

# Website Accessibility and Institutional Research

Presented by

Sutee Sujitparapitaya, Associate Vice President

John Briggs, Institutional Research Coordinator

Chao Vang, Database/System Analyst

Office of Institutional Research, San José State University

# The Law

- **Section 508 of the Rehabilitation Act of 1973**
  - Electronic and Information Technology Accessibility Standards
- **California – Government Code 11135**

# Policy Implementation

- **California Community Colleges**
  - [Legal Opinion M 03-09](#)
  - [Legal Opinion M 01-17](#)

# Policy Implementation

- **California State University**
  - California – Government Code 11135
  - The California State University Board of Trustees Policy on Disability Support and Accommodations - Executive Order Number 926
  - Coded Memo: AA-2007-04

# Policy Implementation

- **University of California**
  - Proposed Policy (2007)
  - UC Electronic Communications Policy Implementation Guidelines (Attachment 2, section II.B.6 "Accessibility")

# Best Practices

- **Know and Understand your Users**
  - Blind, ColorBlind, low vision, Deaf
  - text-only screen, Voice browser, Screen reader
  
- **Accessibility Tools**
  - Jaws
  - Speakup
  - SuperNova

# Best Practices

- **Remember that a webpage is a text document with code and Accessibility Tools read these documents top-down.**
- **Accessibility tools can not see the information in images, so use text as much as possible.**
  - **This includes anything that is not plain text like videos, flash**
- **Remember the reading order.**

# Best Practices

```
<html><head>  
<title>Title of Document</title>  
</head>  
<body>  
<h1>header 1</h1>  
<p>Some text, body of text</p>  
<p>footer</p>  
</body></html>
```

---

header 1

Some text, body of text

footer



# Best Practices

- **All pages must have valid HTML**

## **Example:**

- All open tags have closing tags.
- Tags are properly nested.

```
<h1>This is header 1</h1>
```

```
<p>This is some text</p>
```

# Best Practices

## ➤ **Style Sheets**

- Pages should be accessible with style sheet
- Pages should be accessible without style sheet
- If Pages do use style sheets, all styles must be valid

# Best Practices

- **All Links with the same text should all go to the same place**
- **Text for hyperlinks should describes where the hyperlink goes**

## **Example:**

For more examples follow the link to [San Jose State University](#).

# Best Practices

- **Headings are properly nested and reflect the content of the document**

## **Example :**

### Student

Student info

Student Summary

### Faculty

Faculty Info

Faculty Summary

# Section 508 Subpart B - Technical Standards

## § 1194.22 standards

### *Applying the 1194.22 Standards*

- **Technical standards that govern a web accessible site**
- **There are other standards (W3C), but this is what we follow**

# Applying the 1194.22 Standards

- **A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).**
  - Alt tags for images
  - Check for context so that description matches the thought it is meant to convey
  - Alt tags should work even if image is not available or disabled by the browser

# Applying the 1194.22 Standards

## Alternative Text Example

```

```

# Applying the 1194.22 Standards

- **Web pages shall be designed so that all information conveyed with color is also available without color.**
  - Check that meaning is conveyed with or without colors



# Applying the 1194.22 Standards

## Example

- You must label all color items, the screen reader can not tell if an image is green or red.

Good



Bad



# Applying the 1194.22 Standards

- **Background and foreground colors have a luminosity contrast ratio of at least 5:1 (for the colorblind)**

**Example :**

Chao Vang

# Applying the 1194.22 Standards

- **Use of frames.**
  - Don't use them!
  - Most Assistive technologies cannot navigate frames
  - Some technologies do not support it at all

# Applying the 1194.22 Standards

- **Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.**
  - Do not use flickering portions on a web page
  - Users with epilepsy can have seizures looking at these pages

# Applying the 1194.22 Standards

- **When a web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the page must provide a link to a plug-in or applet that complies with § 1194.21(a) through (l).**
  - Provide links to any special reader or plug-in (e.g. Adobe Reader for PDF)

# Applying the 1194.22 Standards

- **A method shall be provided that permits users to skip repetitive navigation links.**
  - Each group of repetitive links have a visible and audible way to skip reading

## **Example:**

```
<h2 class="hidden">Home Navigation</h2>
```

# Applying the 1194.22 Standards

- **For a multimedia presentation, a visual equivalent of audio content is needed as well as an audio equivalent of visual content.**
  - An example of this is captions running with the audio

# Applying the 1194.22 Standards

## ➤ Tables

- Do not use tables for layout
- Only use tables to present data
- The more you can identify each data cell the more accessible it is.



# Applying the 1194.22 Standards

## ➤ Create a simple Table

- Summary: Describes the table data
- Caption: The title of the table
- <thead> used to group and identify the header
- <tbody> used to group and identify the body content in the table
- <th> Used to identify the each row header and/or each column header
- Scope: used to define the row and column headers

# Applying the 1194.22 Standards

## Create a simple Table example

Fall Student Count

<b>Students</b>	<b>Fall 2007</b>	<b>Fall 2008</b>	<b>Fall 2009</b>
<b>Male</b>	14,547	14,945	14,249
<b>Female</b>	16,420	16,892	16,223

Refer to code Example1.txt

# Applying the 1194.22 Standards

- **Complex tables**
  - Using id and header attributes to associate data cells with column/row headings

Fall Student Count

		Fall 2008		Fall 2009	
		Male	Female	Male	Female
Undergrad	Part-Time	2,544	2,719	2,885	3,084
	Full-Time	9,628	10,286	8,776	9,528
Graduate	Part-Time	1,338	1,979	1,319	1,828
	Full-Time	1,425	1,908	1,269	1,783

Refer to code Example2.txt

# Accessibility Tools

- **Commerical Software used by SJSU**
  - AccVerify by HiSoftware
  - Jaws
  
- **FreeWare/OpenSource**
  - FireFox Developer toolbar
  - Fangs for Firefox – Text reader
  - Colour Contrast Analyser

# Final Note

- **If you have PDF files on your website, make sure the PDF files are fully accessible.**

# Office of Institutional Research

*([www.oir.sjsu.edu](http://www.oir.sjsu.edu))*



**SAN JOSÉ STATE**  
**UNIVERSITY**