



Accessible Technology Initiative First Year Web Accessibility Report – Phase I May 2007

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EXECUTIVE SUMMARY

This report responds to Coded Memo AA-2007-04, dated February 9, 2007, from the Office of the CSU Chancellor to Campus Presidents. Page 3 of this Memo requires that a self-selected set of web pages be chosen for evaluation and remediation.

San Diego State University (SDSU) selected a set of over 60 web pages that represented a cross section of our various organizations for accessibility evaluation. Of these pages we selected 15 for a more detailed manual evaluation and potential remediation. The SDSU web pages selected for detailed evaluation and potential remediation include:

1. **Academic Affairs** - <http://www-rohan.sdsu.edu/~academic/index.html>
2. **Aerospace Engineering** - <http://www.engineering.sdsu.edu/aerospace>
3. **Associated Students** - www.as.sdsu.edu
4. **Aztec Shops** - www.sdsu bookstore.com/default.aspx
5. **Blackboard** - <http://blackboard.sdsu.edu/>
6. **Business and Financial Affairs** - <http://bfa.sdsu.edu>
7. **Center for Human Resources** - <http://bfa.sdsu.edu/ps/>
8. **Education** - <http://edweb.sdsu.edu/>
9. **Extended Studies** - <http://www.ces.sdsu.edu>
10. **Financial Aid** - <http://www.starter.sdsu.edu/fao>
11. **Graduate Research Affairs** - <http://gra.sdsu.edu/research.php>
12. **Psychology** - <http://www.psychology.sdsu.edu/new-web/index.html>
13. **Public Administration and Urban Studies** - <http://www-rohan.sdsu.edu/~spaus/>
14. **Student Health Services** - <http://shs.sdsu.edu/home.html>
15. **University Advancement** - <http://advancement.sdsu.edu/presidentweber/>

PROCESS

The first step was to identify the 60 pages to be evaluated, and to post them at SDSU's ATI site: <http://access.sdsu.edu/rpts>. Page selection for the more detailed analysis was the result of a collaborative effort. A base-line audit of the pages was then conducted using AccVerify®, and the results were posted as passed (Y) or failed (N). The people responsible for (a) developing the pages, and (b) approving

their publication were then identified; and their contact information was added to the audit table.

Using the Process Guide for automated and manual checking, provided by staff of the Office of the Chancellor at <https://fullerton.blackboard.com/>, people who accepted responsibility for the evaluation and remediation process conducted an automated and/or manual audit of their respective pages. They then reported their remediation efforts to SDSU ATI Project Managers, who compiled this report. Following remediation, the 15 pages were again audited using AccVerify®, and the results were posted at <http://access.sdsu.edu/rpts>.

SDSU asked each person evaluating and remediating a page to respond to the following questions:

1. What are the most significant problems you encountered?
2. How much time did it take you to find the problems?
3. What problems did you fix?
4. How did you fix these problems?
5. How difficult was it to fix these problems?
6. How much time did it take you to fix the problems?
7. Did you learn any key lessons, develop any specific techniques, or develop any standard practices as a result of remediating these pages? If so, what were they?
8. For pages or problems that cannot be fixed immediately, describe current actions (technical or organizational) to provide equally effective access to the page content. For pages or problems that cannot be fixed immediately, describe how a long-term fix is to be accomplished, who will need to do it (For example, a product vendor), and the estimated time and cost of repair or replacement.
9. Note any organizational and/or infrastructure problems in web development and maintenance that you have identified.

RESULTS

Four of the 15 pages selected for the detailed audit failed the base-line AccVerify® audit; 11 passed. The second audit results for the four pages that failed the initial test remained the same as the initial results. This was due to one or more of the following conditions:

- The site was built by a third-party vendor.
- Code for the site was not available.
- It was more cost-effective to rebuild the site from scratch than to remediate.
- There were insufficient resources available to work on the project.

Of the 11 pages that passed the baseline and post-remediation audits, all demonstrated further improvement following manual audit and remediation, including:

- Addition of “alt” tags.
- Removal of spacer gifs.
- Removal of mouse-overs.
- Image file name changes.
- Removal of or disabling unnecessary JavaScript.
- Repair of data tables.
- Insertion of tags to bypass navigation links.
- Use of Cascading Style Sheets (CSS).

Responses to the nine questions (and sub-questions) are summarized as follows:

What are the most significant problems you encountered?

- | | |
|---|---|
| <ul style="list-style-type: none"> • Missing Alt Attribute • Non-semantic Markup • Mixed Content and Formatting • Hidden Frame Used to Manage Session State • Flash Files • Data Tables Used for Layout | <ul style="list-style-type: none"> • Data Tables in Non-logical Format • Missing Applet/Plug-ins • Color Contrast Failure • Graphic Spacers • Missing Source Files |
|---|---|

How much time did it take you to find the problems?

Average of 3.4 hours

What problems did you fix?

In those cases where problems were fixed, most or all of the problems were fixed. In those cases where problems were not fixed, the site was slated for re-design. Only in one instance were problems not addressed at all, and this was due to lack of resources.

How did you fix these problems? Reported tools used included:

- | | |
|---|--|
| <ul style="list-style-type: none"> • Adobe® Dreamweaver® • Adobe® GoLive® • Firefox • HiSoftware® AccVerify® and AccRepair® | <ul style="list-style-type: none"> • HiSoftware® Cynthia Says™ • Opera • Vischeck |
|---|--|

How difficult was it to fix these problems?

Difficulty ranged from “easy” to “impossible”.

How much time did it take you to fix the problems?

Average time was 5.19 hours

Did you learn any key lessons, develop any specific techniques, or develop any standard practices as a result of remediating these pages? If so, what were they?

- Manual evaluation process confirmed importance of building correctly from the start.
- Need HTML knowledge to comprehend HiSoftware® tools and reports and to do a really good job of making repairs.
- Third-party developers must be made part of this initiative.
- It is important to separate content from design.

For pages or problems that cannot be fixed immediately, describe current actions (technical or organizational) to provide equally effective access to the page content.

In some cases, impediments to accessibility were disabled entirely, pending re-creation of the entire site from scratch. In most cases, however, the question either did not apply (due to full remediation's already having taken place); or there was no response to this question.

For pages or problems that cannot be fixed immediately, describe how a long-term fix is to be accomplished, who will need to do it (For example, a product vendor), and the estimated time and cost of repair or replacement.

No one addressed the specifics of this question; however, two respondents stressed the need for centralized support.

Note any organizational and/or infrastructure problems in web development and maintenance that you have identified.

All of the following were cited as significant impediments to web development and maintenance:

- Lack of time to work on web site development.
- Need for more training.
- Need for centralized support.
- Need to replace old sites with new, compliant sites, rather than remedy them.
- Departments need to learn to do this themselves, rather than rely upon 3rd-party vendors.
- In cases where 3rd-party vendors must be used (e.g. Blackboard), impress upon the vendors the importance of 508 compliance.
- Information about the initiative is scattered in multiple locations (e.g. Chancellor's Office site, SDSU site, CSU Fullerton Blackboard).
- Email is not the most efficient means of responding to questions; the Chancellor's Office should consider developing standardized questionnaires, to which participants can respond electronically.

- A firm grasp of HTML programming is necessary to fully comprehend how changes should be made to remediate sites, and to create sites that are fully compliant.

A BROADER VIEW

The results of a survey that was taken at a manual-check training on April 26, 2007, indicates that most of the 28 respondents (over 82%) had knowledge of the ATI prior to the training; nearly a third had already been checking for 508 compliance; and over three-quarters of the respondents would be willing to train others in their organizational areas. Hours spent on ATI compliance varied from one to 40 hours per week, with an average of nearly 17 hours per week.

Of those who indicated they were not willing to train others, their reasons fell into two categories:

1. Lack of confidence in their own skills.
2. Lack of time and other resources.

The chart below, Figure 1, indicates that 17.65% learned of the ATI via email from a campus administrator; 23.53% through committee participation; 35.29% while at a conference or attending training; and 23.53% by word-of-mouth.

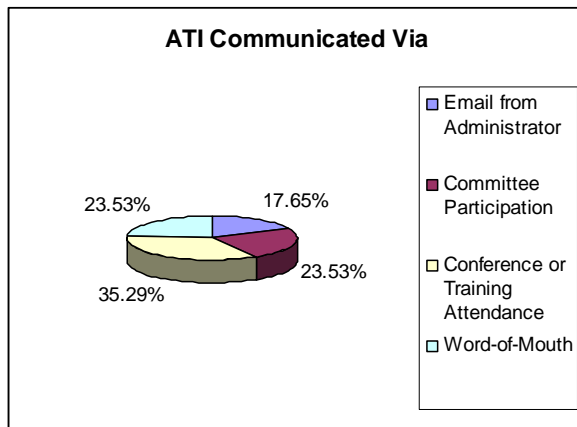


Figure 1

Over 82% of the respondents used two or more tools to check for compliance; the remainder used only HiSoftware®. Other tools, as demonstrated in Figure 2, immediately below, were Cynthia Says (11.76%), Dreamweaver (11.76%), W3C (17.65%), Firefox Tools (17.65%), Bobby (23.53%), and other, unspecified tools (17.65%).

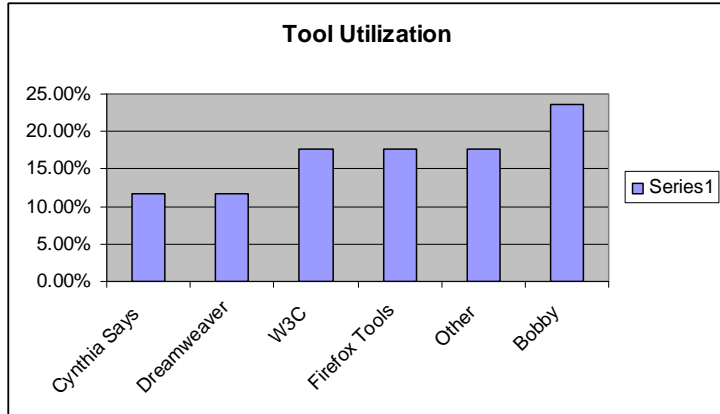


Figure 2

SUMMARY

Most pages had similar problems, as did most of the people who worked on this project. When reviewing the results of this exercise, it is important to remember that the skills sets of the participants vary widely. Some of the people who stepped up to this challenge are typically charged only with updating content. Others routinely develop web pages and are thoroughly familiar with HTML, as well as the tools that were used during this endeavor.

The timing of the project, coming as it did during the last weeks of the Spring Semester, undoubtedly limited people's availability to participate as fully as they might otherwise have done. Those who did contribute, however, did so in a spirit of open collaboration, as evidenced by the many email exchanges that took place among various team members.

Although the creation of no new policies or procedures has been reported, this exercise has created heightened awareness of the issues and challenges surrounding the Accessible Technology Initiative. It will serve as the springboard to future phases of this ongoing project.