

# Establishing Standards for Usable and Accessible User Services Web Sites

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## ABSTRACT

The University of Delaware provides nearly all of its information on the World Wide Web; in fact, much of it can be found only on the Web. With this focus, it is critical that all people be able to access the information they seek through usable and accessible Web sites.

Responding to this need, User Services has developed a process for designing its new and revised Web pages with the philosophy that:

1. Web pages should allow all people to find the information they seek (usability).
2. Web pages should work on all browsers and platforms User Services supports and for all supported populations (accessibility).

## Categories and Subject Descriptors

H.5.2 [Information Interfaces and Presentation]: User Interfaces – *Screen design (e.g., text, graphics, color), Style guides, User-centered design.*

## General Terms

Design, Human Factors, Standardization.

## Keywords

Usability, accessibility, web standards, web design guidelines.

## 1. INTRODUCTION

Recent statements by the World Wide Web Consortium (W3C) and the amendment of Section 508 of the Rehabilitation Act of 1973 have focused attention on making Web pages accessible to all people. In addition, Web pages benefit from following usability and design principles that enable people to find the information they seek. To address usability and accessibility issues in User Services Web pages, a committee representing all departmental groups selected a subset of design guidelines based on those of the W3C and Section 508. The guidelines were what we considered the minimum a developer should follow to create an acceptable site.

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## 2. THE DEVELOPMENT PROCESS

The committee designed a 5-step process for developing and redesigning User Services Web sites:

- A. Design pages following the guidelines in the “Basic Standards for User Services Web pages” document.
- B. Use a Validator to check your HTML code.
- C. Evaluate and repair your pages for usability and accessibility.
- D. Test your pages on the browsers in use at the University before you officially publish the site.
- E. If all else fails, create a text-only alternative for your page.

## 3. GUIDELINES

We agreed on the following minimum guidelines for Web pages:

- A. Images: Every image should have meaningful “alt” text that describes the purpose of the image. For design images like “spacer.gif” and for images used as bullets, use empty “alt” tags.
- B. Applets and scripts must have alternate text descriptions.
- C. Image Maps: Use client side image maps whenever possible. Provide “alt” text links for the image and for each active region of the image map.
- D. Movies or animations: Provide users with an option for narration in text form. Most important: make sure that critical information (e.g., the location or availability of a particular computing site) is not hidden in a movie file.
- E. Color: Don’t use color alone to convey information.
  - All critical information that depends upon color must be available without color from the context or markup.
  - Provide enough contrast between text and background color so that people who cannot distinguish colors or those who use black and white screens can read the information.
- F. Use Style sheets and proper markup:
  - Include a Document Type definition (DTD) at the beginning of the Web page.

- Use headers to structure the document and use them correctly.
  - If possible, use CSS style sheets to control layout and presentation.
- G. Label all form fields.
- H. Create data tables that can be read in a linear fashion.
- I. Identify frames correctly. Each frame should have a title that describes its purpose.

#### **4. VALIDATOR PROGRAMS**

After pages are designed using the above guidelines, the next step is to use a validator program to check HTML code to make sure it complies with W3C standards. The W3C HTML Validator is online at

<http://validator.w3.org/>.

#### **5. USABILITY and ACCESSIBILITY TOOLS**

Many page-design programs now provide a way to check for accessibility and usability and to remedy problems before pages are published.

In addition, software for checking pages is available online and for purchase. One of the most frequently used Web accessibility programs at Delaware is “Bobby,” which can be found online at

<http://bobby.watchfire.com/bobby/html/en/index.jsp>.

Page developers type the page’s URL into the box on the Bobby Web site to have their work evaluated and to receive suggestions for improvement.

Beyond this, an extensive list of software for evaluating and repairing Web pages can be found online at

<http://www.w3.org/WAI/ER/existingtools.html>.

#### **6. PAGE TESTING**

Once pages are finished, validated, and repaired, they are tested on the platforms and browsers we support at the University of Delaware as well as on other browsers staff may have available. At Delaware, this means that pages should be looked at on the Windows, Macintosh, and UNIX platforms and on at least Internet Explorer, Netscape, and Lynx. Pages must still be usable when images and JavaScript are turned off in the browser.

#### **7. TEXT-ONLY PAGE**

If accessibility cannot be achieved in any other way, then page developers include a text-only equivalent of the information they are providing. In this way, we can be assured that those who seek the services of our department will find the help they need.

#### **8. REFERENCES**

- [1] World Wide Web Consortium Web site.  
<http://www.w3.org>.
- [2] Section 508 Web site.  
<http://www.section508.gov>.