

Who needs accessibility?

HEARING

Deaf: can't hear

Hard-of-hearing or hearing-impaired: can hear only with amplification or can hear in one ear only

VISION

Blind: can't see

Visually-impaired: can't read small type or distinguish certain colors

Color-blind: can't distinguish certain colors

MOBILITY

Physical disability: unable to move one or more limbs, fingers, or toes

Motor skills impairment: unable to press one key at a time, unable to press a key without duplicate keystrokes, unable to use a mouse

LEARNING

Dyslexia: difficulty with reading

HOW MANY PEOPLE IS THIS?

It's estimated at 15%

U.S. population \cong 290 million people (15% = 43.5 million)

World population \cong 6 billion people (15% = 900 million)

ARE THESE PEOPLE PART OF YOUR AUDIENCE?

Do men visit your site? About 8% of them are color-blind.

In the U.S., over 19 million adults reported having trouble with vision in a 1997 CDC survey.

In the same survey, over 28.7 million reported “a little trouble” with hearing and over 5.9 million reported “a lot of trouble or deaf.”

What is Accessibility?

IN REAL LIFE

HEARING

closed captioning for films, sign language interpreters
for live events

MOBILITY

ramps, elevators, kneeling busses

VISION

large print books, elevator buttons with braille

LEARNING

special learning approaches/techniques

ON THE WEB

HEARING

Deaf: visual cues in addition to audio cues, captioning for multimedia (Flash animation, audio, video with sound)

Hard-of-hearing: amplified headphones

Relevant only when your Web site contains sound

MOBILITY

Navigation

Fitt's Law

ON THE WEB

VISION

Blind: screen readers, dynamic braille printers

Visually-impaired: use browser features to make font sizes larger or use screen magnification tools

Color-blind: use stylesheets to force usable color preferences for text colors and page backgrounds

LEARNING

Extremely difficult to address properly, even for today's Web experts in the field

Why Accessibility?

THE GOAL

To provide equivalent access of effective communication to everyone without imposing undue hardship and without fundamentally altering the program or service.

UNDERSTANDING THE GOAL

What is “equivalent access”?

Wheelchair access to a building

“equivalent dignity”

What is “effective communication”?

Equally effective as with non-disabled visitors

THE GOAL

To provide equivalent access of effective communication to everyone without imposing undue hardship and without fundamentally altering the program or service.

UNDERSTANDING THE GOAL

What is “undue hardship”?

Company would go bankrupt

What is “fundamentally altering the program or service”?

Elevators in the Leaning Tower of Pisa

PUBLICITY REASONS

If UCSF is a medical sciences campus, why isn't it a leader in this health-related issue?

Can you afford to lose or annoy 15% of your audience?

If a disabled person has a bad experience with a UCSF Web site, what will he or she think of the people who run UCSF? What would you say if he or she were waiting to see you in your office?

The potential for bad publicity is real.

LEGAL REASONS

1973: United States Section 504 (Rehabilitation Act)

Bans discrimination based on disability in any program or activity that receives financial assistance from any federal agency

1990: United States Americans with Disabilities Act (ADA)

Extends Section 504 to include places of public accommodation

LEGAL REASONS

1998: United States Section 508 (Rehabilitation Act amendments)

Extends Section 504 to include information technology

2002: California Senate Bill 105

Affirms that United States Section 508 applies to California governmental entities using information technology

FINANCIAL REASONS

Do you budget for the costs of a disability lawsuit?

Can you afford to risk losing a federal grant because your site is not accessible?

ETHICAL REASONS

Web accessibility is an issue of equal opportunity and discrimination.

TECHNICAL REASONS

Standards and guidelines for the Web let disabled and non-disabled users benefit from the same data sources.

The Web makes accessible communication very inexpensive and relatively easy.

How do we make accessible Web sites?

EDUCATE PEOPLE

MORE EFFECTIVE

Explain who, what, why, and how, then ask people to agree—and commit—to these changes.

Provide resources to help people make the changes.

LESS EFFECTIVE

Impose mandates or legislation, then have people defend why they can't or won't change.

EDUCATE PEOPLE

WEB SITE SPONSORS

WEB DEVELOPERS

Web Accessibility Initiative (WAI) Guidelines

Section 508

How to use color-blind simulators

How to make technology choices, design choices

How to use accessibility-focused development tools

How to find more information (widely available on the Web and in bookstores)

INCLUDE ACCESSIBILITY IN YOUR BUDGET

Hardware and software tools

Education and training

Additional Web developers to balance the load

Just like wheelchair ramps, it's smarter and less expensive to build in with a new project than it is to retrofit at a later date.

EXPOSE WEB DEVELOPERS TO ACCESS TOOLS

Software

Code validators

Accessibility checkers

Screen readers

Screen enlargement tools

Optical character recognition (OCR)

Voice recognition

EXPOSE WEB DEVELOPERS TO ACCESS TOOLS

Hardware

Document scanners

Large monitors

Braille printer

TEST YOUR SITES WITH DISABLED PEOPLE

Rose Resnick LightHouse for the Blind and Visually Impaired

Peninsula Center for the Blind and Visually Impaired

Recording for the Blind & Dyslexic

American Foundation for the Blind

San Francisco Public Library

BEST FIXES TO IMPLEMENT FIRST

Create valid code

Use ALT tags for all images (except spacer-GIFs and other meaningless graphics)

Use “skip navigation” links before all navigation bars

Recommended Reading

NON-TECHNICAL

Introduction to the Screen Reader (12 MB Apple QuickTime movie)

<http://www.doit.wisc.edu/accessibility/video/intro.asp>

Access: Everybody Wins

<http://www.alistapart.com/stories/access/>

Beyond Accessibility: Treating Users with Disabilities as People <http://www.useit.com/alertbox/20011111.html>

TECHNICAL

Joe Clark's Answers – In Valid HTML

<http://interviews.slashdot.org/interviews/02/12/09/1446221.shtml>

Accessibility and Authoring Tools

<http://www.alistapart.com/stories/tools/>

NON-TECHNICAL AND TECHNICAL

Mark Pilgrim: Dive into Accessibility

<http://diveintoaccessibility.org/>

MORE INFORMATION

There are too many other excellent sources to list concisely and representatively.

Google is your friend! <http://www.google.com/>

[Web accessibility](#)

[Section 508](#)

[color-blind Web development](#)

[screen readers](#)

ABOUT THIS PRESENTATION

This presentation is available on the Web at:

<http://pharmacy.ucsf.edu/go/access/>

PDF, 26 pages, 84 KB

Requires [Adobe Reader](#) 5.0 or later