

ASSISTIVE ANNOTATIONS

The Art of Recommending Web Sites

Have you ever recommended a favorite restaurant to a friend, or had someone else recommend one to you? Consider the kinds of information that were shared: the location of the restaurant? type of cuisine offered? price range? an entrée not to be missed? driving directions or parking suggestions? What was it about this recommendation that was particularly helpful? Would providing just the name of the eatery and its street address have been as assistive? Believe it or not, answers to these questions can help us, by analogy, understand aspects of educational Web page designs that incorporate links to informational sources—that is, “resource collection” Web sites.

When we’re not sure where to go for a good meal, a knowledgeable friend’s suggestions can guide us toward a worthwhile dining experience. The same is true for information seekers on the World Wide Web. An experienced educator’s Web site recommendations can help learners satisfy their hunger for knowledge in rich and instructive ways. Yet even though someone’s bookmarks might point us in potentially productive directions, they do not necessarily suggest of what we should partake once we arrive. Finding the “restaurant” is essential, but knowing a bit beforehand about a long and varied “menu” is also important.

By Judi Harris

Annotations Are Important

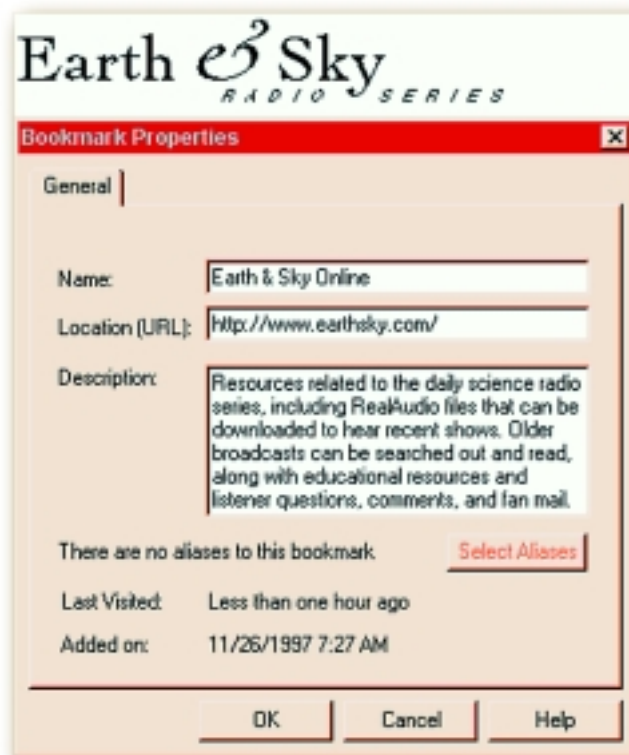
Sometimes teachers ask me to share my bookmarks. I do so, but usually with words of warning. Why? Let's look at a section of a bookmarks file that I created for a group of math and science teachers who were participating in the National Teacher Training Institute (<http://www.wnet.org/ntti/index.html>), which is sponsored by the Corporation for Public Broadcasting. After saving the bookmarks file to a disk and opening it as a page in Netscape Navigator (by choosing "Open File" from the "File" menu), part of what I see on the screen is this:



Perhaps you would like to investigate some of the sites listed here. Why would I warn you before you explore them? Because it's difficult to tell from even the most well-crafted bookmark label the nature of what any site offers. What is missing, and what is needed? The answer: meaningful *annotations* for each item in the bookmarks file.

Browser-Based Annotations

Web browsers do provide for limited annotation material inside bookmark files. Netscape Navigator, for example, allows you to create brief descriptions for individual items in your bookmarks list. Depending on which version of Netscape you use, you can select either "Get Info" from the "Edit" menu or "Edit Bookmarks" from the "Item" menu in the "Bookmarks" window to view, change, or create notes on a particular bookmarked site. For example, when reviewing the bookmarks file excerpt pictured above, you might have wondered about the "Earth and Sky" site. (It originates here in Austin, Texas.) If the bookmark's creator had annotated this item, you would be able to read about the site and what it offers:



But to read the kind of information displayed above, the information file for each bookmark in the list would have to be displayed separately on screen, and copies of the bookmarks file would have to be given to each interested educator. There is a much easier way to share recommended Web sites, complete with helpful annotations.

Page-Based Annotations

Many rich and well-organized Web-based "virtual centers" are available for teachers and students to visit, each offering links to promising educational resources. These collections of links serve as maps to education-related information "gold mines." They save visitors the considerable time and frustration that often come with searching for topical information with a search engine such as Alta Vista. (Some of my favorite education information centers are shared on this month's Mining the Internet Web page. Access it at <http://curry.edschool.Virginia.edu/go/mining/98/mar/> or through the ISTE Web site at <http://www.iste.org/>.)

Having links to the best sites posted to a publicly accessible Web page is preferred, of course, to having to share individual copies of bookmarks files by e-mail. Yet what makes these informational "treasure chests" highly functional is not just their 24-hour accessibility or the time and effort you save by following knowledgeable colleagues' Web site recommendations. At the most helpful of the resource-collection sites, an *annotation* clearly and succinctly describes the nature of each recommended subsite's offerings.

Let's look at examples of particularly helpful annotations on Web pages that have been designed to help educators locate

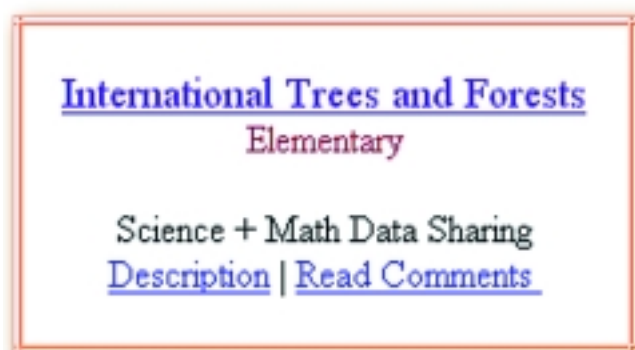
potentially useful information. Through ED's Oasis (<http://www.EDsOasis.org/Oasis.html>), teachers and students can connect to sites that are considered educational "treasures"—and they can nominate others as they find and use them. According to Director Terrie Gray,

ED's Oasis' primary purpose is to make the Internet easier and more rewarding to use with students. ED's Oasis provides links to what educators around the country recommend as the most engaging student-centered [W]eb sites, [and] examples demonstrating effective classroom Internet use from successful teachers. [Source: <http://www.EDsOasis.org/Oasis.html>]

"The Treasure Zone" at ED's Oasis (<http://www.EDsOasis.org/Treasure/Treasure.html>) is organized into "interactive sites" (where "students communicate with others [or] publish their own work") and "resource sites" (where students can find much curriculum-related information). All are subdivided into science, history, language arts, math, art, cross-curricular, and teacher resource collections. Some of the sites that Oasis staff members consider to be particularly good ("educationally sound, easily navigated, intellectually challenging, and wholesome") receive ED's A-OK Award (<http://www.EDsOasis.org/EDsOk.html>).

Example Annotation

In the cross-curricular section of the interactive sites indexed at ED's Oasis, an "International Trees and Forests" project for elementary-level students is listed. What we see first about this activity is a simplified annotation that succinctly provides links to three different kinds of project-related information, all appearing in one cell of a large table of cross-curricular interactive online projects:



The information included in the first-encountered description of the project—about general grade level, curriculum areas, and primary participation processes—is sufficient to allow page visitors to decide whether they want more details about the project. If they do, then they can link directly to the related Web page, read a short description of the project, or read participants' comments about this interactive effort.

The second-level, more detailed description of the project at the Oasis (<http://www.EDsOasis.org/Treasure/Trees.html>) provides a good example of annotative material that is helpful to educators who either wish to participate or want to understand expediently how a successful international online effort is structured, supported, and tied to typical curricula. The hand icon and its accompanying gold star on this page indicate the project's status as an "A-OK" award recipient. Menu choices for the entire Web site are available in the column of options displayed on the left side of the page.



Annotation Characteristics

What made these annotations particularly assistive to interested site explorers? The successive levels of annotation that ED's Oasis offers are especially helpful to busy teachers visiting the site: Each level provides increasingly detailed and varied information about each educational project. Also, links to additional information within each level of annotation are displayed in a logical way. Page layout is consistent across different project descriptions, with each subpage showing similar information organized in a standard form. There is also excellent use of white space, text formatting, and functional (as contrasted with purely decorative) and aesthetically appealing colors and graphics.

How can we inform ourselves and teach others how to create helpful annotations for Web-based resource collections? Perhaps we can begin to answer this question with some instructions. The final project for "Internet-Based Telecomputing" (<http://www.tapr.org/~ird/Telecomputing-Course/>), a "mostly online" course that I teach here at the University of Texas at Austin, is the creation of a set of topically related, annotated resources for educators. Each project becomes part of an ongoing "Internet Resource Directory for Educators" (<http://www.tapr.org/~ird/>). I give my graduate students the following instructions for creating annotations for these pages.

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Each Internet resource that you mention **must** have the following information provided about it:

- the title or topic of the site,
- any special operation instructions, such as login information, if necessary,

(If this is a mailing list, be sure to include **explicit** subscription, article posting, and unsubscription directions.)

- a 1-paragraph description of what is available at the site that is related to your focus,
- the parts of the site not to miss, and why your users should check each of these out,
- and any cautions and/or helpful suggestions about what to do or not do at the site to save your users frustration or wasted time.

Susan Hemstreet, a doctoral candidate in instructional technology, assembled an excellent collection of Internet resources for use in “teaching and learning American History in the middle grades” (<http://www.tapr.org/~ird/Hemstreet/main.htm>). She included several different types and levels of annotation in her online guide, as is shown in the information she provided “About This Site”:

This page contains a collection of links to sites that may be helpful to teachers and students who would like to use the resources of the Web to augment their study of American history.

The section “Web Sites for Students” groups resources according to units that are typically taught in grades five to eight. Students should be able to use the information available at each site to do research and gather ideas for projects. Each site is rated in two ways:

Reading Levels

- Difficult:** appropriate for solid seventh- and eighth-grade readers; might frustrate less capable readers.
- Medium:** may be challenging for younger readers, but this entire age group should be able to use the site as a research source
- Easy:** fifth-grade readers should be able to read material at the site without difficulty

Site Ratings

- Four Star:** excellent source of information; topics are presented in a way that should make them interesting to this age group
- Three Star:** excellent source of information, but materials may not be geared specifically to students in this age group
- Two Star:** has interesting information but does not lend itself to more than information collection
- One Star:** may be helpful for students who need to do research on specific topics, but students may not enjoy simply reading material available at the site

(Source: <http://www.tapr.org/~ird/Hemstreet/main.htm>)

The first educational resource presented in the “Native American Cultures” section for students’ use (<http://www.tapr.org/~ird/Hemstreet/native.htm>) shows how Susan succinctly and effectively described what the Native American Technology and Art (NativeTech) site at the University of Connecticut (<http://www.lib.uconn.edu/NativeTech/>) offers to middle-grade students.



Susan’s work shares many of the characteristics listed previously for the annotations at ED’s Oasis, adding more specific site evaluation and reading level information. Evaluating Web sites for their educational potential is an important form of annotation that is just beginning to be explored in depth and specificity. Kathy Schrock, the technology coordinator for the Dennis–Yarmouth Regional School District in Massachusetts, provides the Internet community with an excellent collection of resources that guide critical evaluation of Web sites (<http://www.capecod.net/schrockguide/eval.htm>).

Annotative Essences and Examples

The dictionary reminds us that annotations are notes that serve as explanations or comments. The examples described in this article provide good illustrations of both annotative functions. As the amount and range of information available on the Internet continue to expand, the crucial service provided by well-conceived and well-executed annotations in Web-based resource-collection sites will become increasingly evident. Have you seen or created well-annotated educational Web pages? If so, I’d love to receive and share your recommendations online.

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