

Virginia Information Technologies Agency



# I. T. Accessibility Toolkit

## Overview

Version 1.0

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### Introduction:

In November 2005, the Commonwealth of Virginia implemented the Virginia Information Technology Accessibility Standard (GOV 103-00). The Standard provides all State Executive Branch agencies and institutions of higher learning with the minimum accessibility requirements for procurement, development, or maintenance of electronic and information technology systems. The Standard also requires that Commonwealth of Virginia (COV) employees with disabilities and members of the public with disabilities have access to and use of information and data comparable to the access and use of Commonwealth employees and the public who do not have disabilities.

At its core, information technology (IT) accessibility involves making information accessible to the widest range of people as possible. This is accomplished by removing barriers to access.

Today accessible technology offers benefits to a wide range of people beyond those with physical disabilities. Many accessibility products originally designed for disabled users are today taken for granted. This technology is not limited to use by only those with disabilities. It includes such products as:

- closed captioning, which was originally designed for the hearing impaired, is commonplace in bars, restaurants and airports,
- hands-free telephones and mobile phones,
- magnified type on a screen, and
- screens with audio capabilities.

### Toolkit Purpose:

In Virginia, Executive Branch agencies must meet the accessibility requirements contained in the *Code of Virginia*. The purpose of the Virginia Information Technologies Agency (VITA) Information Technology Accessibility Toolkit is to provide Commonwealth of Virginia agencies with an on-line resource that is continuously available and provides a consistent methodology to Virginia state employees as they work to achieve IT accessibility across all state agencies.

### Toolkit Content:

The actual content of the online toolkit will be expanded based on the needs of VITA and Commonwealth of Virginia agencies. Following is a list of current topics that can be customized to meet the needs of each agency.

- Alternative Text Guidelines
- Basics of Captioning for the Deaf and Hard of Hearing
- Best Practices for Writing Voluntary Product Accessibility Template
- Developing Accessible E-Learning
- Developing Accessible Software Applications and Content
- Developing Accessible Telecommunications
- Developing Alternative Formats
- External Resources – Where to Get Help
- Insights into Accessibility Testing Tools: Are They Enough?
- Legacy Systems and Accessibility

### Who is likely to benefit?

The 2000 census by the US Census Bureau reported there are over 54 million Americans with disabilities. However, according to a study commissioned by Microsoft and conducted by Forrester Research, Inc. in 2003, "In the United States, 60% (101.4 million) of working-age adults who range from 18 to 64 years old are likely or very likely to benefit from the use of accessible technology due to difficulties and impairments that may impact computer use. Among current US

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computer users who range from 18 to 64 years old, 57% (74.2 million) are likely or very likely to benefit from the use of accessible technology due to difficulties and impairments that may impact computer use.”

The Forrester study also notes that “As the US population ages, more US workers and computer users will notice changes in their abilities and experience difficulties and impairments. At the same time, older US workers will remain in the workforce long past previously expected retirement ages. Maintaining productivity among US workers—regardless of abilities, difficulties, and impairments—will become an increasingly vital economic issue for US businesses as the population continues to age.”

In Virginia this translates to a population of about 2.5<sup>1</sup> million workers likely to benefit from the use of accessible technology.

### What are the Problems?

Technology may be inaccessible to people with disabilities if it provides only one way for users to gain access to or manipulate information. Examples include:

- people who are blind cannot read instructions presented only in a visual format;
- people who are deaf cannot understand content that is presented only aurally;
- people who are color-blind cannot discriminate between color-coded options;
- people with specific physical limitations cannot use a software application that requires use of a mouse; and
- people who use wheelchairs cannot operate a fax machine if the controls are positioned too high or too far for them to reach from a seated position.

Many of these barriers can be lowered or eliminated when technology environments are developed from an approach called "universal design."<sup>2</sup>

Accessibility problems more specific to Web sites include:

- Images without appropriate text description
- Color used alone to distinguish meaning
- Navigational controls that require a mouse
- Requirement for client-side scripting

The Department of Rehabilitative Services' Virginia Assistive Technology System conducted an automated online survey of Executive Branch agencies' Web sites in October 2005. Of the 82 agencies tested, 19 passed (23%) and 63 failed (77%).

### What are the Benefits for Virginians?

Accessible technologies allow Virginians with sight, mobility, cognitive or hearing impairments to be a productive part of the work force. Moreover, spending on accessible technology returns value to all Virginians, not just those estimated likely to directly benefit from it. The Commonwealth's return on value (ROV) is outlined below.

#### *Accessibility Standards Return on Value*

Accessible technologies serve all Virginians regardless of their ability to use them. The Forrester study notes that accessible technology helps businesses keep great employees, recruit from a larger pool of candidates, and enhance team collaboration and communication among all employees—including those with disabilities. Providing accessible technology facilitates

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<sup>1</sup> Source: US Census Bureau "Virginia QuickFacts" – Virginia's percent of the US population of about 2.5%

<sup>2</sup> Source: Copyright © 2002-2005 by University of Washington/AccessIT ([www.washington.edu/accessit](http://www.washington.edu/accessit))

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collaboration and communication among all employees in an organization—whether they have a disability or not. Accessible technology broadens an agency's<sup>3</sup> potential audience and makes it much more usable for everyone.

- Employment opportunities for the disabled.

The Department of Defense<sup>4</sup> encourages managers to use assistive technology to keep temporarily disabled employees working while they recuperate at home. A typical home installation of a workstation and assistive technology costs about \$5,000 versus \$28,000 for an average worker's compensation claim.

In a 2003 article in *Government Technology*<sup>5</sup> noted the "...employment opportunities that accessible technologies will bring to people with disabilities. Of the approximately 54 million people in the United States with disabilities, an estimated 70 percent are unemployed. With governments facing unprecedented retirement figures and needing skilled workers, enabling technologies can open up a new resource of capable employees."

- Reduces disabled individuals dependence on the welfare system.

"Because cognitive disabilities are invisible, it's easier for individuals to fake it or deny the existence of the disability. They end up falling into the welfare system because they don't understand their challenge, or what technology exists to help them," concluded a case study in the state of Georgia<sup>6</sup>.

- Reduces workers compensation costs.

"All federal agencies, and many private companies, are spending huge amounts of money on workers' compensation," said former Secretary Cohen in to a DoD case study.<sup>7</sup> "It's smart business to get these people back to work, even if they're at home. With so much work today done on computers, assistive technology can keep these people productive and their morale high during much of their illness or temporary disability."

### *Legal Factors & Cost Avoidance*

Not complying with accessibility requirements can result in significant legal costs and have negative impact on the agency's reputation. When people have a positive experience may not tell anyone. However, when people have a negative experience they are likely to tell anyone one who will listen resulting in negative publicity for the agency.

In Virginia, Executive Branch agencies must meet the accessibility requirements contained in the *Code of Virginia* which include:

- Section 2.2-2012 requires procurements be made in accordance with the regulations that implement the electronic and information technology accessibility standards of Section 508 of the Rehabilitation Act of 1973 (29 U.S.C. § 794d), as amended, and any regulations as may be prescribed by VITA.

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<sup>3</sup> The use of the term "agency" in this document refers to Commonwealth of Virginia Executive Branch agencies and institutions of higher education.

<sup>4</sup> Source: Excerpts from a case study on the Department of Defense's regarding the use of assistive technology to reconnect disabled employees" in *Accessible Technology in Today's Business*.

<sup>5</sup> Darby Patterson, "Building a Standard," *Government Technology*, April 22, 2003

<sup>6</sup> Source: Excerpts from a case study on the state of Georgia's assistive technology initiative in *Accessible Technology in Today's Business*.

<sup>7</sup> Source: Excerpts from a case study on the Department of Defense's regarding the use of assistive technology to reconnect disabled employees" in *Accessible Technology in Today's Business*.

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- Section 508 applies to all Federal agencies when they develop, procure, maintain, or use electronic and information technology. It requires Federal agencies to make their electronic and information technology accessible to people with disabilities.
- The objectives of Section 508 are to:
  - (i.) eliminate barriers in information technology;
  - (ii.) make available new opportunities for people with disabilities; and
  - (iii.) encourage development of technologies that will help achieve these goals.
- The Information Technology Access Act (§ 2.2-3500 et seq.) addresses the assurance of non-visual access and procurement.
  - Section 2.2-3502 requires information technology equipment and software used by blind or visually impaired employees, program participants, or members of the general public:
    - (i.) provide access (including interactive use of the equipment and services) that is equivalent to that provided to individuals who are not blind or visually impaired;
    - (ii.) are designed to present information (including prompts used for interactive communications) in formats adaptable to both visual and non-visual use; and
    - (iii.) have been purchased under a contract that includes the technology access clause required pursuant to § 2.2-3503.”
  - Section 2.23503 requires non-visual access standards shall include the following:
    - (i.) the effective, interactive control and use of the technology (including the operating system), applications programs, and format of the data presented, shall be readily achievable by non-visual means;
    - (ii.) the technology equipped for non-visual access shall be compatible with information technology used by other individuals with whom the blind or visually impaired individual interacts;
    - (iii.) non-visual access technology shall be integrated into networks used to share communications among employees, program participants, and the public; and
    - (iv.) the technology for non-visual access shall have the capability of providing equivalent access by non-visual means to telecommunications or other interconnected network services used by persons who are not blind or visually impaired. A covered entity may stipulate additional specifications in any procurement.

In addition to Virginia’s the accessibility requirements, many agencies could face legal action if they fail to comply with such Federal regulations<sup>8</sup> as:

- Americans with Disabilities Act (ADA).

Prohibits discrimination and ensures equal opportunity for persons with disabilities in employment, state and local government services, public accommodations, commercial facilities, and transportation. The ADA requires that reasonable accommodations be provided in meeting the needs of individuals with disabilities. Additional technical assistance regarding the ADA is available through the

- Assistive Technology Act of 1998.

Establishes a grant program, administered by the U.S. Department of Education, to provide Federal funds to support State programs that address the assistive technology needs of individuals with disabilities.

- Section 255 of the Telecommunications Act of 1996

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<sup>8</sup> Source: Center for IT Accommodation (CITA), Office of Government-wide Policy, U.S. General Services Administration

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Requires manufacturers of telecommunications equipment and providers of telecommunications services to ensure that such equipment and services are accessible to persons with disabilities, if readily achievable. The Federal Communications Commission's Report and Order Implementing Section 255 was released in September 1999.

- Section 501 of the Rehabilitation Act.

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. Additional information and definitions related to Section 501 can be found at the EEOC website.

- Section 504 of the Rehabilitation Act.

Prohibits discrimination based on disability in federally funded and federally conducted programs or activities in the United States, including employment programs.

- Section 505 of the Rehabilitation Act.

Establishes the enforcement procedures for title V of the Rehabilitation Act:

Section 505 (a) (1) provides that the 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) provides that the 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).

- Workforce Investment Act of 1998.

Congress significantly strengthened section 508 in the Workforce Investment Act of 1998. Its primary purpose is to provide access to and use of Federal executive agencies' electronic and information technology (EIT) by individuals with disabilities.