Exploring an Accessible Web

CDS Media Center Webinar Series

http://www.media.cds.hawaii.edu/
http://tinyurl.com/a4m4z3g
1. Define Web Accessibility
2. Review Section 508 Regulations
3. Discuss Strategies for Compliance
Web Accessibility

a. Define Web Accessibility
b. W3C - Tim Berners-Lee
c. Content vs. Platform
d. Screen Readers
e. Style Sheets
f. Captioned Videos
Web Accessibility

Define Web Accessibility vs. Assistive Technology

http://tinyurl.com/az9a5px
Web Accessibility Defined examples

"refers to the **inclusive practice** of making **websites** usable by people of all abilities and **disabilities**. When sites are correctly designed, developed and edited, all users can have equal access to information and functionality."

"**WAI-ARIA** (Accessible Rich Internet Applications) is a specification published by the [World Wide Web Consortium](https://www.w3.org) that specifies how to increase the **accessibility** of **dynamic content** and **user interface components** developed with [Ajax](https://en.wikipedia.org/wiki/Ajax_%28programming%29), [HTML](https://en.wikipedia.org/wiki/HTML), [JavaScript](https://en.wikipedia.org/wiki/JavaScript) and related technologies."
Web Accessibility Defined examples

The needs that Web accessibility aims to address include:

- **Visual**: Visual impairments including blindness, various common types of low vision and poor eyesight, various types of color blindness;
- **Motor/Mobility**: e.g. difficulty or inability to use the hands, including tremors, muscle slowness, loss of fine muscle control, etc., due to conditions such as Parkinson's Disease, muscular dystrophy, cerebral palsy, stroke;
- **Auditory**: Deafness or hearing impairments, including individuals who are hard of hearing;
- **Seizures**: Photoepileptic seizures caused by visual strobe or flashing effects.
- **Cognitive/Intellectual**: Developmental disabilities, learning disabilities (dyslexia, dyscalculia, etc.), and cognitive disabilities of various origins, affecting memory, attention, developmental "maturity," problem-solving and logic skills, etc.
Web Accessibility Defined examples

The accessibility of websites relies on the cooperation of eight components:

1. the website itself - natural information (text, images and sound) and the markup code that defines its structure and presentation
2. user agents, such as web browsers and media players
3. assistive technologies, such as screen readers and input devices used in place of the conventional keyboard and mouse
4. users' knowledge and experience using the web
5. developers
6. authoring tools
7. evaluation tools
8. a defined web accessibility standard, or a policy for your organization (against which to evaluate the accessibility)
These components interact with each other to create an environment that is accessible to people with disabilities.

1. Web **developers** usually use **authoring tools** and evaluation tools to create Web **content**.

2. **People** ("users") use Web **browsers, media players, assistive technologies** or other "**user agents"** to get and interact with the **content**.
Web Accessibility Simplified

1. Screen Reader (Style Sheets)
2. Navigate by keyboard (no mouse)
3. Labeled images & video (captioned!)
Web Accessibility Simplified

What it is...    is NOT...
Screen Reader Usable    Multiple Language Translators
Easy to Read    Mega Information on single
page
User Control Styles
Clean Design

Adjustable Font Size
Animated Madness
Web Accessibility

World Wide Web Consortium (W3C)
Tim Berners-Lee

http://www.w3.org/2011/11/w3c_video.html
Web Accessibility

Content vs. Platform
Screen Readers (show examples of text)

Using YouTube with a screen reader

Introduction

This following information will be helpful for people using screen readers as it explains the steps for using YouTube with screen readers. A screen reader is a software application that identifies and interprets what is being displayed on the computer screen. This information is then presented to a blind user as speech. Visually impaired or blind people use screen readers. This article provides step-by-step process for using YouTube making it easier for a new user to explore YouTube. Please note: The experience of using YouTube may not be same with all screen readers due to inconsistency of support of technology by the various screen readers. To learn more about using YouTube with a screen reader that supports Adobe Flash accessibility extensions, please see this accessibility feedback page. Read on to learn more about using YouTube with a screen-reader and discover which keyboard shortcuts are available for the site:

No Mark Up with Style Sheet

Using YouTube with a screen reader

Introduction

This following information will be helpful for people using screen readers as it explains the steps for using YouTube with screen readers. A screen reader is a software application that identifies and interprets what is being displayed on the computer screen. This information is then presented to a blind user as speech. Visually impaired or blind people use screen readers. This article provides step-by-step process for using YouTube making it easier for a new user to explore YouTube. Please note: The experience of using YouTube may not be same with all screen readers due to inconsistency of support of technology by the various screen readers. To learn more about using YouTube with a screen reader that supports Adobe Flash accessibility extensions, please see this accessibility feedback page. Read on to learn more about using YouTube with a screen-reader and discover which keyboard shortcuts are available for the site:
Web Accessibility Style Sheets

Accessible Documents
- Adobe PDF
- Microsoft Word

Accessible Web Sites
- CSS (Cascading Style Sheets)
Web Accessibility

Captioned Videos (Youtube & Netflix)
Define open, closed and description
Section 508 Regulations
Chairman Nadler, Ranking Member Sensenbrenner, and Members of the Subcommittee, it is an honor to appear before you today to discuss the rights of individuals with disabilities to have access to emerging technologies. The Civil Rights Division enforces the Americans with Disabilities Act ("ADA") and Section 504 of the Rehabilitation Act, and we have a substantial role in implementing Section 508 of the Rehabilitation Act. Pursuant to these statutes, access to the Internet and emerging technologies is not simply a technical matter, but a fundamental issue of civil rights. As more and more of our social infrastructure is made available on the Internet - in some cases, exclusively online - access to information and electronic technologies is increasingly becoming the gateway civil rights issue for individuals with disabilities.
Dear College or University President:

We write to express concern on the part of the Department of Justice and the Department of Education that colleges and universities are using electronic book readers that are not accessible to students who are blind or have low vision and to seek your help in ensuring that this emerging technology is used in classroom settings in a manner that is permissible under federal law. A serious problem with some of these devices is that they lack an accessible text-to-speech function. Requiring use of an emerging technology in a classroom environment when the technology is inaccessible to an entire population of individuals with disabilities—individuals with visual disabilities—is discrimination prohibited by the Americans with Disabilities Act of 1990 (ADA) and Section 504 of the Rehabilitation Act of 1973 (Section 504) unless those individuals are provided accommodations or modifications that permit them to receive all the educational benefits provided by the technology in an equally effective and equally integrated manner.

The Departments of Justice and Education share responsibility for protecting the rights of college and university students with disabilities. The Department of Justice is responsible for enforcement and implementation of title III of the ADA, which covers private colleges and universities, and the Departments of Justice and Education both have enforcement authority under title II of the ADA, which covers public universities. In addition, the Department of Education enforces Section 504 with respect to public and private colleges and universities that receive federal financial assistance from the Department of Education. As discussed below, the general requirements of Section 504 and the ADA reach equipment and technological devices when they are used by public entities or places of public accommodation as part of their programs, services, activities, goods, advantages, privileges, or accommodations.

U.S. Department of Justice & Education, Civil Rights Divisions
ADA vs. Section 508

June 29, 2010

Dear College or University President:

The Department of Justice recently entered into settlement agreements with colleges and universities that used the **Kindle DX, an inaccessible, electronic book reader, in the classroom as part of a pilot study with Amazon.com, Inc.** In summary, the universities agreed not to purchase, require, or recommend use of the Kindle DX, or any other dedicated electronic book reader, unless or until the device is fully accessible to individuals who are blind or have low vision, or the universities provide reasonable accommodation or modification so that a student can acquire the same information, engage in the same interactions, and enjoy the same services as sighted students with substantially equivalent ease of use. The texts of these agreements may be viewed on the Department of Justice’s ADA Web site, [www.ada.gov](http://www.ada.gov).

U.S. Department of Justice & Education, Civil Rights Divisions

[www.ada.gov/kindle_ltr_eddoj.htm](http://www.ada.gov/kindle_ltr_eddoj.htm)
One year later, on May 26, 2011, as a follow-up to this Dear Colleague Letter, ED issued a Frequently Asked Questions document regarding the legal obligations of schools (both elementary/secondary and post-secondary) under Section 504 of the Rehabilitation Act of 1973 (Section 504) and the Americans with Disabilities Act (ADA) in the use of emerging technology.

The FAQ also clarified that the principles articulated in the earlier DCL apply in other contexts as well—namely: (1) to students with print disabilities other than visual impairments, including students with learning disabilities; (2) to elementary and secondary schools, in addition to post-secondary institutions; (3) to all faculty and staff, not merely to the Section 504 or ADA coordinator; and (4) to forms of emerging technology beyond electronic book readers as well as to online programs, including applications for admission, class assignments, and housing, and to pilot programs of short duration.

The FAQ further pointed out that the use of emerging technology in schools should always include planning for accessibility from the outset, even if there are no students with visual impairments at the school. In addition, the FAQ advised schools—in deciding whether to create or acquire emerging technology—to include accessibility analyses as part of their acquisition procedures. Toward this end, the FAQ proposed a series of questions for schools to consider in determining whether emerging technology is accessible and in reviewing the adequacy of particular accommodations or modifications.

Finally, the FAQ noted that traditional alternative media such as books on tape may still be appropriate for students under certain circumstances; however, if the school offers alternative media as an accommodation to an emerging technology, the alternative media must provide access to the same benefits as the technology in an equally effective and equally integrated manner. According to the FAQ, decisions regarding the provision of FAPE to students in elementary and secondary schools, academic adjustments and auxiliary aids to students at the post-secondary level must be individualized.
"With recent advancements in technology, opportunities for communicating with the public have grown exponentially to include not only the Internet as traditionally used to provide information, but also new Internet-based social networking communities where people can respond to information provided to them, such as Facebook, Twitter, MySpace and YouTube. These expansions in technology hold the promise of increased participation for all, but present challenges for the full inclusion of persons with disabilities."
Strategies for Compliance

Discuss Strategies for Compliance

1. Develop Written Policy
2. W3C Guidelines Checklist
   a. WebAim Wave Evaluator
3. Universal Design for Learning (UDL)
   a. Principle 1: Multiple Means of Representation
4. Fix main page first
Strategies for Compliance

Discuss Strategies for Compliance

Develop Written Policy
Strategies for Compliance

Discuss Strategies for Compliance

Develop Written Policy

CDS Web Accessibility Policy

It is the policy of the Center on Disability Studies to provide equal access to information and information technology in accordance with Section 508 of the Rehabilitation Act. This means offering equal access to online content and information technology for all users regardless of mode of access.

- Conformance
- Assessment Procedures
- Conformance Claims
- Enforcement
Strategies for Compliance

Discuss Strategies for Compliance

W3C Guidelines Checklist
  a. WebAim Wave Evaluator

www.w3c.org/WAI
wave.webaim.org
How to Meet WCAG 2.0

A customizable quick reference to Web Content Accessibility Guidelines 2.0 requirements (success criteria) and techniques

Introduction

Click to Hide Introduction

This document lists all of the requirements (called “success criteria”) from Web Content Accessibility Guidelines (WCAG) 2.0. It also lists techniques to meet the requirements, which link to more details. The "Understanding" links go to descriptions, examples, and resources.

You can customize the list by selecting the technologies that apply to your Web project, and the levels and techniques that you want included in the list.

Technology-specific techniques do not supplant the general techniques: content developers should consider both general techniques and technology-specific techniques as they work toward conformance.

Note: In some customized views, no techniques will be listed under some headings. This indicates that there are no documented techniques for the technologies chosen.

See the WCAG Overview for an introduction to WCAG and supporting documents, including more information about this document.

About the Techniques

Click to Show All

http://www.w3.org/WAI/WCAG20/quickref/
Welcome to WAVE

WAVE is a free web accessibility evaluation tool provided by WebAIM. It is used to aid humans in the web accessibility evaluation process. Rather than providing a complex technical report, WAVE shows the original web page with embedded icons and indicators that reveal the accessibility of that page.

Enter a web site address
Enter the URL of the web site you want to evaluate:

Upload a file
If you have files that are not publicly available on the internet, you can upload the files for WAVE evaluation. Simply browse to the file using the form below.

Check HTML code
Paste HTML code into the text area below.

http://wave.webaim.org/
Discuss Strategies for Compliance

Universal Design for Learning (UDL)
  a. Principle 1: Multiple Means of Representation
Transforming Education through Universal Design for Learning

Who we are
About CAST
CAST is an educational research & development organization that works to expand learning opportunities for all individuals through Universal Design for Learning.

What we do
Research and Development
CAST works to apply Universal Design for Learning (UDL) to education’s greatest challenges. 
Read about our projects

What we offer
Learning Tools
Thanks to the generosity of our funders, CAST offers free multimedia learning tools. 
View all tools

http://www.cast.org/
Next Accessibility Webinar
CDS Media Center Webinar Series

http://www.media.cds.hawaii.edu/?page_id=61
Questions?

CDS Media Center Webinar Series

http://www.media.cds.hawaii.edu/