with requirements related to Section 508.
- b. Provides Postal Service technology and development standards for the design, development, use and maintenance of Section 508-compliant information technology systems.
- c. Identifies and assigns the organizational roles and responsibilities necessary to ensure Postal Service compliance with the law.
- d. Designates a program manager to lead the corporate-wide Section 508 initiative.

3-3 Section 508 Program Manager, Information Technology

The Section 508 Program Manager, as designated by the VP/CTO, does the following:

- a. Coordinates overall activities undertaken by the Postal Service in guiding our response to Section 508.
- b. Develops and disseminates Postal Service policies, procedures, and requirements, related to achieving implementation of, compliance with, and *institutionalization* of Section 508.
- c. Provides high-level technical guidance on the EIT accessibility standards.
- d. Identifies functional organization stewardships that correspond to the Section 508 technical specification standards in the following products and services areas:
 - (1) Software applications and operating systems.
 - (2) Web-based intranet and Internet information and applications.
 - (3) Telecommunications.
 - (4) Video and multimedia.
 - (5) Self-contained, closed products.
 - (6) Desktop and portable computers.
- e. Identifies functional organization stewardships that correspond to the non-technical specifications of the law and standards for the following areas:
 - (1) Purchasing.
 - (2) Consumer complaints.
 - (3) Employee complaints.
 - (4) Legal guidance.
- f. Prepares and provides the Postal Service's input to the U.S. Department of Justice for inclusion in the Attorney General's biennial government-wide accessibility report to the President. Prepares other reports as required by the Department of Justice.
- g. Identifies an agency Section 508 coordinator and backup coordinator and provides this information to the Architectural and Transportation Barriers Compliance Board (hereafter, "Access Board") and General Services Administration (GSA) Section 508 Interagency Program.
- h. Serves as the Postal Service liaison to the Access Board and GSA Interagency Program.
- i. Directs the Section 508 Program Team by doing the following:
 - (1) Managing the day-to-day program activities.
 - (2) Addressing the varying demands of the program.
 - (3) Establishing program objectives.

- (4) Facilitating coordination of stewardships across the Postal Service in the following areas:
 - (a) Standards definitions and integration.
 - (b) Evaluation processes.
 - (c) Training for all audiences.
- (5) Providing a framework for communication vehicles: handbook, brochures, and videos.
- (6) Creating and conducting education and awareness throughout the agency.
- (7) Reporting program status to senior management.
- j. Coordinates and implements processes resulting in the institutionalization of Section 508.

3-4 508 Technical Stewards

The VP/CTO designates a Technical Steward for each of the six EIT accessibility standards. Technical Stewards do the following for their respective EIT standards:

- a. Serve as the Postal Service technical experts.
- b. Provide technical guidance and support for the content of Postal Service Section 508 policy and technical documents to enable the Postal Service to comply with Section 508 when purchasing or developing EIT.
- c. Provide technical guidance and support to Postal Service organizations on their specific 508 standards.
- d. Establish testing and evaluation of benchmarks that are in harmony with the generic testing approaches and techniques defined in Handbook AS-508-A, *Section 508 Technical Reference Guide*.
- e. Stay abreast of changes to the technical standards and update Postal Service Section 508 policy and technical documents accordingly.
- f. Help functional organizations respond to inquiries and complaints concerning the class of technology for which they are the stewards.
- g. Create and conduct training on the technical area of their stewardship.
- h. Coordinate among stewardships to ensure that interpretations rendered by stewards are consistent and to address issues that arise when EIT solutions are covered by more than one Section 508 standard.
- i. Promote ongoing communications and education within the Postal Service.
- j. Represent the Postal Service on interagency working groups to further understanding and consistency of technical guidance.

3-5 IT Portfolio Managers

IT Portfolio Managers do the following:

- a. Acquire an in-depth knowledge of Section 508 requirements.
- b. Disseminate Section 508 knowledge for their area.
- c. Champion Section 508 compliance of their area.
- d. Determine how Section 508 applies to each new business function.
- e. Ensure that market research and other Integrated Systems Methodology (ISM) procedures include Section 508 considerations within the EIT life cycle.
- f. Document Section 508 compliance within their area of responsibility, including updates to the Enterprise Information Repository (EIR), Infrastructure Tool Kit (ITK), or other databases as needed.
- g. Assist functional organizations to document exceptions when a solution is not completely 508 compliant.

3-6 Vice President, Labor Relations

The Vice President, Labor Relations (LR) does the following:

- a. Provides policies and procedures on the Section 508 employee complaint process and any other labor-related areas affected by Section 508.
- b. Integrates Section 508 policies and procedures into existing labor-relations processes and documents.
- c. Creates and conducts training for affected parties to promote awareness.

3-7 Vice President, Supply Management

The Vice President, Supply Management, does the following:

- a. Provides policies and procedures on how the Postal Service purchases any products that involve compliance with Section 508 requirements.
 - (1) Creates and incorporates applicable procurement clauses into the *Purchasing Manual*.
 - (2) Creates and implements processes to insure that the Postal Service follows the legal requirements for complying with exceptions and undue burdens documentation.
- b. Integrates policies and procedures of Section 508 into the existing Supply Management processes and documents.
- c. Creates and conducts training for contracting officers and others involved in the purchasing process.

3-8 Vice President, General Counsel

The Vice President, General Counsel, does the following:

- a. Updates legal publications and Postal Service policies and procedures in his or her area of responsibility to conform to ongoing legal requirements.
- b. Provides legal guidance in response to Section 508-related inquiries from functional organizations and the Section 508 Program.
- c. Notifies affected functional organizations of updates to relevant statutes and related interpretations.

3-9 Vice President, Consumer Affairs

The Vice President, Consumer Affairs (CA) does the following:

- a. Provides policies and procedures on processing consumer complaints.
- b. Integrates policies and procedures concerning Section 508 into the existing processes and documents.
- c. In consultation with the General Counsel, updates 39 CFR 255 and any Postal Service CA policies that are affected by Section 508.
- d. Manages the responses to consumer complaints.

3-10 Vice President, Public Affairs and Communications

The Vice President, Public Affairs and Communications, designates the manager of USPS TV to be responsible for the multimedia stewardship.

3-11 All Postal Service Officers

All Postal Service officers do the following:

- a. Designate a liaison to coordinate Section 508 activities within and among their respective organizations.
- b. Champion Section 508 compliance within their organizations.
- c. Fund the cost of compliance and litigation for their organizations.
- d. Authorize exception or undue burden documents for the requiring functional organization, if a solution is not completely Section 508 compliant (see section 4-3 of this handbook).

3-12 All Functional Organizations

Functional organizations have the responsibility and legal liability for Section 508 compliance. This ensures all products, including those a contractor develops or supplies in accordance with contract requirements, comply with

Section 508. Contracts should include requirements for contractors to comply and may include contractor responsibility for testing, but acceptance of a product or service as compliant is the legal responsibility of the Postal Service.

All functional organizations that require EIT do the following:

- a. Follow the requirements of the law and of this handbook (and Handbook AS-508-A, *Section 508 Technical Reference Guide*) when they use, develop, procure, or maintain EIT products and services.
- b. Respond to Section 508 inquiries and complaints from the public according to 39 CFR 255, *Access of Persons with Disabilities*, regarding EIT controlled by their functional organizations.
- c. Respond to Section 508 inquiries and complaints from employees, following established procedures.
- d. Provide information on the status of Section 508 EIT compliance as required.
- e. Create exception or undue burden documents for the approval of their respective vice president, when a solution is not completely Section 508 compliant (see section 4-3 of this handbook).

3-13 Section 508 Stewards — Liaisons for Accessibility

Section 508 Stewards, as designated by their Postal Service officer, do the following:

- a. Acquire an in-depth knowledge of Section 508 requirements.
- b. Coordinate Section 508 activities within their respective organizations.
- c. Respond to reporting requirements on Section 508 compliance within their respective organizations.
- d. Stay abreast of changes to the Section 508 Program.
- e. Develop an ongoing education/information awareness activity to make sure that employees within their organizations are aware of Section 508 program updates.

3-14 Importance of Compliance

Compliance with Section 508 requirements does the following:

- a. Demonstrates our commitment to implementing business practices that make our IT-based products and services accessible to our employees and customers with disabilities.
- b. Reinforces the worldwide reputation of the Postal Service as a trusted provider of communications — for all people.
- c. Enhances business opportunities.
- d. Avoids costly litigation.
- e. Improves overall usability of our information resources.

For all phases of the EIT life cycle, compliance monitoring resides with the responsible *functional organization*. The functional organizations have this responsibility for all EIT purchased or developed by the Postal Service.

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4 Guiding Steps for the Purchase of an EIT Business Solution

While it may seem that Section 508 compliance is daunting because of the range of activities it covers, a simplified look at the pieces reveals how to fit it into a Postal Service business solution.

4-1 The Six Steps

Step 1. Learn About 508.

To learn about Section 508 requirements, see the following sources:

- HBK AS-508-A, *Section 508 Technical Reference Guide*.
- Postal Service Intranet or Internet search on Section 508.
- Purchasing Manual, <http://blue.usps.gov/cpim/manuals.htm>.
- EIT Accessibility Standards (includes a definition of EIT):
 - <http://www.section508.gov>
 - <http://www.access-board.gov/508.htm>

The Goal —

Make text and data as accessible to people with disabilities as it is to people without them.

Step 2. Determine whether EIT is part of the business solution.

- If EIT is *not* part of the business solution, *Section 508 does not apply*. Skip the remaining steps and continue with the normal purchasing process.
- If EIT is part of the solution, determine whether a general exception applies. If a general exception is justified, document the exception and include it in the contract file.

Step 3. Identify the applicable EIT standards and then conduct market research to determine if there are EIT solutions that meet business needs and address the standards.

- Section 508 defines six technical standards, which include many provisions. Keep the following in mind:
 - Some functions are defined by a single standard.
 - Some functions may be covered by multiple standards.

- Research products and services that meet business needs and learn about their Section 508 compliance.
 - Look for the product's Voluntary Product Accessibility Template (VPAT). Many suppliers are using this form to provide information on how they conform to the Section 508 standards. If no VPAT is available, ask the supplier to produce a VPAT or provide comparable documentation.
 - Use research organizations.
 - Search the Internet and supplier Web sites.
 - Contact other government agencies that are already using the product or service.
- Determine if an exception applies (e.g., no product exists that complies with the applicable standards and meets the business requirements). If an exception exists, document it appropriately.

Step 4. Include "Section 508" clauses in the Statement of Work (SOW)

Once market research is complete, work with Supply Management to do the following:

- Develop a solicitation that correctly states Section 508 requirements.
- Determine in the evaluation process if there should be any special instructions to suppliers.
- Include "Section 508" concepts in the internal design or implementation documents.

Step 5. Evaluate and test products based on "Section 508" standards

Evaluation and selection activities are key components in positioning the Postal Service to meet its Section 508 compliance commitments. In evaluating and testing products, follow these guidelines:

- Compare supplier responses that meet Section 508 requirements.
- Determine how to evaluate and test suppliers' proposed solutions for compliance. This varies, depending on the complexity of the solution. There are different ways in which proposed solutions can meet the requirements. For information on exceptions and undue burdens, see section 4-3 of this handbook and section 4-6 of Handbook AS-508-A, *Section 508 Technical Reference Guide*.
- For products that do not fully conform, a specific exception may be needed (see section 4-3).
- Conduct testing and evaluation, which may include the following:
 - Demonstrations by the supplier.
 - Testing by the Postal Service or third-party suppliers.
 - Literature evaluation.

Proof of Compliance —

If your product provides at least one mode of operation and retrieval that does not need user vision, hearing, or fine motor skill or provides support using assistive technology, it is compliant.

Step 6. Plan Delivery

Before delivery of a solution, an acceptance test is a standard procedure to verify that the supplier has met its contractual obligations. The Postal Service can conduct and may require the contractor to perform Section 508 testing with multiple techniques. See the resources in the technical reference guidelines for recommended approaches. Before accepting a purchase, do the following:

- Test compliance with the stated accessibility standards.
- Work with the vendor to address issues where the vendor does not meet standards.
- Work with Supply Management to address the issue, if the deliverable does not meet standards.

The Measure of Success —

Success is measured by compliance at the text or data “interface,” (i.e., where the person with a disability can access information).

4-2 Technical Standards and Functional Performance Criteria

Section 508 includes six technical standards with associated provisions and functional performance criteria.

These technical standards are defined in terms of classes of technology (i.e., software applications and operating systems; Web-based intranet and Internet information and applications; telecommunications products; video and multimedia products; self-contained, closed products; desktop and portable computers). These technical standards translate into day-to-day business functions such as using the Web to look up postal rates, using a kiosk to purchase stamps, getting messages with e-mail, and using a computer to view a presentation.

The Functional Performance Criteria define overarching performance measures that ensure interaction across all classes of technology. They ensure that, from the perspective of a person with a disability, all interactions are consistent and accessible, regardless of the class of technology.

Business functions often span multiple classes of technology. When you apply the law, you must consider all applicable technical standards and functional performance criteria. For example, an e-learning system may include Internet-based technology, video and multimedia, and access from a desktop, with consistent functional performance.

When we adhere to both technical standards and functional performance criteria, people with functional limitations can use all IT systems.

4-3 About Exceptions and Undue Burden

There are three types of exceptions that can be invoked and still achieve Section 508 compliance. The three types are general exceptions, specific exceptions, and undue burdens. Definitions of each category of exception may be found in Chapter 4, Section 508 — Postal Service Processes to Comply, of Handbook AS-508-A, *Section 508 Technical Reference Guide*.

When the purchase of an EIT solution falls within even one of the three exception areas, the Postal Service requires the functional organization to document the rationale for the exception. Supply Management, together with the functional organization, must include the relevant market research documentation in the contract file. For general and specific exceptions, the documentation is relatively easy to prepare. When the purchase of an EIT solution would result in an undue burden to the Postal Service, the requiring organization must prepare an undue burden justification, signed by the vice president of the requiring organization. Additional detail for documenting undue burdens can be found in Chapter 4 of Handbook AS-508-A, *Section 508 Technical Reference Guide*.

5 About the Section 508 Technical Standards

Additional detail on what the law requires, techniques specific to the chapter's technologies, and further discussion addressing each standard can be found in the Section 508 Technical Reference Guide.

5-1 Software and Operating Systems Accessibility

Software is a program that runs on electronic equipment. For a program to be considered accessible, assistive technology should be able to work with it to allow its features and functions to be understood.

Software developers are responsible for helping the screen reader understand the screen. Blind users, for instance, do not use mice. A program that required the use of a mouse would not comply with Section 508. Blind users need an alternative method to understand the functions of a toolbar, radio buttons, push buttons, drop-down menus, or pop-up messages explaining the function of an icon.

5-1.1 **Technical Steward**

The technical steward for software and operating systems is the Manager, Business Solutions Services, IT.

5-1.2 **General Requirements**

Accessibility is accomplished by designing software that accommodates the widest range of users, including those with disabilities. Listed below are some general requirements that will help the Postal Service ensure continued accessibility of software applications and operating systems:

- The Postal Service will develop and procure software applications that take advantage of hardware and operating system built-in accessibility features when those features are available to both end users and software developers.

- The Postal Service will maintain standards for the following categories of assistive technologies that people with disabilities use to access software applications and operating systems:
 - Screen magnifiers: Help visually impaired people by allowing them to enlarge any part of the screen (i.e., as with a magnifying glass).
 - Screen readers: Help people who are blind by making on-screen information available as synthesized speech or for display as refreshable Braille.
 - Voice input aids: Help mobility- or dexterity-impaired people by allowing them to control the computer with their voice instead of with a mouse or keyboard.
 - On-screen keyboards: Help people who are unable to use a standard keyboard by providing an on-screen keyboard that can be used with a pointing device.
 - Keyboard filters: Help people who have trouble typing by compensating for erratic motion, tremors, or slow response time.
 - Alternative input devices: Help people who would prefer to control their computer with a device other than a keyboard or mouse.
- The Postal Service will develop software applications that maximize the capabilities of the accessibility features installed and activated by a user (e.g., native hardware and operating system features, as well as installed accessibility aids). Software developers should do the following:
 - Support the native operating system and activate the accessibility features for the major operating systems that are integrated with input and output devices (e.g., keyboard, sound, display, or mouse).
 - Use standard controls for the particular operating systems where possible (e.g., menus, buttons, lists, or windows). These standard controls often already support the native operating system accessibility features. Using them will often eliminate the need for software to provide explicit accessibility support, unless the behavior of the standard controls has been enhanced.
 - Be careful when using custom controls or enhancing standard controls, because accessibility aids may have difficulty identifying them (i.e., accessibility aids require specific information to work successfully with screen elements). When custom or enhanced standard controls are used, developers must use appropriate accessibility interfaces or application programming interfaces (APIs) (e.g., Sun's Java Access Bridge, Microsoft Active Accessibility, window messaging, off-screen model, etc.) to provide object information to accessibility aids. The information that must be provided by objects includes name, location, type, associated values, parent control, logical order for navigation, and event notifications, such as focus gain or loss.

- Provide flexibility in using a variety of input methods (e.g., keyboard or mouse) and output methods (e.g., color, sound, images, or text).
- Detect if accessibility aids are in use and configure the software applications automatically. For example, determine when a screen reader is in use so that the software can be reconfigured.

5-2 Web-based Information and Application Accessibility

Web-based information and applications are based on access guidelines developed by the Web Accessibility Initiative of the World Wide Web Consortium (<http://www.w3c.org>). The standards aim to ensure that such information is also available in an accessible format. This means use of text labels or descriptors for graphics and certain format elements. HTML code already provides an alternative text attribute (or “alt” tag) for graphics which can serve as a verbal descriptor for graphics. Web-based information and application accessibility standards also address 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 that 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.

5-2.1 **Technical Steward**

The Technical Steward for Web-based information and applications is the Manager, Corporate Business Systems Solutions, IT.

5-2.2 **General Requirements**

Accessibility is accomplished by designing software that accommodates the widest range of users, including those with disabilities. Listed below are some general requirements that will help the Postal Service ensure that Web-based applications and information remain accessible:

- The Postal Service will take advantage of operating system and **Web client built-in accessibility features** when those features are available to both end users and software developers.
- The Postal Service will maintain standards for the following **accessibility aids or assistive technologies** that are used by people with disabilities to access Web-based applications and information:
 - Screen magnifiers: Help visually impaired people by allowing them to enlarge any part of the screen (i.e., as with a magnifying glass).

- Screen readers: Help blind people by making on-screen information available as synthesized speech or for display as refreshable Braille.
- Voice input aids: Help mobility- or dexterity-impaired people by allowing them to control the computer with their voice instead of with a mouse or keyboard.
- On-screen keyboards: Help people who are unable to use a standard keyboard by providing an on-screen keyboard that can be used with a pointing device.
- Keyboard filters: Help people who have trouble typing by compensating for erratic motion, tremors, or slow response time.
- Alternative input devices: Help people who would prefer to control their computer with a device other than a keyboard or mouse.
- The Postal Service will develop **Web-based applications** that are based on interoperable specifications and do not interfere with accessibility features installed and activated by a user (e.g., operating system features and Web client capabilities, as well as installed accessibility aids). Web-based developers should do the following:
 - Support native operating system and activated accessibility features for major operating systems that are integrated with input and output devices (e.g., keyboard, sound, display, or mouse). These features are supported by most Web clients and Web browsers. Developers should be aware of how these features will be used in combination with Web-based technologies. Standards for each operating system related to each specific requirement are shown in the “References” area under each specific requirement in Chapter 5 of Handbook AS-508-A, *Section 508 Technical Reference Guide, Software Applications and Operating Systems*.
 - Use standard markup tags in creating Web content where possible (i.e., use the W3C recommendations). Standardized markup is often already supported by Web clients and operating system accessibility features. Using these tags will often eliminate the need for software to provide explicit accessibility support.
 - Use caution when using plug-ins or enhancing Web content, because accessibility aids may have difficulty identifying them (i.e., accessibility aids require specific information to work successfully with screen elements). When custom or enhanced Web content is used, developers must use appropriate methods to allow Web content and information (e.g., providing alternate or equivalent content) to function with accessibility aids. The nonproprietary information that is created using standard HTML, XHTML, XML, or SGML allows for access using multiple clients (tools), reduces development costs, and permits the interoperability of technologies unknown by the author or creator of the information. Provide flexibility by allowing for a variety of

input (e.g., keyboard, mouse) and output (e.g., color, sound, images, text) methods.

- Allow accessibility aids and nonstandard clients to use and configure the Web applications and information automatically. For example, detecting a specific browser and providing additional modification of Web content should not prevent unknown clients and accessibility aids from accessing the content.

Handbook AS-885, *usps.com Development Process and Standards*, provides processes and standards for building and maintaining an information presence or application on *usps.com* and defines the design and development standards and best practices for use on that site. It may be accessed online at <http://blue.usps.gov/cpim/ftp/hand/as885.pdf>.

5-3 Telecommunications Products Accessibility

Telecommunication products are any products whose primary function is to provide telephone functions (i.e., two-way voice communications), regardless of type.

The convergence of telephony and information technology is blurring the line between different product types as a variety of new and innovative products are created (e.g., softphones, voice over IP, etc.). For products with multiple functions, these requirements apply only to the telephone functions of those products.

5-3.1 Technical Steward

The Technical Steward for telecommunications products is the Manager, Telecommunications Services, IT.

5-3.2 General Requirements

Accessibility is accomplished by purchasing or developing telecommunications products that accommodate the widest range of users, including those with disabilities. Listed below are some general requirements that will help the Postal Service ensure that its telecommunications products continue to be accessible:

- The Postal Service will develop and procure telecommunications products that take advantage of built-in accessibility features when those features are available to both end users and product developers.
- The Postal Service will procure or develop telecommunications products that maximize the capabilities of the accessibility features installed and activated by a user (e.g., native hardware, as well as installed assistive technology). Postal Service telecommunications products procurement personnel and developers should do the following:
 - **Buy or build products that support industry and regulatory telecommunications standards.** Accessibility features are often

integrated with these standards to ensure accessibility in telecommunications usage (including input, compression, transmission, storage, and output).

- **Use standard hardware and software controls instead of custom controls.** Standard controls often already support product accessibility features. Using them may eliminate the need for additional configuration or programming to provide explicit accessibility support, unless the behavior of the standard control has been enhanced.
- **Buy or build products that support a variety of input and output methods.**
- **Buy or build products that can detect the assistive technology in use and configure the telecommunication products automatically.** For example, IVR (Interactive Voice Recognition) systems might detect the presence of TTY signals and automatically route calls to the appropriate system or subsystem.

5-4 Video and Multimedia Products Accessibility

The purpose of this standard is:

- To ensure that video receivers and displays are capable of displaying closed captioning in a variety of contexts.
- To ensure that all associated data, information, training material, and documents related to those mission-critical video and multimedia productions must be open or closed-captioned.
- Require audio descriptions for all training and informational video and multimedia productions which are related to the mission of the organization (i.e., considered mission-critical) and that contain visual information necessary for the comprehension of the content.

In considering the many different technologies involved, note that video in combination with other media, regardless of format, is considered multimedia. Whether broadcast to a television or streamed over the Internet, it must comply with the video and multimedia standard.

5-4.1 Technical Steward

The Technical Steward for video and multimedia products is the Enabler Business Systems Portfolio, IT.

5-4.2 General Requirements

Accessibility is accomplished by designing video and multimedia that accommodates the widest range of users, including those with disabilities. Listed below are some general requirements that will help the Postal Service ensure that video and multimedia products remain accessible:

- Implementation of specific requirements may require **research** on the current accessibility features of the target platform, operating system, or transmission/broadcast method.
- All video and multimedia productions should be designed with the **evolving open standards for accessibility** that support cross-platform use (i.e., use of SMIL standards that are supported by most digital media players, etc.).

In many cases, **raw videotaped footage** does not have to be captioned or audio described. For example, raw videotaped footage used to document a safety violation could be considered a video “in support of the Postal Service’s mission.” If the footage is used in a *production*, however, such as a Web-based presentation or training video, it *does* have to be captioned or audio described.

5-5 Self-Contained, Closed Products Accessibility

The term “self-contained” is used to define a class of information technology. Unlike personal computers, which can have assistive technology installed, closed products can be accessible only if they have been designed to be accessible by people with limited vision, mobility, or hearing.

This standard covers any products or systems that do not permit end-user-installed assistive technologies. Such products often involve input and output interactions that present accessibility challenges (e.g., touch screens, physical layout/positioning). Unlike personal, customizable devices, many products in this class of technology (e.g., kiosks and shared printers) are used by the general public.

Since they cannot be customized, such closed products must be designed with the needed accessibility features for all users.

5-5.1 Technical Steward

The Technical Steward for self-contained, closed products is the Manager, Technology Support, IT.

5-5.2 General Requirements

Accessibility is accomplished by purchasing or developing self-contained, closed products that accommodate the widest range of users, including those with disabilities. Listed below are some general requirements that will help the Postal Service ensure continued accessibility of self-contained, closed products:

- The Postal Service will develop and procure self-contained, closed products that take advantage of built-in accessibility features when those features are available to both end users and product developers.
- The Postal Service will procure or develop self-contained, closed products that recognize and maximize the capabilities of the accessibility features installed and activated by a user via an attached personal computer (e.g., operating system features and assistive technologies that enable control of dialog boxes to activate device controls). Postal Service self-contained, closed products procurement personnel and developers should do the following:
 - **Buy or build products that support self-contained, closed products standards.** Accessibility features are often integrated with these standards in order to ensure accessibility in self-contained, closed products. Standard kiosk shapes have been developed to meet appropriate reach specifications.
 - **Where possible, use standard hardware and software controls instead of custom controls.** These standard controls often already support product accessibility features. Using them will often eliminate the need for additional configuration or programming to provide explicit accessibility support, unless the behavior of the standard controls has been enhanced. Full-screen keyboards are well understood. Many self-contained, closed products support the attachment of such input devices. Telephone-style key clusters are another *de facto* standard.
 - **Provide flexibility in using a variety of input and output methods.** Many self-contained, closed products support only one mode of operation. When such devices can be added to a network, people with disabilities may be able to access these products from a personal computer that has assistive technology.
 - **Consult with accessibility experts and representatives of the disability community when developing unique devices.** Assistive technology products for personal computers represent standard solutions to *open* products. Accessibility experts and representatives of the disability community are a resource that can vastly enhance the designs of engineers and solution architects.

5-6 Desktop and Portable Computers Accessibility

This standard covers any hardware computer product, regardless of type (e.g., desktop, mobile or portable), onto which operating systems and software applications can be installed.

For products with multiple functions, these requirements apply only to the hardware components of those products.

5-6.1 Technical Steward

The Technical Steward for desktop and portable computers is the Manager, Distributed Computing Environment, IT.

5-6.2 General Requirements

Desktop and portable computer products that have mechanically operated controls and keys shall comply with the following requirements:

- Controls and keys shall be tactilely discernible without activating the controls or keys.
- Controls and keys shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls and keys shall be 5 lbs. (22.2 N) maximum.
- If key repeat is supported, the *delay before repeat* shall be adjustable to at least 2 seconds. *Key repeat rate* shall be adjustable to 2 seconds per character.
- The status of all locking or toggle controls or keys shall be visually discernible, and discernible either through touch or sound.
- For touch screens, provide an appropriate alternate access method that supports the first four requirements listed above.

Biometric User Identification and Controls.

When biometric forms of user identification or control are used, an alternative form of identification or activation, which does not require the user to possess particular biological characteristics, shall also be provided.

Industry-Standard Expansion Slots, Ports, and Connectors.

Where provided, at least one of each type of expansion slots, ports and connectors shall comply with publicly available industry standards.

5-7 Information, Documentation, and Support Accessibility

This standard covers all information about EIT products and their support services, regardless of technology type. Persons with disabilities need this information to support their effective use of the EIT products covered by Section 508. It includes any documentation provided by the Postal Service or its EIT suppliers to its technology users must be available upon request in appropriate alternate formats. The Postal Service functional units are required to supply end users with information about accessibility or compatibility features that are built into a product, upon request. This information is vital in knowing how to use certain products such as self-contained, closed products. It is also essential for the installation of assistive technology in IT devices that are open to software which provides functions such as speech output, speech recognition, screen enlargement, or keyboard alternatives.

Help desks and other technology support services serving the Postal Service's employees and customers must be able to accommodate the communications needs of persons with disabilities. For example, a Postal Service help desk may need to communicate through a TTY. The help desk or support service must also be familiar with such features as keyboard-only access and other options important to people with disabilities. Electronic methods of interaction — e.g., Web forms, IVR systems, and online help systems — must also work properly for the employees and customers of the Postal Service.

5-7.1 General Requirements

Accessibility is accomplished not only by purchasing or developing compliant products that accommodate the widest range of users but also by ensuring that the information, documentation, and support services for the products are compliant as well. Listed below are some general requirements that will help the Postal Service ensure continued accessibility of both purchased and developed EIT information, documentation, and support:

- The Postal Service will procure products and systems with documentation and support that are accessible to the users of the system. These users may be Postal Service employees who access the system or customers who will interact with the system or its developed outputs.
- The Postal Service will develop products and systems that have accessible information, documentation, and support.

6 Summary of Section 508 Resources

An ongoing part of the central Section 508 Program is to provide resources that assist in the understanding of the law and the techniques for compliance. When evaluating the requirements of the law, the Postal Service accepts the published Federal Law or other information officially published by the Access Board. (The Access Board is an independent Federal agency devoted to accessibility for people with disabilities. Its Web site is <http://www.access-board.gov/index.htm>.) Additional publications that reinforce the Postal Service's institutionalization of accessibility considerations include the following:

- a. Handbook AS-508-A, *Section 508 Technical Reference Guide*, provides valuable technical guidance.
- b. Handbook EL-307, *Reasonable Accommodation, An Interactive Process*.
- c. Handbook AS-885, *usps.com Development Process and Standards*.
- d. Management Instruction AS-885-2002-15, *Managing Web Sites on the Corporate Intranet*.
- e. 39 CFR 255, *Access of Persons with Disabilities to Postal Service Programs, Activities, Facilities, and Electronic and Information Technology*.
- f. Purchasing Manual, <http://blue.usps.gov/cpim/manuals.htm>.
- g. USPS Integrated Solutions Methodology, January 31, 2002.
- h. The GSA has a Web site that contains both the law itself and may educational resources: (<http://www.Section508.gov>).
- i. Our improving Intranet site at <http://cto.usps.gov/> (click on *Support, Standards & Guidelines*, then *508 Standards and Compliance*) will host collaborative work that demonstrates our accomplishments and shares evolving best practices.

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