

Working Toward an Accessible Dartmouth Web

*Information about universal design for Web sites & what you can do
to help make Dartmouth's Web site accessible to all visitors*

DARTMOUTH RECOGNIZES the potential of information technology for people with disabilities. An accessible computing environment enriches the diversity of our community by welcoming students, educators, professionals, and guests with disabilities. In pursuit of this goal, Dartmouth seeks to build public Web spaces that are accessible to everyone. We ask all departments, units, groups, and individuals to become versed in the principles of universal Web design, and to endeavor to use those principles when building pages for the Dartmouth Web.

— PRESIDENT JAMES WRIGHT



What is universal design?

Universal design strives to create spaces that are useable and navigable by everyone. By anticipating the needs of people with varying abilities, accessible elements can be integrated into the initial design of a space, rather than requiring adaptations and special accommodations as an afterthought. Everyday examples of universal design include access ramps, curb cuts and automatic doors. The College routinely uses principles of universal design to plan new buildings and to renovate existing ones.

How does universal design apply to the Web?

Many tools have been developed to make the Web more accessible for people with disabilities. Examples include text-to-speech software that reads text aloud, programs operated by voice commands, and tools to help transcribe audio files into written captions. However, since much of the Dartmouth Web and the World Wide Web in general were designed without the guidance of universal design principles, current Web pages often cannot take advantage of these technologies.

How is a universally designed Web page different from other Web pages?

A universally designed Web page makes all information on that page accessible in a variety of ways, whether it's in the form of text, images or sound. For example, a Web page that uses principles of universal design:

- can be resized to accommodate low-vision users;
- uses text formats that can be read aloud by software or can be printed in Braille for blind users;
- offers text descriptions of images displayed on the screen;
- displays captions of audio content for deaf or hard of hearing users;
- can be navigated from the keyboard for people who cannot use a mouse;
- is clearly written and organized and can be understood by all users.

What should you look for on your Web pages?

A thorough evaluation of Web site accessibility can be an involved and time-consuming process. There are tools and resources available to help with that process, some of which are listed in the next section of this booklet on evaluation and repair. However, it is easy to become familiar with the type of elements that may present accessibility problems, and to get a sense of the scope of repair needed on your site by performing a series of manual checks using your computer system and browser software.

Graphics

Information displayed only in graphic format is not accessible for people who cannot view images.

Try viewing your pages with image loading turned off in your browser. Can you still use the site? Is essential information unavailable without images?

Audio

Information presented only in audio format is not accessible for people who cannot hear.

Try navigating your site with your computer volume turned off. Is all audio content available through equivalent text?

Navigation

Point-and-click navigation can be difficult for people who cannot use a mouse.

Try moving your mouse out of reach and using the keyboard to navigate your Web site. Use the tab key to move between links and form fields. Are all elements accessible from the keyboard? Do you cycle through elements in a logical sequence?

Text

Small fixed-size text can be illegible for people who need large text for reading.

Try enlarging your text using the text zoom feature in the browser. Does all your text enlarge? Does the page design hold up to enlarged text? Watch particularly for graphic text, which cannot be enlarged.

Color

Color can be a problem for people who need high contrast for legibility.

Try setting your monitor to grayscale or printing your pages on a grayscale printer. Are all page elements legible and readable? Do you rely on color to convey information? Watch for things like, “fill out the form fields labeled in red,” or “Click the green button to continue.”

Layouts

Fixed page layouts present difficulties for people who need to customize their view.

Try setting your screen resolution to 640×480 or resizing your browser window to less than the maximum width. Does the page layout resize to accommodate different window widths? Is horizontal scrolling required to read the text on the page?

Formats

Certain formats and technologies are not accessible for people using older systems or alternate browsers.

Try turning off special features like style sheets, JavaScript, frames, plug-ins, and scripting in the browser. Are your pages still usable with these features disabled? Is information in non-standard formats, such as PDF or Flash, also available as plain HTML?

How can you evaluate and repair your pages?

In examining the accessibility of your Web site, chances are you identified potential problems on your pages. Don't panic. There are many resources and tools available to help fix accessibility problems, some of which are listed below. And don't think you need to fix everything all at once. Even a small change, such as adding alternate text to images, will take you a long way toward providing universal access to your Web site.

Learning about universal Web design

Access Dartmouth is a site about access at Dartmouth for people with disabilities. The site describes current initiatives underway at the College, including the work of the Web Access Group. Access Dartmouth is a good place to start to learn about accessible Web design.

Access Dartmouth: www.dartmouth.edu/~access

The **Web Accessibility Initiative (WAI)** provides guidelines and techniques in support of the World Wide Web Consortium's commitment to universal Web access. Consult the WAI site for official standards and techniques for authoring accessible Web sites.

Web Accessibility Initiative: www.w3.org/wai

Web Accessibility in Mind (WebAIM) is an organization at Utah State University charged with improving accessibility online. Visit their Web site to learn accessible design techniques. Also join the WebAIM Forum for discussions about Web access.

WebAIM: www.webaim.org

Many people use Adobe's PDF format to deliver documents on the Web. Unfortunately, PDF documents are generally not readable using adaptive technology. If you are using the PDF format, consult Adobe's **How to create accessible Adobe PDF files** booklet for guidance on developing accessible PDF documents. How to create accessible Adobe PDF files: access.adobe.com/booklet.html

Flash is a popular Web authoring format that is not always easy to use with adaptive technology. However, the current version, Flash MX, offers new accessibility features. Visit **Flash Accessibility** for tips on building accessibility into your Flash presentations.

Flash Accessibility: www.macromedia.com/macromedia/accessibility/features/flash/

Evaluating and repairing Web pages

A-Prompt is free software that runs on Windows computers. Use A-Prompt to evaluate the accessibility of your Web pages and for help repairing inaccessible features.

A-Prompt: aprompt.snow.utoronto.ca

WAVE and **Bobby** are both free Web-based analysis tools. Submit a page URL to WAVE or Bobby and receive a report of potential accessibility problems, which you can then repair using your Web authoring software.

WAVE: www.temple.edu/inst_disabilities/piat/wave
Bobby: bobby.watchfire.com

What is WAG?

Formed in 2002, the Web Access Group (WAG) is an *ad hoc* committee dedicated to making Dartmouth Web sites accessible and navigable for all users. The group's two major goals are to raise awareness about Web accessibility and to offer information and resources for people interested in creating accessible pages. Some of the ways WAG supports these goals include:

- providing guidelines for accessible Web design;
- offering talks on Web accessibility;
- assisting Web developers in evaluating their sites' accessibility.

For information on current WAG activities and to monitor access initiatives at the College, visit the Access Dartmouth site at www.dartmouth.edu/~access.

WAG members

- Ellen Arnold
Associate General Counsel, Office of the General Counsel
- Bill Brawley
Director of User Communications, Computing Services
- Sarah Horton
Instructional Technology Specialist, Academic Computing
- Michelle Meyers
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