

The background features a large, dark red curved shape on the left side. On the right side, there is a faint, light-colored image of a classical column capital with intricate scrollwork.

Stanford Online Accessibility Program

Introduction to Web Accessibility

Before we get started:

Headcount

How many people here are:

- Content Authors
- Designers/Artists
- Developers/Technical

It's important to remember...

"We don't want accessibility to be the thing that limits what people can do on their Web sites. We're not trying to slow down the world. We're trying to say, take accessibility into account."

Aaron Leventhal, IBM Web architect

Types of Access Barriers

Visual impairments

- Can range from total blindness, to low vision, reduced vision(near sighted / far sighted), as well as color blindness, etc.



- 17% of US computer users report having a mild visual difficulty or impairment

Source: Study Commissioned by Microsoft Corporation and Conducted by Forrester Research, Inc. - www.microsoft.com/enable/research/computerusers.aspx

- Clients in this group will usually employ adaptive technology such as Screen readers, screen magnifiers, etc.

Types of Access Barriers

Auditory impairments

- Includes users with total or partial hearing loss, users operating in noisy environments or areas which require silence, or using appliances without soundcards and/or speakers, etc.
- 18% (24.0 million) of computer users have a mild hearing difficulty or impairment, and 2% (2.5 million) of computer users have a severe hearing difficulty or impairment.



** Source: Study Commissioned by Microsoft Corporation and Conducted by Forrester Research, Inc. - www.microsoft.com/enable/research/computerusers.aspx

- Normally associated with Multimedia files on web sites, issues may also arise when required Media Player plug-ins are not present or supported, or connectivity issues impede the delivery of the media files.
- Incumbent on content creators to ensure alternative (text) transcripts are available to end users.

Types of Access Barriers

Mobility impairments

- May include paraplegics / quadriplegics, persons with arthritis, Parkinson's, cerebral palsy, etc., extreme youth, extreme age, etc.
- May also include barriers due to temporary conditions, or specific environments.
- 19% (24.4 million) of computer users have a mild dexterity difficulty or impairment, and 5% (6.8 million) of computer users have a severe dexterity difficulty or impairment.



** Source: Study Commissioned by Microsoft Corporation and Conducted by Forrester Research, Inc. - www.microsoft.com/enable/research/computerusers.aspx

- Clients in this group often employ technology such as speech recognition software, as well as alternate switching devices (sip and puff, foot switches, head activated mouse, touch screens, one-handed keyboards, etc.)

Types of Access Barriers

Cognitive impairments

- Can range from severe learning disability, to low literacy skills, dyslexia or cultural and language differences.
- 16% (20.6 million) of computer users have some form of cognitive difficulty or impairment.

** Source: Study Commissioned by Microsoft Corporation and Conducted by Forrester Research, Inc. - www.microsoft.com/enable/research/computerusers.aspx

- While some techniques do exist to aid in web site accessibility, clear, effective, written communication that is target-audience appropriate is important for this group.

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Types of Access Barriers

Technological restrictions

- Addresses issues ranging from older equipment & poor connectivity, to 'cutting edge' appliances such as cell phones, pda's and others.
- Mobile web browsing is growing - especially in places like Asia and Europe.
- New platforms such as Xbox, Wii, Play Station and others are connecting and using the web as a delivery and communication channel



Standards and Guidelines

W3C Web Content Accessibility Guidelines

The guidelines and Success Criteria are organized around the following four principles, which lay the foundation necessary for anyone to access and use Web content. Anyone who wants to use the Web must have content that is:



Perceivable

Operable

Understandable

Robust

Understanding the Four Principles of Accessibility

- **Perceivable:** Information and user interface components must be presentable to users in ways they can perceive.
This means that users must be able to perceive the information being presented (it can't be invisible to all of their senses)
- **Operable:** User interface components and navigation must be operable.
This means that users must be able to operate the interface (the interface cannot require interaction that a user cannot perform)

Understanding the Four Principles of Accessibility

- **Understandable:** Information and the operation of user interface must be understandable.

This means that users must be able to understand the information as well as the operation of the user interface (the content or operation cannot be beyond their understanding)

- **Robust:** Content must be robust enough that it can be interpreted reliably by a wide variety of user agents, including assistive technologies.

This means that users must be able to access the content as technologies advance (as technologies and user agents evolve, the content should remain accessible)

Understanding the Four Principles of Accessibility

If any of these are not true, users with disabilities will not be able to use the Web.

- Under each of the principles are guidelines and Success Criteria that help to address these principles for people with disabilities.
- There are many general usability guidelines that make content more usable by all people, including those with disabilities.
- This includes issues that block access or interfere with access to the Web more severely for people with disabilities.

Building a Case for Accessible Web Design

What's In It For Me?

"I'm not selling to the blind so why should I go to the trouble of making my site accessible?" Why? Because the most powerful Internet force known to God and man visits your web pages like blind people - Google. Google doesn't care how pretty your page looks: Google cares about accessing your content."

Vincent Flanders – www.websitesthatsuck.com

There are numerous reasons why creating Accessible online content is in your best interest. They include:

Building a Case for Accessible Web Design

Technical Reasons

- Reduce Site Development and Maintenance Time
- Enable Content for Different Configurations - write it once, use it many times
- Be Prepared for Advanced Web Technologies - future proof your site

Building a Case for Accessible Web Design

Social Reasons

- Positive Public Image - Web Accessibility is an Aspect of Social Responsibility
- Improved Usability - Web Accessibility Benefits People With and Without Disabilities
- Increased interaction between your site and end users

Building a Case for Accessible Web Design

Financial Reasons

- Decreases the need for creating multiple versions of a site for different devices
- Improved Search Engine ranking - Increased Web Site use by reaching a wider audience
- B2B client requirements (i.e. Section 508 requirements)

Building a Case for Accessible Web Design

Legal Reasons

- Web Accessibility is Essential for Equal Opportunity
- Proactive initiatives are defensive
- Legal liabilities generally un-tested – but who needs negative publicity?

"Getting it"

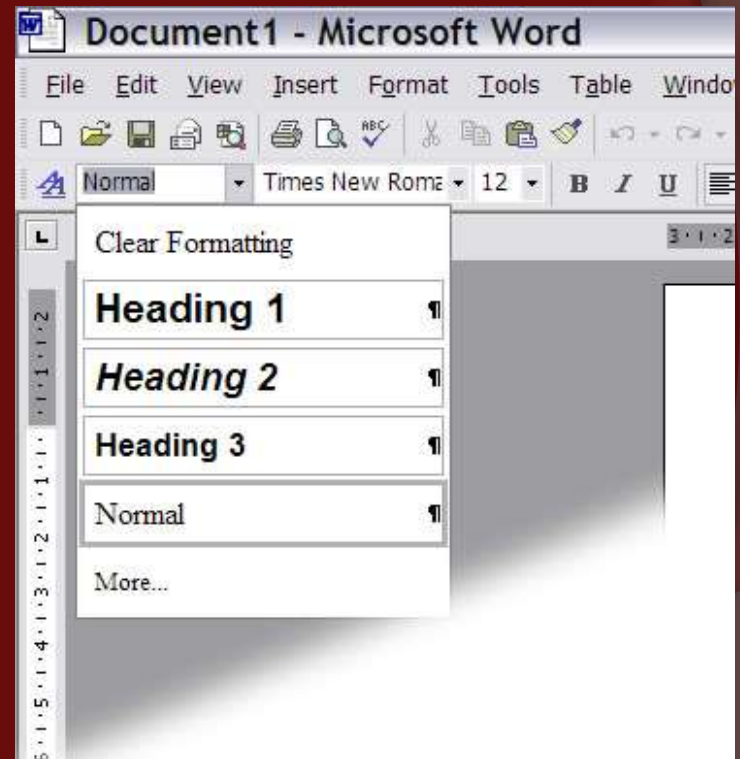
*"On my income tax 1040 it says:
'Check this box if you are blind.'
I wanted to put a check mark
about three inches away."*

Tom Lehrer, lecturing in "The Nature of Math", 4/4/90

What Can I Do Then?

If you are a Content Author

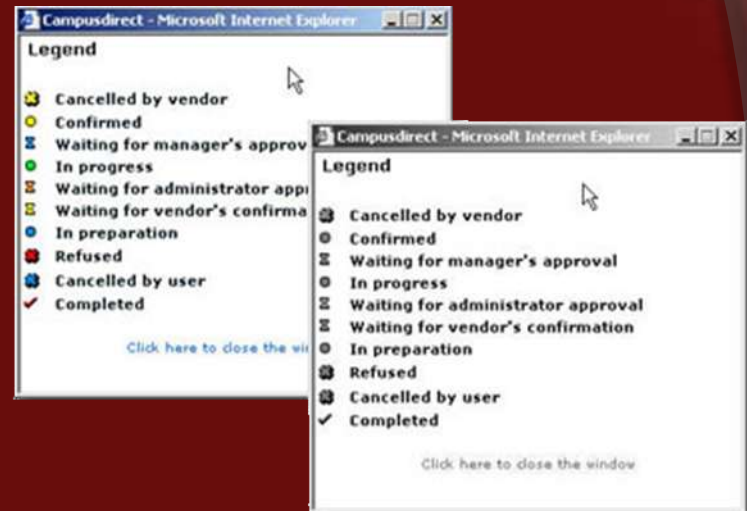
- Semantic Structure (Text Editor)
- Spatial Awareness (left or right?)
- Unique Link Text ("Click here")
- Clear and Jargon-free Language (watch for acronyms and abbreviations)
- Provide suggested Alternative Text for images



What Can I Do Then?

If you are a Designer/Artist

- Color and Contrast Issues
- Fluid Design principles
- Scalable Design (including Text)
- Beware of Icons!



What Can I Do Then?

If you are a Developer/Technical

- Separation of Content, Style, and Functionality
- Semantic Structure
- Code Validation - Standards
- Checklists and Guidelines



Now It's Your Turn

Questions

- Does anyone have any questions?

Discussion

- What are the major sites you use each day?
- Have you ever noticed an accessibility issue on a web site?
- What should you do if you notice an accessibility problem?

Stanford Online Accessibility Program

The Stanford Online Accessibility Program has been established to provide guidance to the Stanford Community as they use various online means to share information to their respective constituents. The program achieves this through the promotion of Universal Accessibility and web standards compliance.



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