16

Content Organization

After ensuring that content is useful, well-written

and in a format that is suitable for the Web, it is important to ensure that the information is clearly organized. In some cases, the content on a site can be organized in multiple ways to accommodate multiple audiences.

Organizing content includes putting critical information near the "top" of the site, grouping related elements, and ensuring that all necessary information is available without slowing the user with unneeded information. Content should be formatted to facilitate scanning, and to enable quick understanding.

16:1 Organize Information Clearly

Relative Importance:
①②③④⑤

Strength of Evidence:
①②③④○

Guideline: Organize information at each level of the website so that it shows a clear and logical structure to typical users.

Comments: Designers should present information in a structure that reflects user needs and the site's goals. Information should be well-organized at the website level, page level, and paragraph or list level.

Good website and page design enables users to understand the nature of the site's organizational relationships and will support users in locating information efficiently. A clear, logical structure will reduce the chances of users becoming bored, disinterested, or frustrated.

Sources: Benson, 1985; Clark and Haviland, 1975; Detweiler and Omanson, 1996; Dixon, 1987; Evans, 1998; Farkas and Farkas, 2000; Keyes, 1993; Keyes, Sykes and Lewis, 1988; Lynch and Horton, 2002; Nielsen and Tahir, 2002; Redish, 1993; Redish, Felker and Rose, 1981; Schroeder, 1999; Spyridakis, 2000; Tiller and Green, 1999; Wright, 1987; Zimmerman and Akerelrea, 2002; Zimmerman, et al., 2002.

Example: This design clearly illustrates to the user the logical structure of the website. The structure is built on the user's needs—namely, completing a form in ten steps.
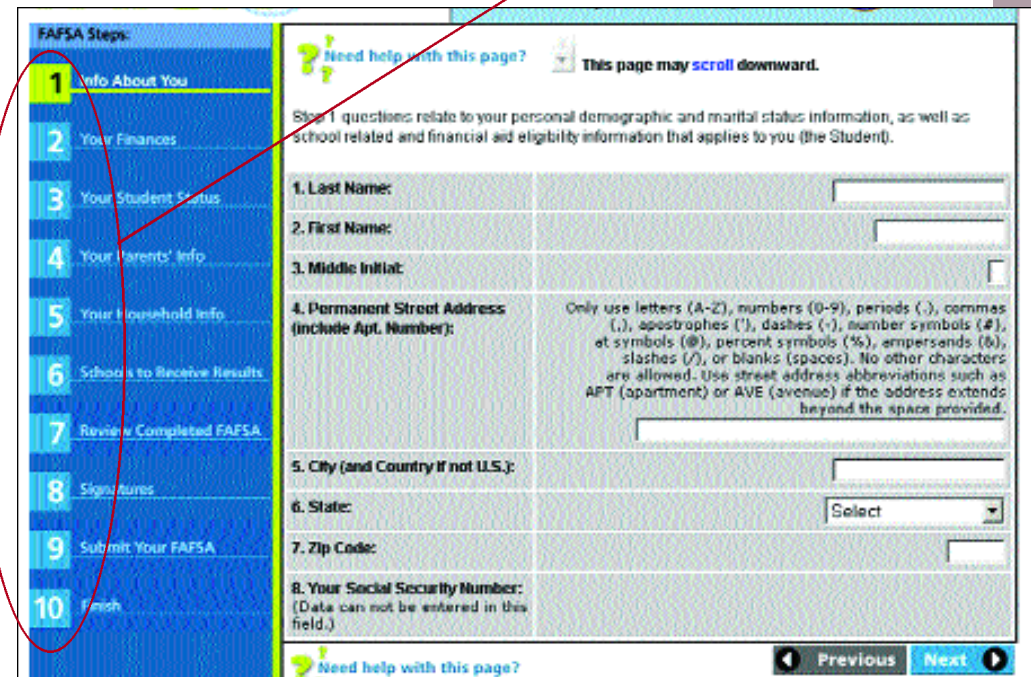
16:2 Put Critical Information Near the Top of the Website

Guideline: Put critical information high in the hierarchy of a website.

Relative Importance:
①②③④⑤

Strength of Evidence:
①②③○○

Comments: Critical information should be provided as close to the homepage as possible. This reduces the need for users to click deep into the site and make additional decisions on intervening pages. The more steps (or clicks) users must take to find the desired information, the greater the likelihood they will make an incorrect choice. Important information should be available within two or three clicks of the homepage.

Sources: Evans, 1998; Levine, 1996; Nall, Koyani and Lafond, 2001; Nielsen and Tahir, 2002; Spyridakis, 2000; Zimmerman, et al., 1996; Zimmerman, et al., 2002.

Example:

A key topic area, "Links," is placed on the homepage, and its content is only one click away.

This important topic, "Good Nutrition," is not represented on the homepage. The topic's content is only available after several clicks.

16:3 Facilitate Scanning

Guideline: Structure each content page to facilitate scanning: use clear, well-located headings; short phrases and sentences; and small readable paragraphs.

Relative Importance:
①②③④○

Strength of Evidence:
①②③④⑤

Comments: Websites that are optimized for scanning can help users find desired information. Users that scan generally read headings, but do not read full text prose—this results in users missing information when a page contains dense text.

Studies report that about eighty percent of users scan any new page. Only sixteen percent read word-by-word. Users spend about twelve percent of their time trying to locate desired information on a page.

To facilitate the finding of information, place important headings high in the center section of a page. Users tend to scan until they find something interesting and then they read. Designers should help users ignore large chunks of the page in a single glance.

Sources: Bailey, Koyani and Nall, 2000; Byrne, John, et al., 1999; Evans, 1998; Morkes and Nielsen, 1997; Morkes and Nielsen, 1998; Nielsen, 1997e; Nielsen, 2000; Schriver, 1997; Spool, et al., 1997; Spyridakis, 2000; Sticht, 1985; Sullivan and Flower, 1986; Toms, 2000; Zimmerman, et al., 1996.

Example:

This page facilitates scanning.

16:4 Group Related Elements

Relative Importance:
①②③④○

Strength of Evidence:
①②③④⑤

Guideline: Group all related information and functions in order to decrease time spent searching or scanning.

Comments: All information related to one topic should be grouped together. This minimizes the need for users to search or scan the site for related information. Users will consider items that are placed in close spatial proximity to belong together conceptually. Text items that share the same background color typically will be seen as being related to each other.

Sources: Ahlstrom and Longo, 2001; Cakir, Hart and Stewart, 1980; Faraday, 2000; Gerhardt-Powals, 1996; Kahn, Tan and Beaton, 1990; Kim and Yoo, 2000; Nall, Koyani and Lafond, 2001; Niemela and Saarinen, 2000; Nygren and Allard, 1996; Spyridakis, 2000.

Example:
This site organizes information well by grouping core navigation elements and key topic areas. These features allow users to search and scan for information faster.

See page xxi
for detailed descriptions
of the rating scales
①②③④○

16:5 Display Only Necessary Information

Relative Importance:
①②③④○

Strength of Evidence:
①②③④○

Guideline: Limit page information only to that which is needed by users while on that page.

Comments: Do not overload pages or interactions with extraneous information. Displaying too much information may confuse users and hinder assimilation of needed information. Allow users to remain focused on the desired task by excluding information that task analysis and usability testing indicates is not relevant to their current task. When user information requirements cannot be precisely anticipated by the designer, allow users to tailor displays online.

Sources: Engel and Granda, 1975; Mayhew, 1992; Morkes and Nielsen, 1998; Powers, et al., 1961; Smith and Mosier, 1986; Spyridakis, 2000; Stewart, 1980; Tullis, 1981.

Example:
An example of extraneous information. In this case, the user is looking for a weather forecast for Washington, D.C. The site provides this information, but also indicates today's vacation weather for Aruba—this information is extraneous to the user's original task.

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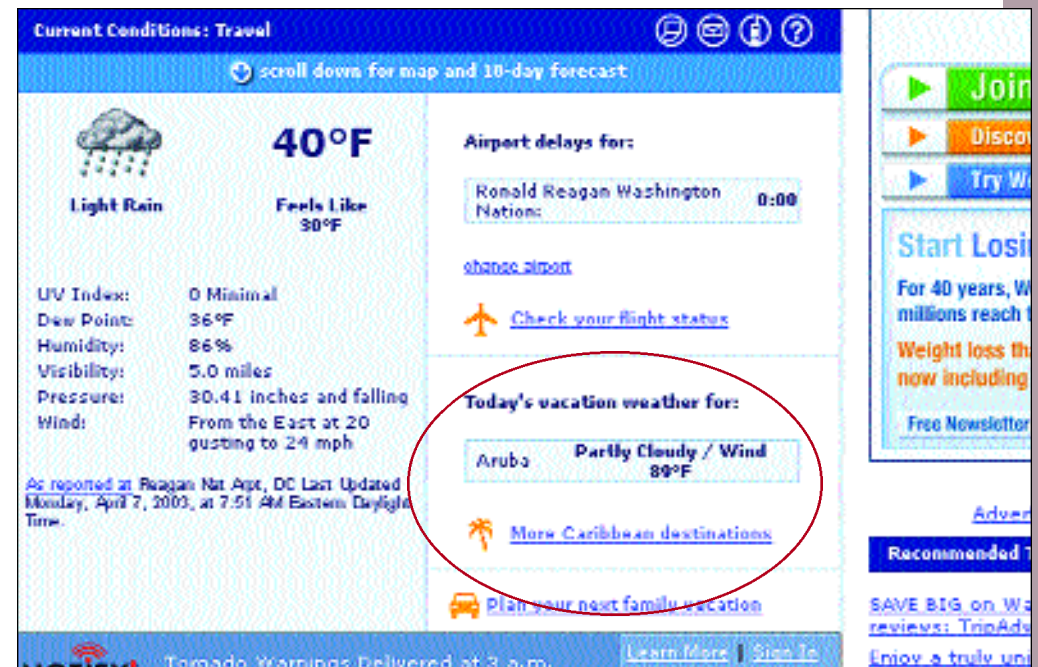
Guideline: Ensure that all needed information is available and displayed on the page where and when it is needed.

Relative Importance:
①②③④⑤

Strength of Evidence:
①②③④⑤

Comments: Users should not have to remember data from one page to the next or when scrolling from one screenful to the next. Heading information should be retained when users scroll data tables, or repeated often enough so that header information can be seen on each screenful.

Sources: Engel and Granda, 1975; Smith and Mosier, 1986; Spyridakis, 2000; Stewart, 1980; Tullis, 1983.

Example: This header row disappears as users scroll down the table. This can negatively effect users' performance on the site by exceeding their "working memory" capacity.

Guideline: Provide information in multiple formats if the website has distinct audiences who will be interested in the same information.

Relative Importance:
①②③④⑤

Strength of Evidence:
①②③④⑤

Comments: Information can be provided in varying formats and at different levels of detail on the same site. For example, information about cancer can be presented in differing ways for physicians and patients.

When segmenting content for two or more distinct groups of users, allow users from each audience to easily access information intended for other audiences. One study showed that users want to see information that is intended for a health professional audience, as well as for a patient or consumer audience. Users want access to all versions of the information without first having to declare themselves as a health professional, a patient, a caregiver, etc. To accommodate these users, audiences were not segmented until they reached a page where links to multiple versions of a document (i.e., technical, non-technical) were provided.

Sources: Nall, Koyani and Lafond, 2001; Zimmerman and Prickett, 2000; Zimmerman, et al., 2002.

Example: These are examples of ways to provide different audiences access to information.

See page xxi for detailed descriptions of the rating scales
①②③④⑤

Guideline: Design quantitative information to reduce the time required to understand it.

Comments: Make appropriate use of tables, graphics, and visualization techniques to hasten the understanding of information. Presenting quantitative information in a table (rather than a graph) generally elicits the best performance; however, there are situations where visualizations will elicit even better performance. Usability testing can help to determine when users will benefit from using tabular data, graphics, tables, or visualizations.

Sources: Galitz, 2002; Gerhardt-Powals, 1996; Kosslyn, 1994; Meyer, 1997; Meyer, Shamo and Gopher, 1999; Meyer, Shinar and Leiser, 1997; Tufte, 1983.

Example:

Figure 10.1 Renewable Energy Consumption by Source
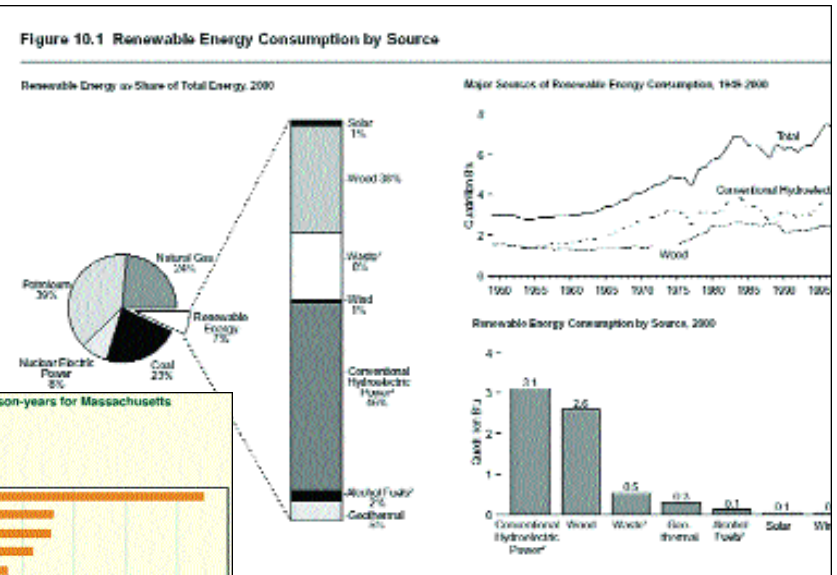
This is a case where displaying information using graphs and bars allows users to discern the importance of data much more quickly than when it is presented in a table format.

Presenting numerical data as bar charts may speed up the user's understanding of data.
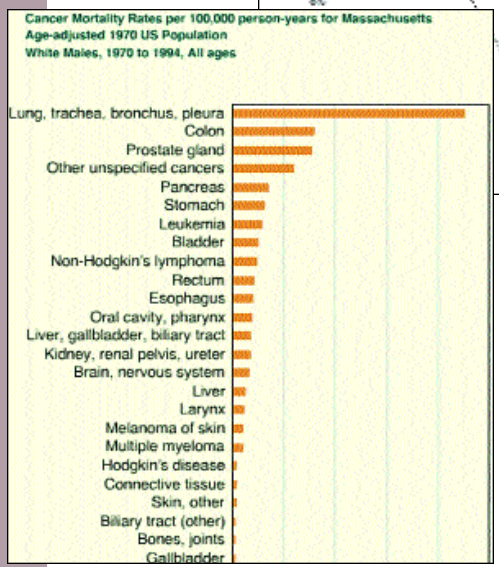
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Guideline: Use color to help users understand what does and does not go together.

Comments: Color coding permits users to rapidly scan and quickly perceive patterns and relationships among items. Items that share the same color will be considered as being related to each other, while items with prominent color differences will seem to be different.

People can distinguish up to ten different colors that are assigned to different categories, but it may be safer to use no more than five different colors for category coding. If more than ten different colors are used, the effects of any particular relationship will be lost.

Do not use color alone to convey information.

Sources: Carter, 1982; Christ, 1975; Engel and Granda, 1975; Haubner and Neumann, 1986; Murch, 1985; Nygren and Allard, 1996; Smith, 1962; Smith, 1963; Smith, Farquhar and Thomas, 1965.

Example:

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