

## Writing and Managing Content

**D**

In your Web site design, two of the big issues to sort out are how to manage large amounts of content, and how to make it presentable to all kinds of visitors. This pattern group presents an overview to help you create and manage your content effectively.

- D1** PAGE TEMPLATES
- D2** CONTENT MODULES
- D3** HEADLINES AND BLURBS
- D4** PERSONALIZED CONTENT
- D5** MESSAGE BOARDS
- D6** WRITING FOR SEARCH ENGINES
- D7** INVERTED-PYRAMID WRITING STYLE
- D8** PRINTABLE PAGES
- D9** DISTINCTIVE HTML TITLES
- D10** INTERNATIONALIZED AND LOCALIZED CONTENT
- D11** STYLE SHEETS

## D1 PAGE TEMPLATES



D1.1

(<http://news.yahoo.com>, October 29, 2001)

Figure D1.1

This page template from the Yahoo! News homepage targets its database content to specific locations on the page.

## \* BACKGROUND

Many of the patterns in Pattern Group A (Site Genres) are based on database content, which allows information to be published dynamically to the site without individual files having to be moved to the server. The result is a streamlined publishing process and enhanced productivity. Even if a site is not database driven, customers come to expect images and text to be in the same place when they're moving around a site or returning to a particular page. You can organize your information into BROWSABLE CONTENT (B2), with CATEGORY PAGES (B8) and content pages. Each of these pages requires a template to describe its content. This pattern provides the solution.

A

B2 B8

## \* PROBLEM

A site that is not consistent from page to page is difficult for customers to navigate and hard for site managers to maintain. However, it is challenging to design Web pages to be consistent because not all pages are the same, and many will need some way to be updated.

**C1** Your homepage implicitly establishes a pattern for layout and design of your entire Web site, and from then on, customers expect to find key elements of the page in the same places on other pages. You can build a system that takes advantage of the HOMEPAGE PORTAL (C1) design by creating a family of page templates that all relate to one another but have their own variations.

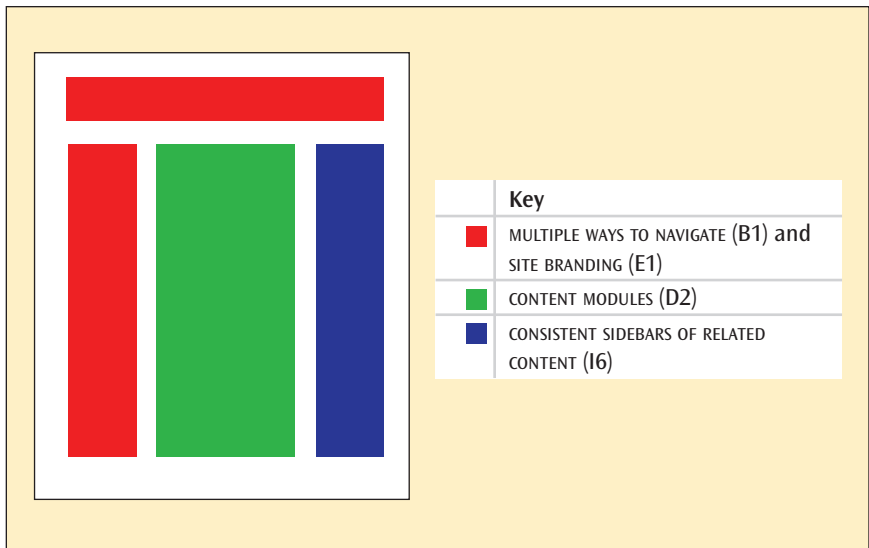
Designing, editing, and publishing unique pages can be time-consuming and tedious. Even if content does not come from a database, a standard design benefits the site team by giving everyone a system to work within, and therefore less work. Often page designers are not the same people who write the content. Separating the design from the writing helps the process by letting each team focus on its strong suit, but it makes a consistent approach across the board all the more important. This pattern provides the solution that addresses the needs of the site team and the customers.

**Build a Page Template by Using Grids •** People read along vertical and horizontal lines. If you use implied lines on your page designs, as described in **I1** GRID LAYOUT (I1), customers can skim and read more quickly than when objects and text are not aligned. Help your visitors read more easily by using grids as the backbone of every template you build.

**Define Global and Individual Page Templates •** Keep the basic graphic design structure the same throughout your site. Customers remember where navigation tools and content appear from page to page, so keeping these places consistent will make the site easier to use. Create a page template by setting aside areas of every page for navigation, content, and **I6** CONSISTENT SIDEBARS OF RELATED CONTENT (I6) (see Figure D1.2). Each area needs rules about what to put in that space. The template becomes especially important when multiple teams are updating different parts of a site.

Global page templates describe the overall page structure and layout of every page on a Web site. Included are navigation elements at the top of the page template, like **E1** SITE BRANDING (E1), **K2** NAVIGATION BARS (K2), and **J1** SEARCH ACTION MODULES (J1), as well as supplementary elements often found at the bottom, like **E5** ABOUT US (E5), **E4** PRIVACY POLICY (E4),

D1 PAGE TEMPLATES



D1.2

Figure D1.2

Page templates define areas for navigation, branding, content, and related links on every page.

FREQUENTLY ASKED QUESTIONS (H7), and CONTEXT-SENSITIVE HELP (H8). Depending on the site genre, you might have other elements as well, such as a SHOPPING CART (F3) or an ACCOUNT MANAGEMENT (H4) link.

Individual page templates build on global page templates, describing specific types of pages. For example, you might have individual page templates for your CATEGORY PAGES (B8) (see Figure D1.3), CLEAN PRODUCT DETAIL (F2) pages, and news articles.

Be consistent with how you adjust your layout to browser window resizing, using either EXPANDING SCREEN WIDTH (I4) or FIXED SCREEN WIDTH (I5). Key items must be ABOVE THE FOLD (I2), just as in the HOMEPAGE PORTAL (C1) pattern.

CONTENT MODULES (D2) contain the live content that turns templates into actual pages. Either new content will appear as you publish it, or more sophisticated personalization will target special content to each customer. The page template is the skeleton that holds everything together, and the content modules are the muscles and flesh that bring life to a page.

CONTENT MODULES (D2) also need to be part of the basic graphic design of the page. However, the length of a content module can range from a few lines to several pages because content modules can be retrieved dynamically from files or from a database. Because of the way HTML works, if one content module has too much information, it will become extremely long and lead to an unbalanced visual design.

H7 H8

F3 H4

B8

F2

I4 I5

I2 C1

D2

D2



Figure D1.3

Amazon.com uses a global page template to maintain consistency across the entire site, and individual page templates to maintain consistency for categories of pages. The global page template is first designed to have the site branding, tab row, search action module, and sidebars appear in the same locations. Individual page templates are then created from the global page template. Both of these screen shots show examples of category pages created from the same individual page template.



D1.3a

(www.amazon.com, October 15, 2001)



D1.3b

(www.amazon.com, October 15, 2001)

## D1 PAGE TEMPLATES

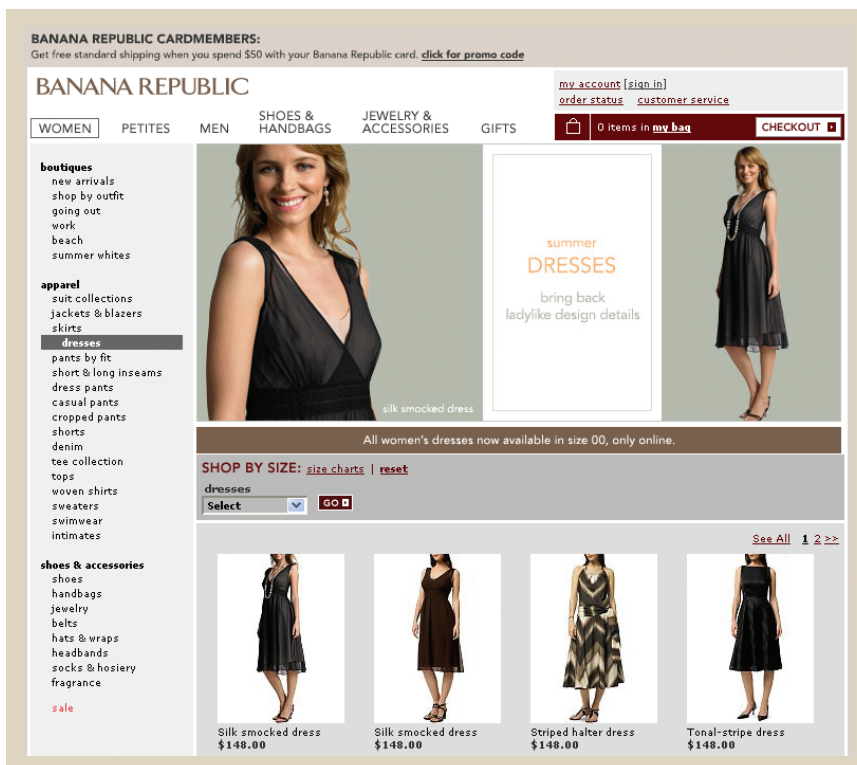
Set standards for the length of the content or the length of every page. For text-based articles you can use multiple pages, which let you break up a long piece of writing into more readable chunks. If your site is supported by advertising, readable chunks of text broken into pieces across several pages will also provide more ad impressions. Customers also need a way to view the entire article in a single PRINTABLE PAGE (D8) so that they can easily print it if they want.

**Use Other Patterns to Build Templates** • Different global and individual page templates will show some variation. The goal is to design for small multiples of differences, by creating templates that are basically the same but with small differences, to suit particular customer and business needs.

For example, Figure D1.4 shows two different pages from Banana Republic's Web site. The pages are essentially the same in terms of color, layout, and navigation structure, but they are slightly different in terms of the NAVIGATION BAR (K2) and REUSABLE IMAGES (L5).

D8

K2 L5



D1.4a

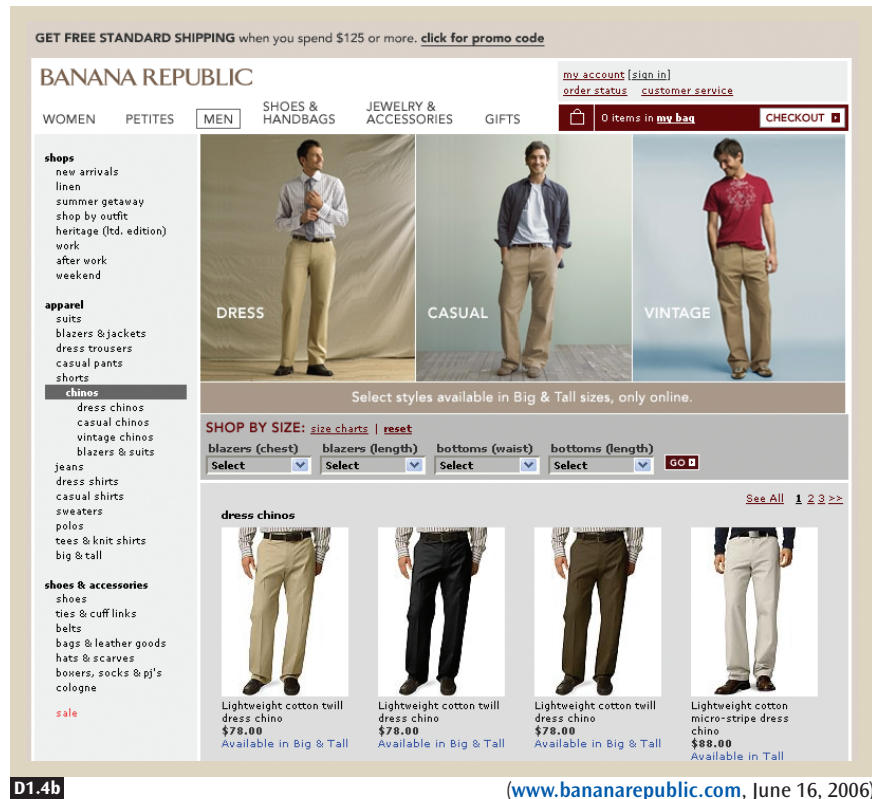
(www.bananarepublic.com, June 16, 2006)

Figure D1.4a, b

On Banana Republic's site, the basic template remains the same in each section. Small variations address particular visitor needs, yet reinforce the overall design.

Figure D1.4a, b

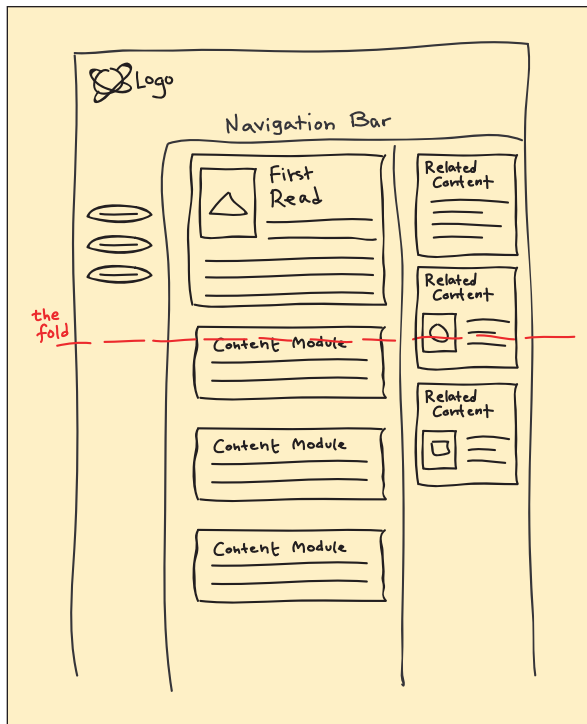
(Continued)



## \* SOLUTION

Use a grid layout to help define a global template that includes the basic navigation elements, major content areas, and any areas for related content. For each kind of page, define an individual template that specifies content size limits for images and text. Each individual template should use the global template as part of its structure.

## D1 PAGE TEMPLATES



D1.5

Figure D1.5

Use a grid layout to align content modules in your templates.

## \* OTHER PATTERNS TO CONSIDER

In the global page template, make the GRID LAYOUT (I1), as well as CLEAR FIRST READS (I3) and the NAVIGATION BAR (K2), consistent. Also consider including an ABOUT US (E5) page, a PRIVACY POLICY (E4), FREQUENTLY ASKED QUESTIONS (H7), and CONTEXT-SENSITIVE HELP (H8) at the bottom of the page template. Choose between EXPANDING SCREEN WIDTH (I4) and FIXED SCREEN WIDTH (I5). Employ templates that use REUSABLE IMAGES (L5) and a LOW NUMBER OF FILES (L1).

Within each individual page template file, create section-specific CONTENT MODULES (D2), and use CONSISTENT SIDEBARS OF RELATED CONTENT (I6) and FAST-LOADING IMAGES (L2). Separate templates that incorporate MOBILE SCREEN SIZING (M1), MOBILE INPUT CONTROLS (M2), and LOCATION-BASED SERVICES (M3) will be needed if you choose to support your site on Mobile Web platforms.



## CONTENT MODULES D2

**Figure D2.1**

Content modules make it easy to update and display content. On the My Monster homepage, visitors can select which content modules they wish to display. Not all sites will need this level of personalization, though.



(my.monster.com, June 16, 2006)

### \* BACKGROUND

- B2 In BROWSABLE CONTENT (B2) we provided a solution for finding content on a site, and in PAGE TEMPLATES (D1) we described how to present page elements in a consistent and easy-to-use manner. This pattern describes content modules, a key component of every page template and a way of managing the publishing process.
- D1

## D2 CONTENT MODULES

## \* PROBLEM

**Without a good system, publishing and managing large volumes of content are time-consuming and error-prone processes.**

When customers visit your site and find that the homepage is the same as it was a week ago, or maybe a month ago, they might say, “Nothing new here!” and leave. If you don’t keep the site updated, it’s probably not worth revisiting. Customers will find a better site, one that has the latest information. Fresh content keeps customers coming back.

**Create a Publishing System** • You might be tempted to let your site go stale because updating and publishing information by hand is tedious, slow, and error prone. It takes time to create or acquire content. A Web page must be recoded, uploaded, tested, revised, and checked again before the final page can be published. By the time the page is published, the news may no longer be news. Without a publishing system, updating a site is a time-consuming and error-prone process.

A publishing system can simplify the process if you’re willing to plan ahead. These systems use a content database to hold and publish content. This way you can avoid recoding each page that has content when the content changes. The publishing system can use the file system or a real database. Different levels of engineering are required for each, but the net effect is the same. It all depends on the amount of content on your site and the kinds of features you want to provide to your customers. Whereas small sites can use files to store articles, more sophisticated and larger sites should use a database, especially if **PERSONALIZED CONTENT (D4)** is provided. A sophisticated system might store content in a database, have the data (such as the date) automatically trigger updates, and then push new content through. Either way, a publishing system can save large amounts of time.

When you create a publishing system, you will want to include content modules. These are the active areas on a page that change whenever new content comes online. Designing content modules into a site’s pages makes updates quick and easy. Content modules and their component pieces deliver the power to integrate new content pages into an existing browsing structure. They can also be used to promote new related content, as well as to provide highly **PERSONALIZED CONTENT (D4)** tailored for each individual site visitor.

**D3** To create an article for a content module, define its content HEADLINES AND BLURBS (D3), body copy, reference information, byline, related content, related products, and related links (see Figures D2.2 and D2.3). These pieces can then be connected to a specific content module in a specific page that reassembles the content on demand (see Figure D2.4).

**D1** **Define Where You Want to Position Content on a Page** • Creating a PAGE TEMPLATE (D1) with content modules makes it easy to add new pages and plug in new content, saving you the trouble of trying to figure out how to lay out the document every time.

**I6** To give customers potentially useful information that is related to the current item, make space on the side for CONSISTENT SIDEBARS OF RELATED CONTENT (I6). These items can be directly related to the current article, or indirectly related through the current content category. Related links can also help keep customers engaged longer, clicking on related articles or products.

**D3** To hook visitors into related articles, use the headline from the related content and perhaps a short description or blurb to explain the content of the related article. These HEADLINES AND BLURBS (D3) entice customers to click through to the full article. Related links can be grouped by subject or by whether they are EXTERNAL LINKS (K8) to other Web sites. Or if there are only a few of them, related links can just be thrown together in no particular order.

**Figure D2.2**

Store this information in all your content files or content database records. Program your publication system to use the information to publish content pages and related links on other content pages.

**Figure D2.3**

Here's how information might look in a content file or record.

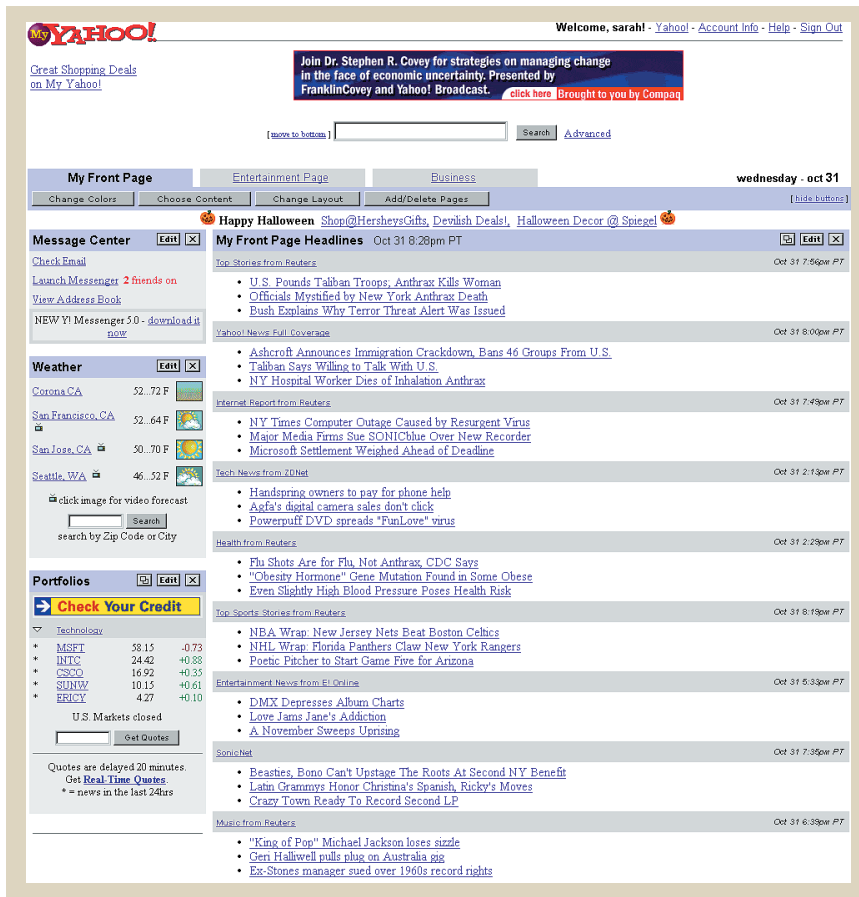
<pre> ArticleNumber: Headline: Blurb: PubDate: Author: Copyright: ContentHome: ContentPosition: NumPages: PageTitle1: Body1: Image1: PageTitle2: Body2: Image2: PageTitle3: Body3: Image3: RelatedArticles: </pre>	<pre> ArticleNumber: 12345 Headline: For Whom Pacific Bell Tolls Blurb: Long derided for poor serv... PubDate: 20010511 Author: Alexander Graham Copyright: 2001 NewArch Media, Inc. ContentHome: Utilities ContentPosition: Middle NumPages: 3 PageTitle1: Once for the Money Body1: Ipso facto decorum unum... Image1: http://www.newarch.com/img... PageTitle2: Two for the Show Body2: Ipso facto decorum unum... Image2: http://www.newarch.com/img... PageTitle3: Three to Get Ready Body3: Ipso facto decorum unum... Image3: http://www.newarch.com/img... RelatedArticles: 56789, 98765 </pre>
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**D2.2**

**D2.3**



## D2 CONTENT MODULES



D2.4

(my.yahoo.com, October 31, 2001)

Figure D2.4

My Yahoo! provides many types of content modules, including news, stocks, and weather. Weather always appears in a content module on the left, and news appears in the middle. Short headlines entice customers to click through to read more.

**Create an Administration Page** • Building a content module publishing tool reduces the time and effort it takes to publish content. All you need is a Web-based form that includes all the content fields plus publication date and their location in the site. This form lets you publish faster and more often (see Figure D2.5).



**Figure D2.5**

eDealFinder.com helps people find special deals and coupons. These two administration pages show how new advertisements are added to the site (a) and how affiliate Web pages, logos, descriptions, search keywords, and so on are managed (b).

The screenshot shows the 'Enter/Edit Ad' form in the eDealFinder.com administration interface. The form is titled 'Enter/Edit Ad' and includes a 'Save Ad' button and a 'Delete Ad' button. The 'Title' field is set to 'Great Deals'. The 'Expiration' field is set to '9999-12-31'. The 'Ref Code' field is set to '0'. The 'Active' field is set to 'Yes'. The 'Ad Location' is set to 'Right'. The 'Sort Order' is set to '5'. The 'Content' field contains HTML code for an Amazon.com ad. The 'Color - Background' is set to '#f3f2ed', 'Color - Title Background' is set to '#666699', 'Color - Border' is set to '#333366', and 'Color - Title' is set to '#ffffff'. The 'Assoc Categories' section includes checkboxes for various product categories, with 'Computers & Electronics' and 'Computers & Electronics - Deals by Savings' checked. A preview of the ad is shown on the right, featuring the Amazon.com logo and a 'Hot Deal from Amazon.com!' banner.

**D2.5a**

(www.edealfinder.com, November 28, 2001)

The screenshot shows the 'Merchant ID' form in the eDealFinder.com administration interface. The form includes fields for 'Merchant ID' (set to 'Amazon.com [1]'), 'Merchant Name' (set to 'Amazon.com'), 'Revenue Tracking' (set to 'Amazon'), 'Parse URL and Impression' (with 'Parse Text', 'Parse Image', and 'Parse 88x31' buttons), 'Merchant URL' (set to 'http://www.amazon.com/exec/obidos/redirect-home/dealfinder'), 'Text Impression' (empty), 'Image URL' (set to 'http://www.amazon.com/exec/obidos/redirect-home/dealfinder'), 'Merchant Image' (set to 'http://www.amazon.com/g/associates/logos2000/s130x60w.gif'), 'Merchant 88x31 Link' (set to 'http://www.amazon.com/exec/obidos/redirect-home/dealfinder'), 'Merchant 88x31 Logo' (set to 'https://secure.amazon.com/g/associates/music2000/ShopHere8'), 'Merchant Description' (set to 'Amazon.com is the place to find and discover anything you want to buy online. They have Earth's Biggest Selection(TM) of products, including free electronic greeting cards, online auctions, and millions of books, CDs, videos, DVDs, toys and'), 'Merchant Keywords' (set to 'www.Amazon.com, amazon.com,amazon books,amazon,amazon.com books,amazon music,amazon.com music,amazon video,amazon.com video,auctions,amazon auctions,amazon.com'), 'Redeem Instruction' (set to 'In the [Pay] step during checkout, enter the discount code in the [Enter claim code]. Press [Enter another] to see your discount applied.'), 'Posting Restrictions' (empty), 'Shipping Abstract' (set to 'CD/Cassette, DVD \$1.99, Toys, Kitchen \$2.99, Books, VHS, Games \$3.30, Software \$3.99. \$9!'), 'Shipping URL' (set to 'http://www.amazon.com/exec/obidos/subst/help/shipping-policy.html'), and 'Featured Merchant' (set to 'No').

**D2.5b**

(www.edealfinder.com, November 28, 2001)

## D2 CONTENT MODULES

### \* SOLUTION

Define content locations in page templates. Organize all content into the file system or into a content database. Manage content from an administration page.

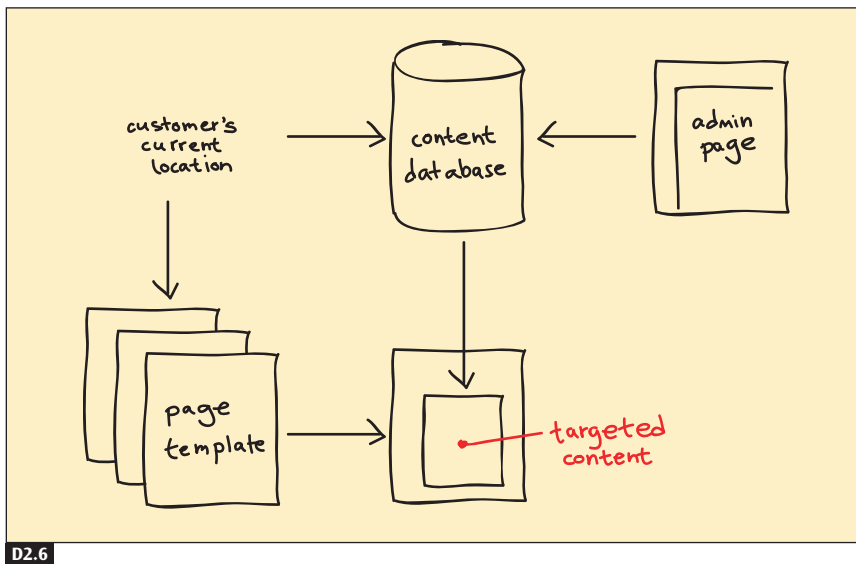


Figure D2.6

The customer's location in a site is used to target content to content modules in a page template.

### \* OTHER PATTERNS TO CONSIDER

Define locations where content is targeted on each PAGE TEMPLATE (D1). These content modules can be articles, CONSISTENT SIDEBARS OF RELATED CONTENT (I6), or EXTERNAL LINKS (K8). Give visitors a hook into related articles by defining HEADLINES AND BLURBS (D3) for each piece of content, and put those headlines and blurbs on related pages. Organize content in a content database, and use it to publish general visitor content, as well as PERSONALIZED CONTENT (D4) if personalization is part of the site. Sites with personalization can also offer visitors DIRECT MANIPULATION (H9) capability to define which content modules they want to see and where the modules should appear on the page.

D1

I6 K8

D3

D4

H9

## HEADLINES AND BLURBS D3

**Figure D3.1**

The World News site uses database-driven headlines and blurbs to draw readers' attention to the full article on a page deeper in the site.



**D3.1**

([www.worldnews.com](http://www.worldnews.com), June 16, 2006)

### \* BACKGROUND

- A2 For NEWS MOSAICS (A2), headlines and blurbs are critical ways to drive reader interest.
- A3 COMMUNITY CONFERENCE (A3) sites can take excerpts from
- D5 A12 MESSAGE BOARDS (D5) and BLOGS (A12) and make them blurbs on the
- C1 HOMEPAGE PORTAL (C1) to highlight what's taking place in the discussion
- A11 forums. ENABLING INTRANETS (A11) can highlight new events, services, or places where the company is mentioned in the media.

- D1 In PAGE TEMPLATES (D1), we defined the structure of each page and how
- D2 CONTENT MODULES (D2) can be used to publish new content. To draw people into these detailed pages, though, each piece of content needs a hook in the form of a headline. This pattern forms the core of the content hook.

## \* PROBLEM

**Content pages need short, descriptive headlines and blurbs to hook customers into clicking for more content deeper on a site. These hooks also need to be published elsewhere on a site so that visitors will be able to see them.**

On most sites, visible content is only the tip of the iceberg. A site's content cannot be revealed in its entirety on just one page. Finding all the content that is buried in a site is a challenge. Customers need **MULTIPLE WAYS TO NAVIGATE** (B1) to find their way around. In addition, from their experience with newspapers and magazines, people are accustomed to seeing headlines and blurbs to introduce every story when they scan for content.

In fact, headlines and introductory paragraphs provide tantalizing leads to pull visitors into the text. According to the **INVERTED-PYRAMID WRITING STYLE** (D7), when an article's conclusion is put in its headline, and the main conclusions are put in the beginning paragraphs, the reader is pulled in to read more.

The style of writing a headline and a short introduction, with each piece hooking the reader further into the story, is what we call *headlines and blurbs*. Use blurbs to give customers a quick grasp of the content. These blurbs can consist of the first few lines of an article, placed on an opening page to tantalize readers about what lies ahead. Or they can be sentences that stand on their own and provide a complete thought.

The sections that follow present some guidelines for writing headlines and blurbs.

**Write a Hook** • For both headline and blurb, think about what makes the content *important*, *unique*, and *valuable* to the reader. Think about why visitors would want to read your content. Will they learn something new? Get a bargain? Have a good laugh? Meet people with the same hobbies? Look at your subject matter from the reader's perspective, and then write directly to the reader, with a promise of value.

Headlines and blurbs have a particular structure on Web pages. **Headlines** are typically a sentence fragment, roughly ten words or less so that they can appear in large type in a small space. A headline articulates the hook in the shortest form possible. The **blurb** is a continuation of the headline, providing details of the customer benefit, reinforcing what is important and unique about the content. Blurbs have to be short and precise, not more than one or two sentences.

Using a **DISTINCTIVE HTML TITLE** (D9) as the headline is possible if the title is descriptive enough. By employing the **INVERTED-PYRAMID WRITING STYLE** (D7)

B1

D7

D9

D7

when writing articles, you can pull a blurb from the first paragraph of the article that is also the conclusion.

Try the following exercise: Write out three to five sets of headlines and blurbs and test them with your team and, if possible, with real customers. They will tell you if you have hit upon what's valuable to them. Continue shaping your message until you can succinctly articulate what customers find important and unique. Now you've created a reason for visitors to click through and experience more of your Web site. The final step is to formulate the hook as a finished headline and blurb.

**Put Headlines and Blurbs in the Content Database •** Writing one headline and blurb for each longer piece of text gives you the capability to place a reference to the text anywhere on your site, especially on the HOMEPAGE PORTAL (C1) and other key PAGE TEMPLATES (D1). Referencing content on other pages becomes as simple as referencing the article number. The code on related pages looks up the article number and places the headline, blurb, and content link in the page. Figure D3.2 shows an example of how the content for a piece of text might be broken up into a database-compatible form.

**Put Headlines and Blurbs into Various Content Modules throughout the Site •** To bring content to the fore, you must highlight it throughout the site, as headlines and as sidebars. Promote content pages using headlines and blurbs in CONTENT MODULES (D2) on the HOMEPAGE PORTAL (C1) (see Figure D3.3), and in CONSISTENT SIDEBARS OF RELATED CONTENT (I6) (see Figure D3.4).

If there are only a few headlines and blurbs, just use CHRONOLOGICAL ORGANIZATION (B6). A chronological structure makes it easier to find what's new, on the basis of the date.

**Figure D3.2**

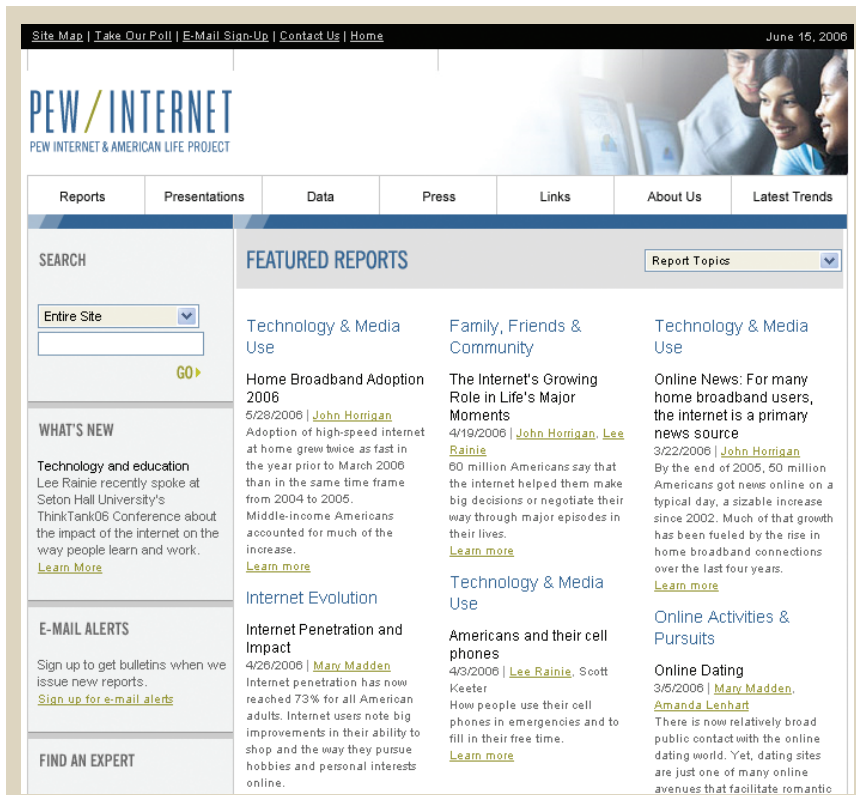
A content file or record might show information in this way in a database.

```

ArticleNumber: 12345
Headline: For Whom Pacific Bell
Tolls
Blurb: Long derided for poor
customer service by its DSL
subscribers, Pacific Bell has
continued to over-commit on DSL
installations as it tries to beat
the cable industry in the broadband
Internet services business. So why
is Pacific Bell still a good
investment?
PubDate: 20010511
Author: Alexander Graham
Copyright: 2001 NewArch Media, Inc.
ContentHome: Utilities
...

```

D3.2

**D3** HEADLINES AND BLURBS

**D3.3**

(www.pewinternet.org, June 16, 2006)

**Figure D3.3**

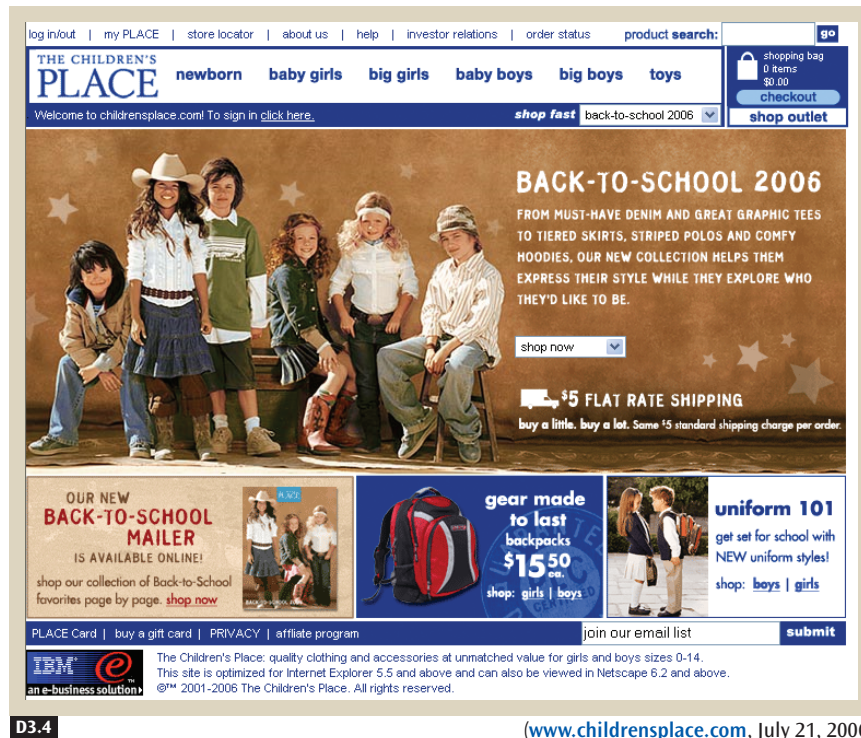
The Pew Internet & American Life Project highlights recent research results in a series of headlines and blurbs. In fact, this whole page is an enticement to go deeper into the site.

If there are lots of headlines, organize them by related topic. Newspapers, for example, have categories such as national news, local news, sports, and entertainment. Some companies have categories such as new products, company information, and a contact section. Within each section, use a CHRONOLOGICAL ORGANIZATION (B6).

**B6**

**Figure D3.4**

The Children's Place promotes products on its Web site with headlines and blurbs in content modules, providing a way to highlight new products easily.



D3.4

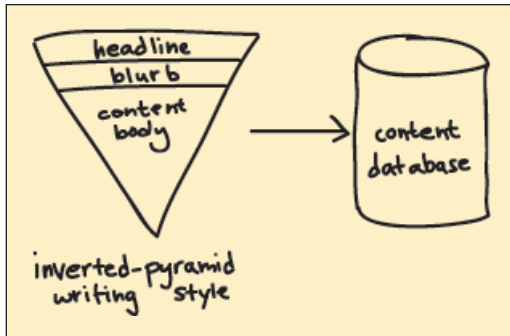
(www.childrensplace.com, July 21, 2006)

## \* SOLUTION

Write a hook, in the form of a headline and blurb, that articulates why the content is important and unique to the visitor. Store these headlines and blurbs in the content database, along with the longer article, so that they can be targeted to content modules on different pages.



### D3 HEADLINES AND BLURBS



D3.5

**Figure D3.5**

Use the inverted-pyramid writing style to write your headlines and blurbs.

### \* OTHER PATTERNS TO CONSIDER

Use the headline you create for the content as the DISTINCTIVE HTML TITLE (D9) for the target page containing the longer article. You might also use the blurb as the first paragraph in an article, as part of the INVERTED-PYRAMID WRITING STYLE (D7). Put related headlines and blurbs in CONSISTENT SIDEBARS OF RELATED CONTENT (I6).

D9

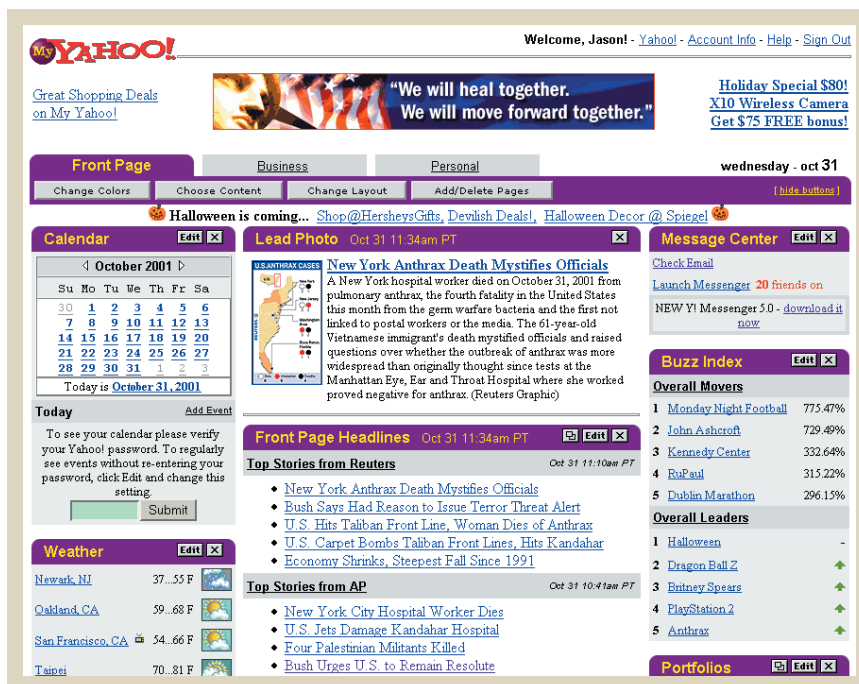
D7

I6



PERSONALIZED CONTENT **D4****Figure D4.1**

One of the first sites to personalize content for each visitor, My Yahoo! provides news, weather, stock quotes, e-mail, and many other customizable options.



(my.yahoo.com, October 31, 2001)

## \* BACKGROUND

**A1** **A2** PERSONAL E-COMMERCE (A1), NEWS MOSAICS (A2), and all the other site genres can benefit from personalized content. **D1** PAGE TEMPLATES (D1) provide the framework for **D2** CONTENT MODULES (D2) and **D3** HEADLINES AND BLURBS (D3), two of several mechanisms for displaying personalized content. This pattern provides the solution for personalizing content to individual visitors.

## D4 PERSONALIZED CONTENT

### \* PROBLEM

**Personalized information can be more useful to people than generic information. However, engineering a dynamic site can produce less-than-satisfactory results if the basic structures and designs are not in place first.**

Dynamic content targeting is a powerful way to provide individualized content. In contrast to a one-size-fits-all approach, dynamic content targeting gives customers a site tailored specifically to their needs. However, designing and implementing a system to manage all the content types for all customers can be daunting, requiring significant database and algorithm development. Yet it can also be of great value to customers, giving them another reason to return to your Web site. If done well, a dynamic, personalized site can be a significant competitive advantage. The framework that we provide here, used in conjunction with other patterns in the book, makes personalization a more manageable development process.

This pattern describes two forms of dynamic content targeting. The first form uses information explicitly entered by customers to dynamically create targeted content. We call this **intentional personalization**. The second form uses information about where visitors go and what they do on a site to target content to their needs. We call this **automatic personalization**. These approaches can be used separately or together.

By targeting content using the methods we describe, in conjunction with other content management techniques, like PAGE TEMPLATES (D1) and CONTENT MODULES (D2), you can make personalized content an integral part of your site.

D1  
D2

#### Create a Site with Intentional Personalization

Personalization gives customers the power and satisfaction of building their own environment. To make this possible, a site needs categorized and scored content. Using a targeting engine, you can target relevant content to each customer profile. See Figures D4.2 and D4.3 for examples before and after targeting is applied.

**Require Minimal Personalization Up Front** • Visitors often do not know that they can personalize a site (or that they might want to) until after they have spent some time on it. If you require visitors to your site to enter personal information before they're comfortable with the site, they'll shy away altogether. Before you find out anything about your visitors, give them a sampling of what the site has to offer. For example, many e-commerce sites list top-selling FEATURED PRODUCTS (G1), thereby letting visitors know what other customers are purchasing.

G1

**Figure D4.2**

Before targeting your content to people, categorize it and decide which profile format you will use for each customer. If visitors say they're interested in art, for example, the system will show them content that is categorized under the heading *Art*.

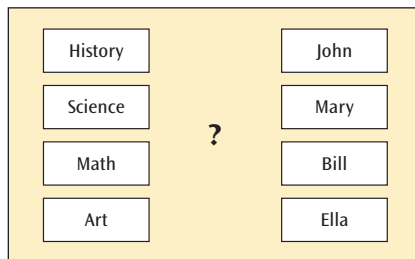
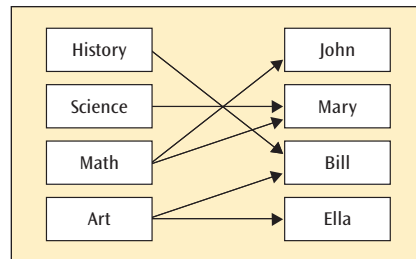
**D4.2****D4.3**

Figure D4.4 shows a more sophisticated example. My Yahoo! provides newcomers with basic content, such as stock prices and headline news. It also places a large notice in the center that tells people they can create personalized content whenever they want to.

The upshot of all that we've said here is this: Don't force people to personalize your site before they're ready, because they may not want to spend the time if they can't see what's in it for them.

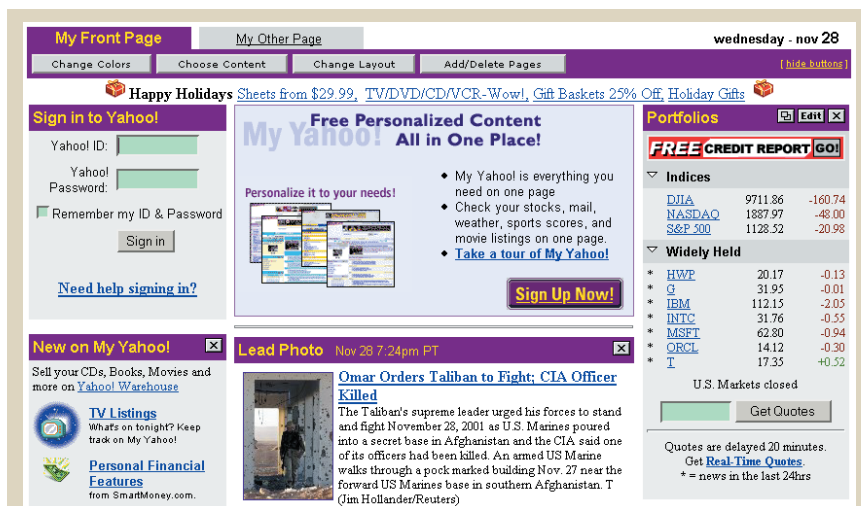
**Figure D4.3**

Once customers have completed their profiles, you can target content to each person, creating a personalized site.

**Invite Visitors to Personalize** • People need a simple and enticing offer that invites them to click through to the personalization menu. The invitation must be obvious and clear so that they can't miss it. Entice them by providing an idea of what they'll be able to do once they personalize the site. For example, Figure D4.5 shows how Monster takes a different approach from that of Yahoo! The site has little value for individual visitors until they go

**Figure D4.4**

First-time visitors to My Yahoo! see a simple page that offers basic content, as well as a note to let them know that they can personalize what they see.

**D4.4**

(my.yahoo.com, November 28, 2001)

## D4 PERSONALIZED CONTENT



D4.5

(www.monster.com, February 8, 2002)

Figure D4.5

Monster makes clear the benefits people will get if they do what it takes to personalize the site.

through the personalization process, so it tells them up front what the benefits will be. Lands' End invites people to personalize its site by creating a fun and interactive experience with a virtual model (see Figure D4.6).

**Categorize Content** • Let customers choose the content they want to see on their personalized pages so that there's no ambiguity about what

**Figure D4.6**

Customers are invited to create a virtual model at this fun part of the Lands' End site. The model gives visitors a sophisticated and personalized shopping experience.

**D4.6**

(www.landsend.com, February 18, 2002)

**B2**

information interests them. Arrange content by subject, date, or task, depending on how it's organized. Use the same information architecture designed for BROWSABLE CONTENT (B2) to lay out the options because this structure will make sense to customers and provide consistency with the information structure of the site. Keep in mind that not all content needs to be strictly related to one category in a site. For example, news about technology could be categorized under either "news" or "technology."

**Use People's Background Information** • If customers are willing to identify who they are, where they live, how old they are, what they've done in life, and/or what type of business they're in, you can use this information to make inferences about their interests. This level of detail can be much more enlightening and useful to you than the information gathered from surfing habits. For example, you can provide a great deal of local information for site visitors in the United States—such as weather, news, and traffic conditions—just on the basis of their zip codes (see Figure D4.7).

## D4 PERSONALIZED CONTENT

**GET your local news**  
WEATHER AND SPORTS

Add local news and custom coverage to your MSNBC.

Enter your zip code and three stock symbols to add top local headlines, weather, sports and relevant business news.

ZIP CODE  
STOCKS

**SUBMIT**

**D4.7**

**Figure D4.7**

After customers fill out a very short form about their backgrounds, MSNBC's Web site offers local news, weather, and personalized stock quotes.

The screenshot shows the MSNBC website interface. On the left, there is a sidebar with navigation links: Video, U.S. News, World News, Business, Sports, Entertainment, Tech / Science, Health, Weather, Travel, Blogs Etc., Local News, Newsweek, Multimedia, Most Popular, MSNBC Classifieds, Shopping, Jobs, Dating, Autos, Real Estate, and Alerts. The main content area features a large headline 'DOING GREAT' about 10-month-old conjoined twin girls. Below this, there are sections for 'IN THE NEWS' and 'NBC NEWS HIGHLIGHTS'. On the right, there is a weather section for Pittsburgh, PA, showing a current temperature of 71°F and a forecast for Thursday. Below the weather, there is a 'LOCAL' section with news about a man being shot and a girl missing. At the bottom, there is a 'SPORTS' section with scores for baseball, NBA, and NHL games.

(www.msnbc.com, June 16, 2006)

**Map Content to Each Visitor** • Establish the fundamental selection criteria for how people receive personalized content. To map people's interests to content, devise a schema showing the relationships between the two. The schema can be as simple as a map between areas of a site and areas of expressed interest (see Figure D4.3). Or the schema can use a map of content zones and personality profile vectors (see Figure D4.8).

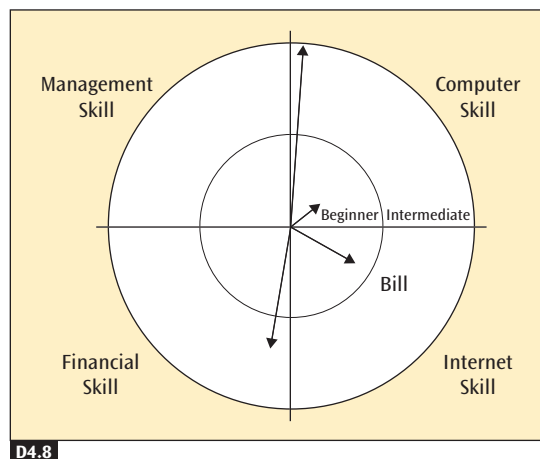
#### Create a Site with Automatic Personalization

With automatic personalization, people's interests are inferred on the basis of the actions they take, such as pages they visit, links they click on, and products they buy. Such inferences can lead to erroneous assumptions about visitors' interests, however, because people's intentions may be different from the actions they perform. For example, if a visitor looking for recipes mistakenly navigates to an area of a site focused on cooking classes instead of recipes, her profile will indicate an interest in cooking classes, which may not be true.

**Create a Scoring System** • Devise a system that automatically matches the needs of the audience to the content you have available. The basic idea is to divide customers into groups, on the basis of a shared characteristic, and to look for trends within those groups. It is assumed that, because customers within a group are similar in one way, they may be similar in other ways. For example, if Victoria is placed in a group with 20 other people, 15 of whom really like the novel *The Scarlet Letter*, the odds are that she will like it too.

**Figure D4.8**

A schema designed to show the relationship between people's interests and site content may be based on a mapping algorithm that uses personality vectors and content regions. This example shows that Bill is a beginner with computers, but more advanced in finance.



D4.8



## D4 PERSONALIZED CONTENT

Use one or more of the following scoring methods to automatically divide customers into groups:

- **Rank.** An ordered list of how the students in a class ranked on an exam, for example.
- **Top rank.** A list of the top three scores only.
- **Threshold score.** A list of only those students who scored over a particular percentage on the exam.
- **Required attributes.** A list of all students who answered a particular question correctly.

Here's how a scoring system would work. Suppose that you offer 500 products on your site. Instead of making visitors sort through all 500 products to determine which one is best for them, you want to present only those that best fit their needs. If you have initially rated each product for speed, power, ease of use, and price, you can now have visitors score or rate the same criteria through a quick online interview. Store each customer's scores in a database. To determine which products to present to visitors, reference each customer profile by looking up the person's account using the account ID that you stored in that customer's cookie (cookies will be discussed shortly), and show only those products that meet the guest profile threshold scores.

### Use Personalized Content-Matching Schemes

You can create personalized pages by matching a customer to the highest-rated content in an area and by pushing the content to **CONTENT MODULES (D2)** in **PAGE TEMPLATES (D1)**. Include a list of all the related content by publishing links to **CONSISTENT SIDEBARS OF RELATED CONTENT (I6)** so that visitors can browse and make their own selections.

Here are four techniques for gathering information: edit, interview, deduce, and filter. The first two are forms of intentional personalization, and the last two are forms of automatic personalization.

1. **Edit.** Visitors click on buttons to make selections. They edit and configure each **CONTENT MODULE (D2)** area, choosing which modules they most desire. For an example, see the top of Figure D4.4, which shows My Yahoo!'s editing options. Also consider letting visitors use **DIRECT MANIPULATION (H9)** to put the content modules exactly where they want on the page.
2. **Interview.** Visitors answer questions by clicking on multiple choices in an interview. For an example, see Figure D4.6, a screen shot from the

D2 D1  
I6

D2

H9



virtual model at landsend.com. Store information in each customer's database profile, and offer visitors the option to continue the personalization process over time.

**3. Deduce.** Observe visitors' behavior preferences, record them, and offer them personalized results later. Amazon.com tracks the products that visitors order, for example, and later offers them a list of PERSONALIZED RECOMMENDATIONS (G3) of similar or related products, selected by Amazon merchandisers, that they might like to buy. Store this kind of information in each customer's database profile.

**4. Filter.** Build a list of customer preferences and display the recommended items to visitors. Amazon.com does this when it tracks the books that all its readers buy most and displays them as FEATURED PRODUCTS (G1). Provide CONTENT MODULES (D2) based on similar customer profiles. To determine areas of interest, analyze the correlation of all the guest profiles. This is also known as *collaborative filtering*.

Employ these techniques singly or in combination. By providing initial personalization from filtering, customers do not need to enter any special information up front. Over time, implicit and explicit information voluntarily offered by a customer can be added, allowing you to target customer needs more directly.

**Use Predefined Content Locations** • Follow the pattern of CONTENT MODULES (D2) to display content in predefined areas on each page. This way you can code each page in a uniform template.

**Track Customer Visits and History with Cookies** • Use cookies to track and remember what visitors found valuable on your site. A **cookie** is a way of storing uniquely identifying information in a customer's computer. A site can store anything in a visitor's cookie: an account ID, user name, even historical information, like the number of times each customer visits a different area of the site. For security reasons, the cookie is accessible only by the site that created it. What makes cookies especially useful is that they enable a site to remember visitors automatically when they come back. Cookies are discussed in greater detail in PERSISTENT CUSTOMER SESSIONS (H5).

If you want to use cookies, make sure you offer a way to let people move from machine to machine, such as from home to office. Create a personalization recovery scheme, in case the cookie is deleted, by providing ACCOUNT MANAGEMENT (H4) tools for customers to create and manage their user name and password.

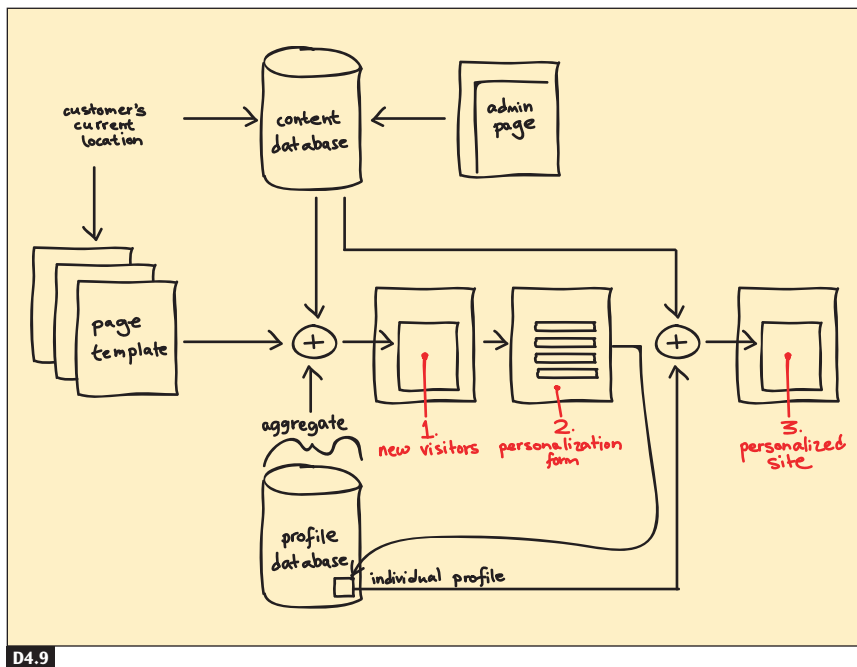
## D4 PERSONALIZED CONTENT

There are also several legal and privacy issues with respect to cookies and to the kinds of information that may and may not be collected about minors under a certain age. See **FAIR INFORMATION PRACTICES (E3)**, **PRIVACY POLICY (E4)**, and **PRIVACY PREFERENCES (E8)** for more details.

E3  
E4 E8

### \* SOLUTION

It is best not to force people to personalize your site before they can use it. Draw customers in by providing basic but valuable content to new customers that, later, can be personalized. Next, invite customers to personalize the site from a menu of options, using information that can be gathered quickly, such as their backgrounds and areas of interest. Gather this information by conducting interviews or by giving people the ability to edit their interests. Deduce what other things might interest your customers by tracking the areas of your site that they visit and scoring the information. Categorize the content and map it to the people who might find such content useful. Structure the site into page templates and content modules that receive content from the targeting engine.



D4.9

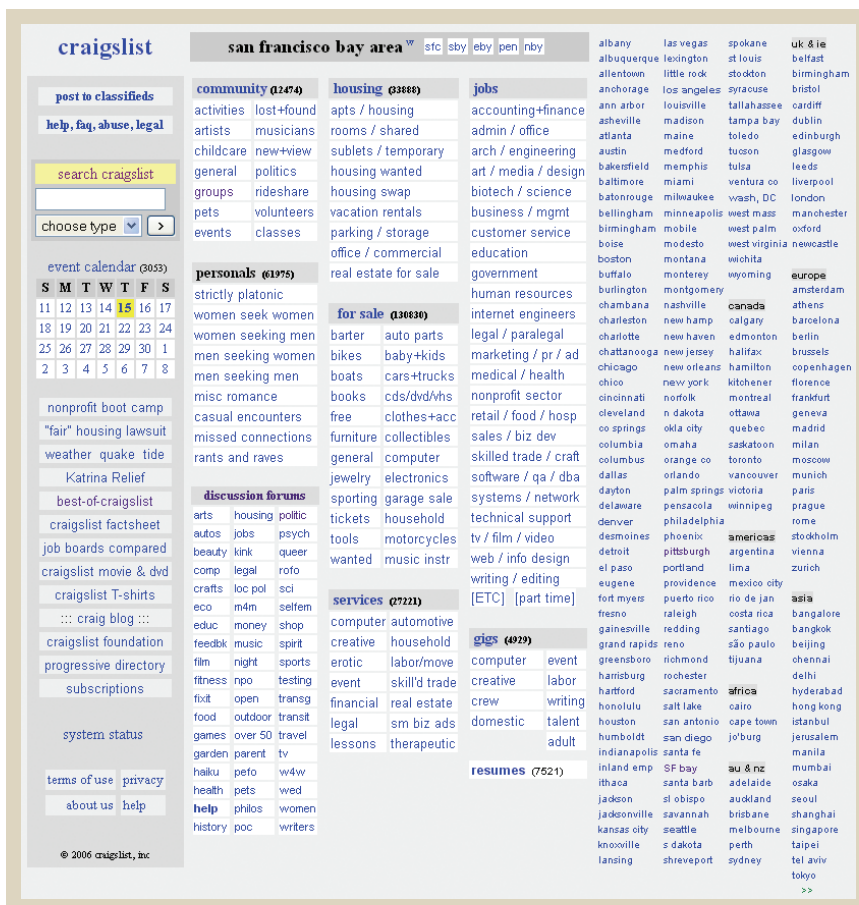
Figure D4.9

A personalized site uses page templates and customer information to target content modules.

## \* OTHER PATTERNS TO CONSIDER

- D1 D2 Target content to PAGE TEMPLATES (D1), CONTENT MODULES (D2), and  
I6 CONSISTENT SIDEBARS OF RELATED CONTENT (I6) on the basis of information  
B2 in each customer's profile. Use the same information architecture designed  
H4 for BROWSABLE CONTENT (B2) to lay out the options consistently with other  
pages. Provide ACCOUNT MANAGEMENT (H4) tools to let people see and edit  
their profile data.
- E3 E4 FAIR INFORMATION PRACTICES (E3), PRIVACY POLICY (E4), and PRIVACY  
E8 PREFERENCES (E8) describe several legal issues that must be addressed  
when data about individuals is collected and stored.
- G3 PERSONALIZED RECOMMENDATIONS (G3) are one form of personalized  
content tailored specifically for e-commerce.

## D5 MESSAGE BOARDS



D5.1

(www.craigslist.org, June 16, 2006)

Figure D5.1

Craigslist provides a broad spectrum of message board topics and organizes them into hierarchical categories.

### \* BACKGROUND

Used by COMMUNITY CONFERENCES (A3), NONPROFITS AS NETWORKS OF HELP (A5), EDUCATIONAL FORUMS (A8), and BLOGS (A12), message boards are a tested way for people to communicate with one another. Whereas these site genres provide the framework for building respectful communities, this pattern forms the core of posting, searching for, and reading messages on message boards. This pattern can also be applied to e-commerce through RECOMMENDATION COMMUNITIES (G4).

A3  
A5 A8 A12

G4

## \* PROBLEM

**Message boards can engage customers if they're easy to find and use. But managing boards to keep them from becoming unruly requires administrative tools and manual labor.**

The ability to communicate directly with other people is one of the great benefits of online communication. People can carry on conversations with communities around the clock and around the world. If customers can find their favorite boards time and again, and use them with ease, the communities that form around these message boards can grow. *The challenge here is to foster high-quality and meaningful discussions.*

We suggest starting with one or two message boards and adding more as your community grows. It's best to start simple, but keep the potential for expansion in mind when you're designing message boards.

**Decide Whether to Allow Anonymous Posts** • One of the first issues you'll have to address is whether to allow community members to post anonymously. If your target visitors want anonymity, you can choose to let them use your message board without revealing their complete names and personal information. Even without complete anonymity, however, some people might act irresponsibly. To prepare for such cases, you must build in systems to ensure that your boards do not become overrun with off-topic, off-color, and perhaps even illegal conversations.

Some communities allow no anonymity because administrators know that if a name is attached to a message, the person is likely to act more responsibly when posting. Other communities make it a rule that visitors may not have complete anonymity, though a visitor's identity might be known only by the site administrators. These kinds of rules are important because, in cases of criminal activity such as fraud, libel, or corruption, law enforcement officials must be able to investigate. This requirement forces site administrators to track more information about people who post, and it potentially changes the site's PRIVACY POLICY (E4).

**Decide Whether to Moderate Your Board** • On moderated message boards, a site administrator reviews messages before they're posted to make sure that everyone is conforming to the rules of the community. On unmoderated message boards, if one person posts a message and another visitor complains, the administrator can choose to remove the message, but otherwise it's a no-holds-barred, free-for-all forum where anything goes.

## D5 MESSAGE BOARDS

Some message boards use a hybrid approach in which first-time posters are moderated but, once approved, can post as much as they want.

Moderated boards can be kept organized and on topic, but they require more administrative work and they can slow down conversations. Although unmoderated boards offer freedom and speed, they are also more unruly, and certain individuals can sidetrack or dominate conversations.

Both kinds of boards must be monitored at some level, either by customers who challenge other customers on their behavior, or by site management. Both kinds of boards require tools to delete messages, but only moderated boards require tools to review posts before they appear on the site.

**Make It Easy to Find Your Message Boards** • People need to find your message boards to take advantage of them. If you put the boards in a separate area from the rest of the related content on the site, they become harder to find. Also, people want to return to the boards that interest them most and see replies to posts that they've written.

Build a **UNIFIED BROWSING HIERARCHY (K1)** to include content, commerce, and community message boards, and link content through **CONSISTENT SIDEBARS OF RELATED CONTENT (I6)** to give customers **MULTIPLE WAYS TO NAVIGATE (B1)**.

Store your visitors' lists of favorite boards, and let them edit those lists through an **ACCOUNT MANAGEMENT (H4)** page so that it's easier for them to find the message boards that they've visited before (see Figure D5.2). This feature requires customers to sign in with **SIGN-IN/NEW ACCOUNT (H2)** before saving a favorites list. At a minimum, add **LOCATION BREAD CRUMBS (K6)** on pages and give them **DISTINCTIVE HTML TITLES (D9)** so that people can bookmark message boards in their list of favorites.

Once inside a message board, customers might want to search by keywords, scan the latest messages, follow the thread of one conversation, or scan posts by authors they like. A **SEARCH ACTION MODULE (J1)** that searches the posts gives customers consistent access to keyword search capability, and a filter that provides **CHRONOLOGICAL ORGANIZATION (B6)** makes it easy to look for the latest messages. A **POPULARITY-BASED ORGANIZATION (B7)** scheme can also be used to let visitors know which posts were most read or most highly rated by other visitors.

Unlike an unthreaded view (see Figure D5.3), a threaded view lets people follow conversations very quickly (see Figure D5.4). On the other hand, a column sort that provides **ALPHABETICAL ORGANIZATION (B5)** of messages provides quick access by author.

K1

I6

B1

H4

H2

K6

D9

J1

B6

B7

B5

**Figure D5.2**

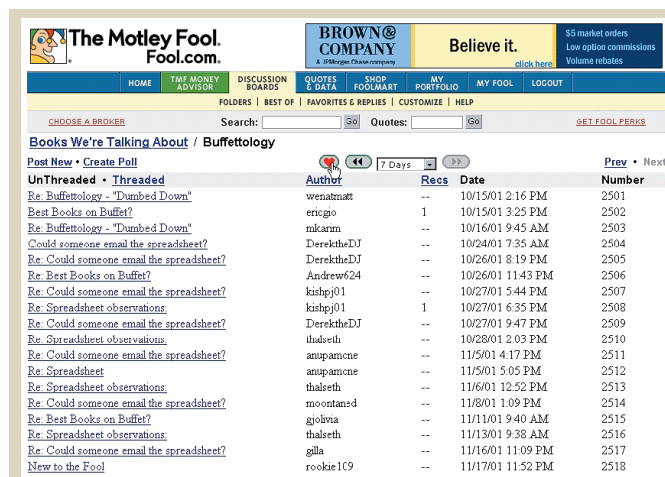
The Motley Fool gives customers the ability to save a list of favorite message boards for the next time they sign in.

**D5.2**

(www.fool.com, November 29, 2001)

**Figure D5.3**

The Motley Fool site provides the ability to search, filter by date, view each thread, and sort alphabetically. This screen shot shows an unthreaded view.

**D5.3**

(www.fool.com, November 28, 2001)

**H2**

**Require Newcomers to Sign In after Reading Posts** • Some sites let newcomers read message boards without going through SIGN-IN/NEW ACCOUNT (H2) but do not let them post until they have registered. This approach lets people “lurk” and see what a community is like before joining it. Once a



## D5 MESSAGE BOARDS

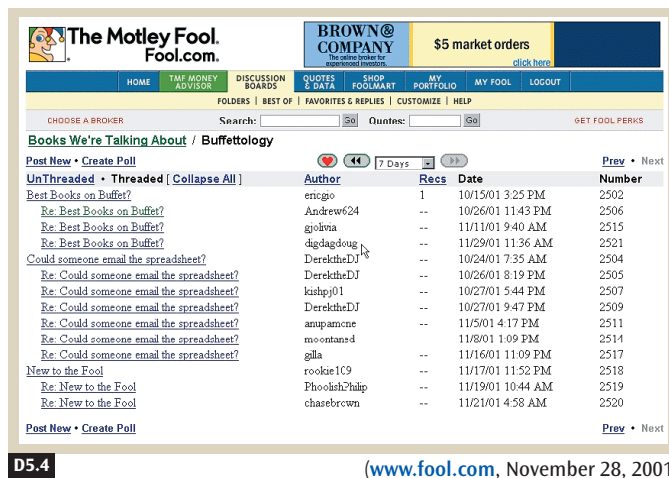


Figure D5.4

This screen shot shows a threaded view of the same message board that is shown in Figure D5.3.

visitor has decided to become a community member, you can offer PERSONALIZED CONTENT (D4), in the form of favorite message boards and favorite community members.

Other sites require newcomers to go through SIGN-IN/NEW ACCOUNT (H2) before they can even read any posts, thereby ensuring that only registered community members can read and post messages. However, this approach may irritate people who do not like to create an account before they can see what the message boards offer.

In stricter communities where true identity is important, or where content is of an adult nature, you may want to ask for a credit card number to validate a customer's identity and age.

**Present Clear Rules** • Each site must establish rules of behavior for its message boards. Customers will not want to waste their time writing posts that won't be accepted or must be removed. If customers are malicious, the rules might dissuade them from posting at all, making site management easier.

The first area to address is a site's FAIR INFORMATION PRACTICES (E3). What kind of information is collected about community members? For what purposes? For how long? And are there any legal requirements, such as content that cannot be viewed by international audiences or by minors? This kind of information needs to be made clear through the site's PRIVACY POLICY (E4) and PRIVACY PREFERENCES (E8).



**H6** To help visitors remember specific rules, present the rules before they post a message. Use a FLOATING WINDOW (H6) or put the rules directly on the page (see Figure D5.5). Specifically, message board rules must address the following:

- Whether the site is moderated
- The fact that you will terminate site privileges and possibly pursue legal action against people who post copyrighted, hateful, threatening, illegal, racist, or other undesirable information (such as spam) on your site
- Whether hyperlinks are allowed in messages
- Whether images are allowed in messages
- How long posts are retained
- Whether people can delete their posts

**Figure D5.5**

Yahoo! News makes its message board rules clear right on the posting page.

**YAHOO! NEWS** [News Home](#) - [Message Boards](#) - [Yahoo!](#) - [Help](#)

[Lose 10 Lbs - eDiets.com](#) [Get a Free Diet Profile](#) **STOP the diet cycle with eDiets!** Free Profile: Height  5 ft  7 in Weight  go!

[Top](#) > [World News](#) > [Russian Germ Warfare Experts Raise Smallpox Alarm](#) [Options](#) - [Edit Public Profile](#) - [Sign Out](#)

Welcome, ssvilays

**Yahoo! News - Message Boards**

[Russian Germ Warfare Experts Raise Smallpox Alarm](#) - 11-05-2001  
Former Soviet germ warfare scientists, warning that rogue powers could have underpaid Russian researchers, called Monday for wide reintroduction of worldwide vaccination against the now extinct smallpox virus.

**NOTE:** Do not assume you are anonymous when posting to Yahoo! Message Boards. Although your IP address is not displayed on your post, Yahoo! does record your yahoo\_id (**ssvilays**) and IP address (**63.201.56.187**) to help combat abuse. Law enforcement agencies may require Yahoo! to disclose information regarding message board postings. Before you post, please read our [Privacy Policy](#).

Select an identity  
 [EDIT or ADD profiles](#)

Type message subject

Type message

[Preview](#) [Post Message](#) [Cancel](#)

**NOTE:** Please read our [Terms of Service](#) before you post on this message board. Messages that are **unlawful, harmful, threatening, abusive, harassing, tortious, defamatory, vulgar, obscene, libelous, invasive of another's privacy, hateful, or racially, ethnically or otherwise objectionable** may be removed and may result in the loss of your Yahoo! ID (including e-mail). Please do not post any private information unless you want it to be available publicly.  
For details, please refer to our [Terms of Service](#)

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[Privacy Policy](#) - [Terms of Service](#) - [Guidelines](#) - [Help](#)

**D5.5**

([www.yahoo.com](http://www.yahoo.com), November 28, 2001)

## D5 MESSAGE BOARDS

**Make Posting Painless** • People can create new messages or reply to a current message. Place ACTION BUTTONS (K4) that lead customers to these two options on every message, to let them continue conversations. Also provide just the **New Message** ACTION BUTTON (K4) in strategically placed locations to let community members start new conversations.

K4

K4

Place the message to which visitors are replying on the same page where they're composing a new message because they may be responding to one or several points that they want to refer to. Create a form so that customers can edit their messages. Customers creating new messages need fields—one for the title and one for the body. When replying to a message, automatically create the title on the basis of the original message by using the term *re*, as in “Re: What is the best book to buy on cooking pasta?” Community members can change the title if they want to. Also be sure to have a **Submit Message** ACTION BUTTON (K4) at the bottom of the form.

K4

A preview capability helps customers visualize how their messages will look to others. If the site allows images or HTML in posts, the preview capability is an essential function to help people verify the links and look of their posts. Create a **Preview Message** or a **Preview Reply** ACTION BUTTON (K4) below the form (see Figure D5.6).

K4

**Help New Community Members Make Good Posts** • Anyone who has been part of any COMMUNITY CONFERENCE (A3) long enough is familiar with the situation of a “newbie” posting a question or comment that veterans find annoying, either because the newbie is not familiar with the social norms of that message board or because he is intentionally interested in annoying people.

A3

You can do two things to avoid this problem. First, you can create a higher barrier to entry for first-time posters. For example, you could require a small fee for a new account (as MetaFilter does), or impose a 24-hour delay after an account is created before that account is allowed to post (as Daily Kos does). On the one hand, these preventive measures are likely to increase the quality of posts and decrease the number of newcomers deliberately making inflammatory posts. On the other hand, these measures are also likely to reduce the total number of people participating on your message boards.

The second thing you can do is explain the social norms of your message boards. For example, many message boards let you create “sticky” posts that are always at the top of the list of message threads. Many communities use these sticky posts to highlight FREQUENTLY ASKED QUESTIONS (H7),

H7

**Figure D5.6**

The Motley Fool has a straightforward interface for entering new posts and replies, and it lets customers e-mail replies directly to the original poster, making it much easier for the original poster to respond.

The screenshot displays two views of The Motley Fool's website. The top view shows a 'Your Reply' form for a post titled 'Books We're Talking About / Buffettology'. The form includes fields for subject, author, and a large text area for the reply. Below the text area are buttons for 'Submit Reply', 'Preview Reply', and 'Cancel Reply'. There are also checkboxes for 'Table Data', 'Post this Reply to the Boards', and 'E-Mail this Reply to the Author'. The bottom view shows the same thread in a 'Threaded' view, displaying the original post by 'digdagdoug' and the reply by 'digdagdoug'.

**The Motley Fool. Fool.com.**

Click here. for an American Express Brokerage account now.

HOME | TIME MONEY ADVISOR | DISCUSSION BOARDS | QUOTES & DATA | SHOP FOOLMART | MY PORTFOLIO | MY FOOL | LOGOUT

FOLDERS | BEST OF | FAVORITES & REPLIES | CUSTOMIZE | HELP

CHOOSE A BROKER Search: Go Quotes: Go GET FOOL PERKS

**Books We're Talking About / Buffettology**

**Original Message**  
 Subject: Re: [Best Books on Buffet?](#)  
 Author: [Andrew624](#) Date: 10/26/01 11:43 PM Number: 2506  
 I read "Of Permanent Value" and loved it. It is > 1000 pages but very short chapters. That makes for easy reading. It is very up to date also.  
 (Using your mouse you can highlight, copy, and then paste any of the above message into your reply)

**Your Reply**  
 Subject: Re: Best Books on Buffet?  
 Author: [digdagdoug](#)

Is it more biographical or investment philosophy?

Submit Reply Preview Reply Cancel Reply

☐ Table Data (fixed-width font, enter your own line breaks)  
☒ Post this Reply to the Boards  
☒ E-Mail this Reply to the Author  
 Mail these Addresses Privately:

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Author: [digdagdoug](#) Number: 2521 of 2521 GO  
 Subject: Re: [Best Books on Buffet?](#) Date: 11/29/01 11:36 AM  
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 Recommendations: 0

Is it more biographical or investment philosophy?

**amazon.com.**

**The Intelligent Investor**

**D5.6**

(www.fool.com, November 29, 2001)

making it easy for newcomers to know which topics are well worn. Another technique that some message boards use is to provide tips on making good posts—for example, “introduce yourself before asking questions,” “be sure to stay on topic,” and “have a good, concise title.”

## D5 MESSAGE BOARDS

**Create an Administrative Back End** • On moderated boards, an administrator must review all new posts. This interface provides the ability to preview each post and accept or reject it. Create a CHRONOLOGICAL ORGANIZATION (B6) of posts that takes an administrator to a preview page, with ACTION BUTTONS (K4) for accepting posts that follow community standards and rejecting posts that violate any rules.

B6

K4

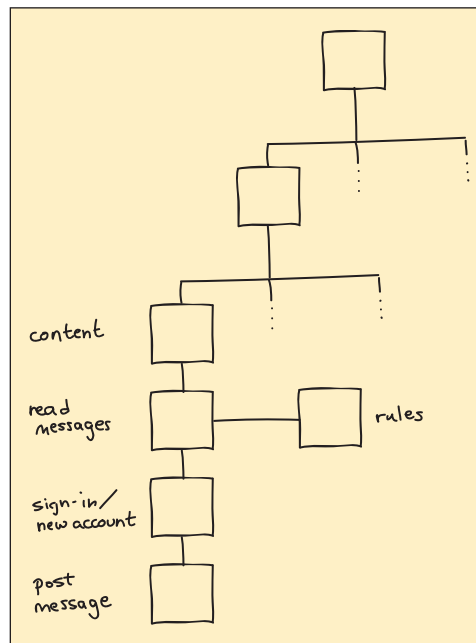
For all boards, administrators need the ability to remove posts, and to remove access for customers who violate the rules. The administrator's view of the message boards, accessed through a special SIGN-IN/NEW ACCOUNT (H2) form, provides the capability to click a **Remove Post** ACTION BUTTON (K4) on the post pages and remove undesirable content.

H2

K4

### \* SOLUTION

To make message boards easy to find and use, build them into your navigation hierarchy and link to the boards from related content. Provide the means for people to save their favorite boards in their customer profile, and save board links in the browser favorites. Let visitors search for keywords in posts, filter posts by date, view threaded and unthreaded conversations, and sort posts by the name of the person posting. Give people the ability to read posts before signing in or registering. Make sure they know the board rules so that they're not surprised if their messages are removed. Provide a simple form to post a new message or a reply. Enable administrators to approve or reject posts before posting, if the site is moderated, and give them the ability to remove messages on both moderated and unmoderated boards.



D5.7

Figure D5.7

Build message boards into your navigation hierarchy, and provide a simple way for people to reply to posts.

## \* OTHER PATTERNS TO CONSIDER

**K1** Build message boards into your UNIFIED BROWSING HIERARCHY (K1) and link to content through CONSISTENT SIDEBARS OF RELATED CONTENT (I6), giving customers MULTIPLE WAYS TO NAVIGATE (B1). Message boards can also form the basis for RECOMMENDATION COMMUNITIES (G4) on e-commerce sites.

Store customers' lists of favorite boards in their profiles, and let them edit their profiles through ACCOUNT MANAGEMENT (H4). These features require customers to go through the SIGN-IN/NEW ACCOUNT (H2) process. At a minimum, provide LOCATION BREAD CRUMBS (K6) on pages and give pages DISTINCTIVE HTML TITLES (D9) so that people can save them in their browser favorites.

**J1** Provide a SEARCH ACTION MODULE (J1) on every page so that people can search for keywords in posts. Allow people to filter posts by CHRONOLOGICAL ORGANIZATION (B6) so that they can see the latest messages. Provide an ALPHABETICAL ORGANIZATION (B5) of page contents to give people quick access to authors they like, and a POPULARITY-BASED ORGANIZATION (B7) to see what others liked.

**H2** Require people to sign in with SIGN-IN/NEW ACCOUNT (H2) before posting new messages. Verifying that people are signed in requires checking before each post, and before the selection of any PERSONALIZED CONTENT (D4), such as favorite message boards.

**E3** Address message board FAIR INFORMATION PRACTICES (E3) and community rules in a site's PRIVACY POLICY (E4), in a FLOATING WINDOW (H6), or directly on the message-posting page.

**K4** Give people **Reply to Message** and **New Message** ACTION BUTTONS (K4) on existing posts, and a **New Message** ACTION BUTTON (K4) on every page. Create a **Submit Message** ACTION BUTTON (K4) at the bottom of the message-posting form.

For moderated message boards, give board administrators a CHRONOLOGICAL ORGANIZATION (B6) of posts that takes them to a post preview page with ACTION BUTTONS (K4) for accepting and rejecting posts.

For all board administrators, provide a view of the message boards, accessed through a special SIGN-IN/NEW ACCOUNT (H2) form, that gives administrators the capability to remove undesirable content by clicking a

**K4** **Remove Post** ACTION BUTTON (K4) on the post pages.

**A3** See COMMUNITY CONFERENCE (A3) for more tips on fostering a strong community.

## D6 WRITING FOR SEARCH ENGINES

**E-LOAN** *A better way to get a loan* **Donate Now**  
In Memory 9-11-01 [Privacy Policy](#) [New to E-LOAN?](#)

[HOME PURCHASE](#) [REFINANCE MORTGAGE](#) [HOME EQUITY](#) [BUSINESS FINANCING](#) [CREDIT CARDS](#) [DEBT CONSOLIDATION](#) [EDUCATION FINANCING](#) [AUTO FINANCING](#)

**Home Purchase**  
Join thousands who saved. Get a decision in minutes and a guaranteed lowest cost.  

- Home purchase
- Get preapproved
- Calculators
- Apply now

**No lender fees...**  
*Just a great rate!*

**Auto Financing**  
Get a check for your **new or used** car by tomorrow. Avoid haggling and over-priced loans.  

- Apply now
- Search rates

**New Low Rate 36 Months 5.75% APR**  
*click here*  
Finance your car with home equity and save taxes\*

**Refinance Mortgage**  
Lowest rates in years with a lowest cost guarantee. Decision in minutes.  

- Search rates
- Refinance Review
- Home equity
- Apply now

**Lowest Cost Guarantee!**

**Home Equity**  
Instant approval. Cash in as little as **5 days** at the guaranteed lowest cost.  

- Apply now
- Search rates
- Consolidate debt

**6.00% Line of Credit APR**  
*Decision in seconds!*

**Personal loan consultants**  
**1-888-E-LOAN-22**

**Search Hundreds of No Lender Fee Loans:**  
[Home Purchase](#) [Home Equity](#)  
[Refinance Mortgage](#) [Auto](#)

**Mortgage Rates**

Rate	APR	Type
5.250%	5.105%	3 Year Fixed
5.500%	5.255%	5 Year Fixed
5.750%	6.047%	15 Year Fixed
6.250%	6.451%	30 Year Fixed

**Home Equity Rates**

Rate	APR	Type
6.000%	6.000%	Line of Credit
7.375%	7.585%	15 Year Loan
7.375%	7.506%	30 Year Loan

**Auto Rates: New & Used**

APR	Type
5.75%	New 36 Months
5.99%	Used 36 Months
7.55%	Refinance 36 Months

[Assumptions](#) [Interest Rate Outlook](#)

**Finish Your Application**

**D6.1** (www.eloan.com, November 2001)

**Figure D6.1**

E-LOAN keeps most of its keyword-filled content high on the homepage, which helps it score high on search engine rankings.

### \* BACKGROUND

When searching the Internet, or an intranet, people will not be able to find your site if it appears too many pages away from the front of the search results list. Your site needs as high a ranking as possible on the list so that customers can find it quickly and regularly. The writing on a site becomes critical for a high listing because most search engines index words to build a database of search results. This pattern provides the solution for writing pages that will be highly ranked by search engines.

## \* PROBLEM

**It is difficult to find a site on a list of search engine results if it is too far down the list. Making a site appear toward the top of any search requires writing site content in customized ways.**

Search engines are one of the primary tools that people use to find sites,<sup>1</sup> just as they are one of the most popular ways that people find pages within a site. But one of the biggest problems people face on search engines is that they have to wade through page after page of results to find a site that meets their needs. Because your potential visitors start at the top of the first page and read down, your site needs to be near the top of the first page of search results, before readers lose interest or find your competitors.

Some search engines rank sites purely on their relevance to searchers' keywords, and each search engine has its own way of calculating relevance. Other search engines rank sites that have paid for top listings first, but they also list all other sites with relevant results. Understanding how relevance is ranked on various search engines is the key to building a site that returns high rankings because rankings are built from the content of sites. This pattern provides the solution for writing content that ranks sites higher and is clicked on more frequently in search result pages.

**Remember That Search Engines Crawl and Index Web Sites** • Search engines have such a vast and widespread index of the Internet (or an intranet) because half of their job is to crawl every page they can find and index every distinctive word. These programs, called **crawlers** or **spiders**, start from a list of a few sites and go from link to link, opening pages and indexing the words on those pages. The other half of a search engine's job is to generate results for every search query, whether a query consists of one word or many.

Some search engines calculate relevance scores from the frequency of word occurrences in a page or site; others rank sites according to their importance, as estimated by the number of Web pages that link to that site. Either way, the words and content on your site (see Figure D6.2) must match the keywords that searchers use when they type in the search form. And the results that search engines display depend on the words and content of your pages as well.

<sup>1</sup> According to information gathered from comScore Media Metrix's "Top 50 Properties" table ([www.comscore.com/press/release.asp?press=906](http://www.comscore.com/press/release.asp?press=906)) and from Alexa's Global Top 500 ([www.alexa.com/site/ds/top\\_500](http://www.alexa.com/site/ds/top_500)), search engines consistently ranked as some of the most popular sites on the Web in 2006.



## D6 WRITING FOR SEARCH ENGINES



D6.2

([www.cancernet.nci.nih.gov/cancertopics](http://www.cancernet.nci.nih.gov/cancertopics), June 16, 2006)

Figure D6.2

The National Cancer Institute uses key-words in the body of its Cancer Topics page to help improve its search engine rankings.

### Strategies That Work

Here are the content-writing strategies that we use to improve site rankings and make search results easier to use overall.

**Write Distinctive Titles for Every Page** • DISTINCTIVE HTML TITLES (D9) are important to search engines for two reasons. First, many search engines rank Web pages higher if one of the search terms is in the title. Second, search engine designers often make HTML titles the leading description for each search hit in the ORGANIZED SEARCH RESULTS (J3) page. If a page does not have an HTML title, the search engine will have to fall back on the **anchor text** for a link—namely, the hypertext label used to link to the page—or, in the worst case, the URL of the Web page, as the title of a search result.

D9

J3

12

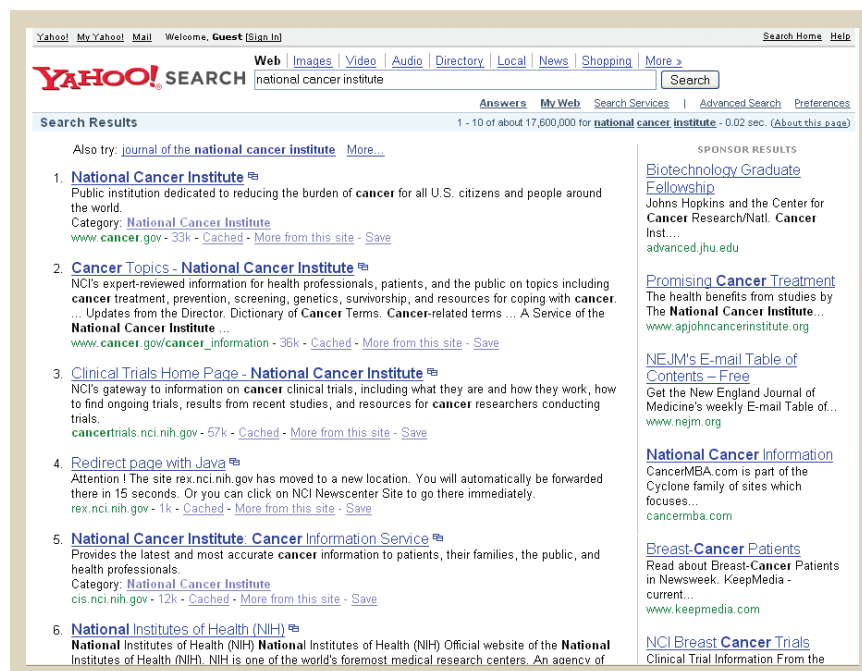
**Write Keyword-Filled Descriptive Text Near the Top of Each Page** • Some search engines give text near the top of a page more weight than text near the bottom. If you place your site's most often used keywords ABOVE THE FOLD (I2), search engines are sure to include those words as part of a site's index. Simply put, **keywords** are significant and descriptive words that describe the content and services offered by a site. For example, a site designed for parents might have keywords like *parents*, *parenting*, *children*, *baby*, *babies*, *adoption*, *family*, and *marriage*.

Write keyword-filled descriptive text so that the customer's search results include the keywords in context and so that the links from the search engine to the site will make sense to the customer (see Figure D6.3).

**Use <meta> Tags** • Most search engines recognize keyword **<meta> tags**, which are markers in files that indicate to software applications, including search engine crawlers, what a site and page contain. Use keyword <meta> tags on all pages to provide additional keywords not included in

**Figure D6.3**

To help customers scan for the most relevant site, Yahoo!'s search results include each keyword as it is used in context on each site. Including keywords in context is one of the most important strategies for improving site rankings and click-through.



D6.3

(www.yahoo.com, June 16, 2006)

the text, including synonyms, phrases, and language translations. A keyword <meta> tag looks like this:

```
<html>
<head>
  <title>Acme Corporation - Homepage</title>
  <meta name="keywords" content="best widgets available,
    gadgets, electronics, machinery">
</head>
```

Strong content for <meta> tags includes the following:

- Terms that customers use most frequently (found in the log of a site's own search engine requests)
- Main site themes
- Synonyms
- Common misspellings
- Foreign-language translations of keywords if your site's audience is international

**Make Your Site Accessible to Web Crawlers** • People who have impaired vision are some of the best customers of the Internet, and they often use text-only browsers and text-to-speech converters to navigate through Web sites. However, many SITE ACCESSIBILITY (B9) barriers make it difficult for them to enjoy a Web site as much as people with normal vision do.

Interestingly, the same kinds of barriers that stop people with impaired vision also stop Web crawlers. You can address both issues at the same time by making sure that there is always at least one full version of content in a form that people with visual impairments can read. Label pictures clearly with **<alt> text** (text that takes the place of an image that's not being displayed) to explain what a person with normal vision would see. Also be sure to have text versions of multimedia files, such as images, image maps, movie files, sound files, and Flash presentations. Examples of these techniques are given in SITE ACCESSIBILITY (B9).

Finally, be judicious with frames. Many Web crawlers are easily confused by frames, and some crawlers avoid framed pages altogether. Having a PRINTABLE PAGE (D8) version of content helps here.

**Specify in a Robots File the Content That You Don't Want Crawled** • The robots exclusion standard is a convention used by search engines, telling a crawler what it can and cannot crawl. It is a file called *robots.txt* that can

be found off the root of a site. For example, the robots file for *The New York Times* can be found at [nytimes.com/robots.txt](http://nytimes.com/robots.txt).

H2

The robots file is a convenient way of telling crawlers to avoid database-backed pages, pages that are likely to change quickly, pages that require sign-in through SIGN-IN/NEW ACCOUNT (H2), and multimedia files. Do not use the *robots.txt* file to specify the location of confidential information, because anybody can look at this file. For a humorous example, check out [sun.com/robots.txt](http://sun.com/robots.txt).

### Counterproductive Strategies

Writing for search engines is a black art. Most search engines closely guard the secret of their relevance-ranking algorithm because of competition from other search engines and because of deceptive tricks used by some site developers. One such trick is to add popular but nonrepresentative search keywords, such as *sex* and *MP3*, to drive traffic to the site. The logic is that such a Web site will be more likely to appear in search results because so many people search for these keywords, even though the Web site has nothing to do with sex or MP3s. Another trick is to present one set of fake pages for search engines while presenting another for site visitors.

We consider many of these schemes for improving rankings in search engines unethical. Furthermore, the managers who run search engine services are constantly watching out for these kinds of behavior. In fact, some of these strategies may decrease a site's ranking because the search engine algorithms may think that the site is cheating. In February 2006, for example, Google gave the German BMW site a "death penalty," removing all search references to BMW's Web site because of purported cheating by BMW to improve its ranking on Google.<sup>2</sup>

Here's a list of search engine strategies to avoid:

- Repeated keywords
- Keywords that do not describe the content of the site
- Trademarks owned by other sites
- Colored text that is the same color as the background, used to hide words that are not really content on the site or to repeat keywords
- Repeated URL submissions to search engines
- Use of **search engine optimization (SEO)** sites
- Fake pages for search engines

<sup>2</sup> As reported by BBC News ([news.bbc.co.uk/1/hi/technology/4685750.stm](http://news.bbc.co.uk/1/hi/technology/4685750.stm)).

## D6

## WRITING FOR SEARCH ENGINES

Even some nonmalicious design choices may adversely affect search engine ratings. Here are some examples:

- Slow connections that take too long to download pages.
- Pages with the same HTML title.
- Pages with the same content but different URLs.
- A <meta> refresh tag that repeatedly loads a page.
- Use of JavaScript for all navigation. If you use JavaScript for menus and navigation, make sure there are hard links elsewhere on your pages.
- Numerous instances of spam hyperlinks—for example, advertisements posted in your BLOGS (A12) or COMMUNITY CONFERENCES (A3).
- Content hidden in CGI (Common Gateway Interface), Java, or JavaScript.
- Content hidden behind SIGN-IN/NEW ACCOUNT (H2) forms.
- Content hidden within databases, behind SEARCH ACTION MODULES (J1).
- Content from disreputable Internet service providers (ISPs) known to host pornographic Web sites or to send unwanted spam.

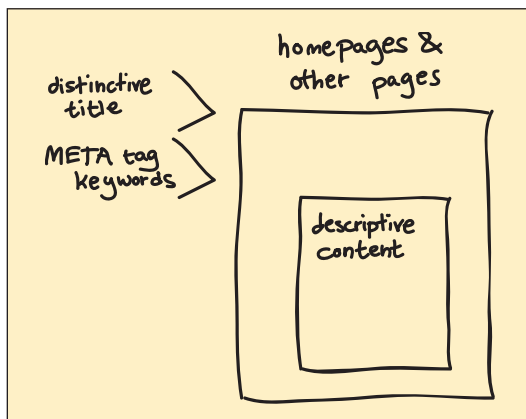
A12 A3

H2

J1

## \* SOLUTION

Begin by writing distinctive HTML titles for every page because they are used as the page title in search results and sometimes search engines rank pages higher if search terms are contained in titles. Use keywords, those you would use most frequently to describe the site's purpose and offering to customers, at the top of each page and in the body of the text. Include descriptive <meta> tags representative of the content contained in each page. Make your site accessible to people with impaired vision because doing so also helps search engines. Avoid rigging the system with bogus keywords and text—an approach that is often counterproductive.



D6.4

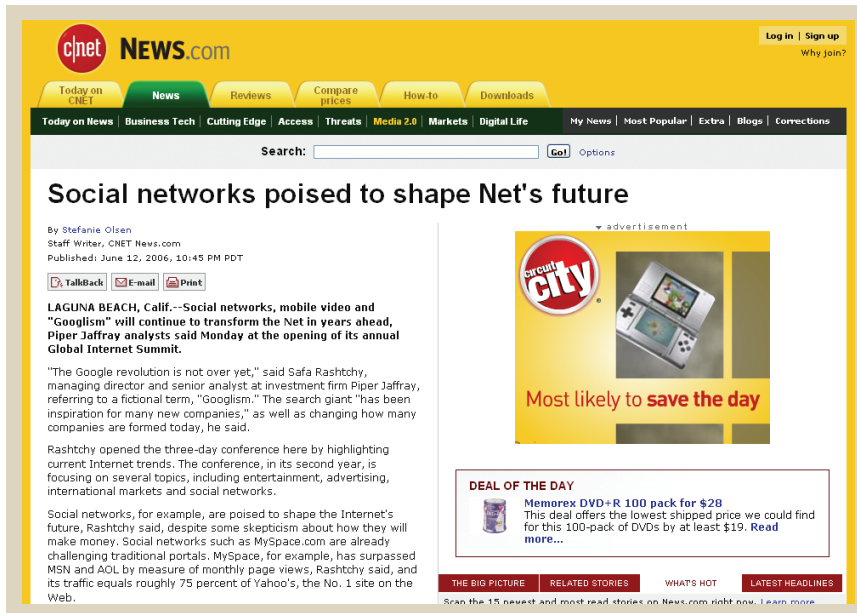
Figure D6.4

Use the page title, keywords, and descriptive text in your Web pages to help ensure high rankings in Web search results.

## \* OTHER PATTERNS TO CONSIDER

- D9** DISTINCTIVE HTML TITLES (D9) are important to search engines because programmers often use HTML titles as the leading description for each search hit in the ORGANIZED SEARCH RESULTS (J3) page, and because they are often favorably weighted if they contain search keywords. If you position the most often used keywords about the category of service that your site provides ABOVE THE FOLD (I2), search engines are sure to include those words. Make your site accessible. SITE ACCESSIBILITY (B9) also helps search engines by making the nontextual content textual, such as by giving images <alt> text descriptions. When these descriptions contain keywords, they become part of a search engine's index.

## D7 INVERTED-PYRAMID WRITING STYLE



D7.1

(www.news.com.com, June 16, 2006)

Figure D7.1

A concise yet descriptive headline, an engaging blurb, and simple, clear writing make the first paragraphs on the CNET News.com site a prime example of the inverted-pyramid writing style.

### \* BACKGROUND

Whether you write text to accommodate MULTIPLE WAYS TO NAVIGATE (B1), for HIERARCHICAL ORGANIZATION (B3), as BROWSABLE CONTENT (B2), or for better SITE ACCESSIBILITY (B9), there is no escaping the written word on the Web. This pattern forms the core for all site writing.





## \* PROBLEM

**People move about quickly on the Web, skimming for information or keywords. If a site's writing is not quick and easy to grasp, it is usually not read.**

Your customers want Web pages to be fast to download, easy to use, and quick to skim. They don't want to wade through self-promoting propaganda or scroll through pages of text to get to the point. Although customers will be more tolerant if they know of no alternative site, you can't count on their good nature. If a page doesn't deliver, your visitors will be gone in a single click.

Often customers find a lot to read on sites, but all this text can be tedious for people who are skimming or looking for specific pieces of information. To help them, you can employ a common journalistic style called **inverted-pyramid writing**. Newspapers and magazines excel at this style because they know that readers tend to scan and skim until they reach a particular item of interest, and even then they may not read past the headline or first paragraph. This pattern explains how to write in this style.

**Create a Concise but Descriptive Headline** • A descriptive headline tells readers what to expect in the following text. People can read a concise title quickly. As we said in HEADLINES AND BLURBS (D3), you must articulate in the headline why the content is *important* and *unique*. Implicit in the headline is a promise about what the content offers.

The headline is typically a sentence fragment, roughly ten words or less so that it can appear in large type in a small space. A good headline does all of the following:

- It contains keywords, most importantly subject and verb. The best headlines indicate action, such as "Buy or Sell Anything Here."
- It confirms the information that follows in the blurb.
- It does not reveal the whole story, so the reader is compelled to continue.
- If it is news based, it states the most important aspect of the relevant news.
- It is clean, simple, and specific. The headline "Social networks poised to shape Net's future" in Figure D7.1 is a good example.
- It is not a boring label, such as "Blue Slacks."
- It is humorous without annoying or perplexing its readers.

A powerful headline is important for many reasons. When implementing a page, take care to put the title in two places: (1) in the HTML <title> tag, as described in DISTINCTIVE HTML TITLES (D9); and (2) in the body of

the text itself. HTML titles are used by search engines [see WRITING FOR SEARCH ENGINES (D6)], and in favorites, bookmarks, and desktop shortcuts. Also, a descriptive title makes it easy to create a DESCRIPTIVE, LONGER LINK NAME (K9).

D6

K9

**Continue with the Most Important Points in the Blurb or Lead** • If you're writing a short list of blurbs, focus on the point you want to make. Keep your target customer in mind at all times.

It is difficult to write short, succinct blurbs, so write something longer first and edit it down to its essence. If you want your page to show a list of blurbs, place the most important ones ABOVE THE FOLD (I2) so that readers can quickly determine whether they're on the right page. The blurb in Figure D7.1 begins like this: "Social networks, mobile video and 'Googlism' will continue to transform the Net in years ahead."

I2

The term **lead** refers to the first few paragraphs of a story or longer text. It reinforces the headline and entices the visitor to read more (see Figure D7.2). Following the inverted-pyramid style, state the most important idea first and continue to the least important.

**Use Less Text** • Text on computer monitors is harder to read than on paper, so people read less online than they do on paper. This means that online articles must be shorter than those in print (see Figure D7.3). Instructions for using a Web application must be kept especially short to keep reader attention on the navigation items and the other application objects.

**Write Short Sentences and Check Your Work** • Write in a straightforward manner, avoiding complex sentences. Use simpler words and FAMILIAR LANGUAGE (K11) to ensure that readers can understand what you're communicating.

K11

Just like short sentences, short blocks of text are easier to read than long blocks. If you break up long paragraphs into shorter ones, readers can skim more quickly. Finally, to avoid confusion and mistakes, run the text through a spell checker and a grammar checker, and then completely proofread it before publishing. These kinds of errors are the easiest to correct, but they are embarrassing if they actually appear on the site.

**Avoid Hype** • Do not underestimate your customers. They can easily become frustrated and annoyed when presented with self-promoting hype and blatant advertising. By avoiding hype, you raise your site's credibility.

Figure D7.2

The most important paragraph in this news article is at the top and in boldface. The following paragraphs continue the story and draw readers in.

The screenshot shows the CNN.com website interface from February 15, 2002. The main headline is "Canadian skaters get gold; judge suspended" in bold. The article text is as follows:

**SALT LAKE CITY, Utah (CNN) -- Olympic officials Friday awarded a gold medal to the Canadian figure-skating pair who initially won the silver in a hotly contested Monday night performance.**

The Russian skaters who had won the gold in that freestyle pairs competition will keep their medal. And the International Skating Union suspended one of the judges on the panel that scored the performance.

ISU President Ottavio Cinquanta said Friday that the organization had evidence of misconduct involving French figure skating judge Marie-Reine Le Gougne. Cinquanta said the ISU based its decision on a written statement from Le Gougne, but he declined to elaborate.

"We decided to put the two pairs on an equal footing, and we are not going to start doing the calculations of all the different marks that (were) given," Cinquanta said through an interpreter. "We simply asked the IOC to give two gold medals."

The ISU has not determined the length of Le Gougne's suspension, he said.

The dispute stems from a performance in which the Russian team of Elena Berezhnaya and Anton Sikharulidze won the gold over Canadians Jamie Sale and David Pelletier, despite witnesses describing the Canadians' performance as nearly flawless.

Pelletier and Sale said they were pleased with the IOC decision.

"We're happy that justice was done," Pelletier said. "It doesn't take away anything from (the Russian skaters). It was not something against them. It was something against the system."

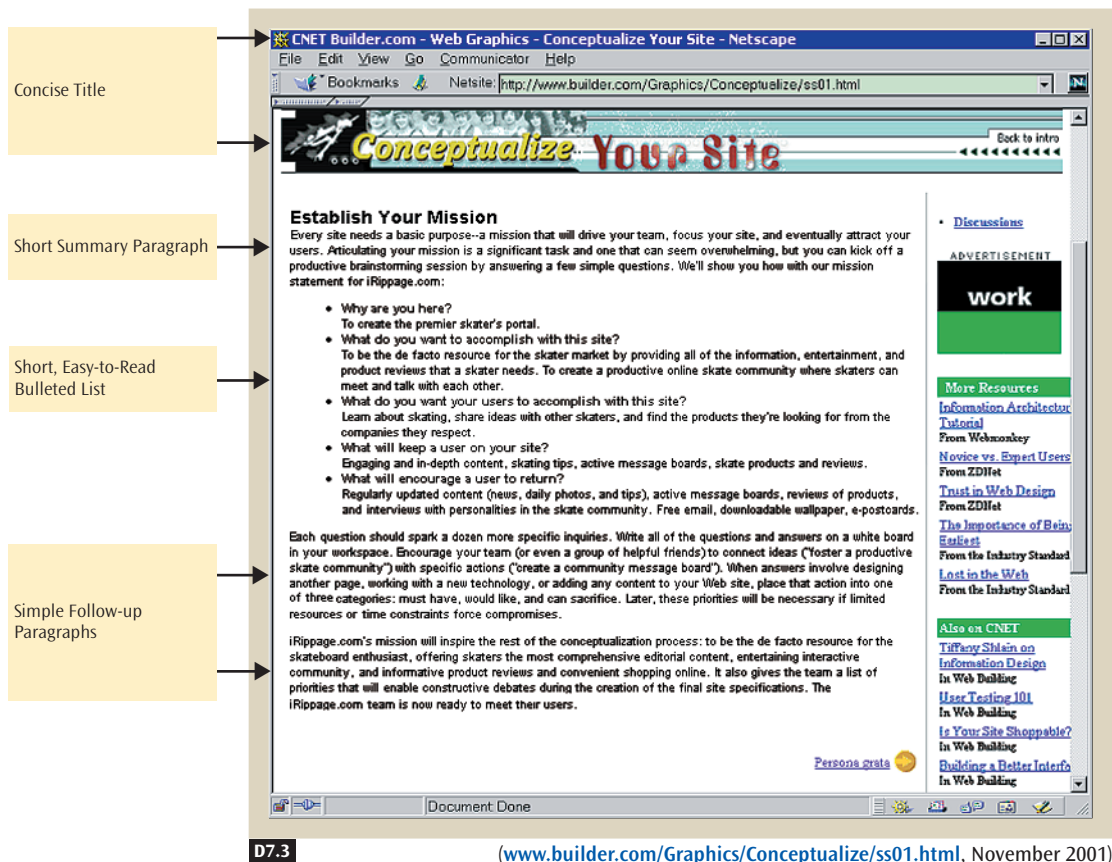
Sale said she and Pelletier were "truly honored" to receive the gold medal, but lamented that the controversy has overshadowed other Olympic events.

The right sidebar contains a "COMPAQ" advertisement and a "2002 Winter Olympics coverage" section with links to "Top Stories" and "Extra Information".

D7.2

(www.cnn.com, February 15, 2002)

## D7 INVERTED-PYRAMID WRITING STYLE



D7.3

(www.builder.com/Graphics/Conceptualize/ss01.html, November 2001)

**Figure D7.3**

Present facts clearly and concisely, without sounding self-promoting. Hype can backfire if you say that your product is the best. Visitors might have found your site in a search engine list, so they can research your competitors' sites as easily as they found yours, just by clicking the **Back** button.

**Use Bullets and Numbered Lists** • Readers appreciate bulleted lists for the following reasons:

- They draw people's attention.
- They are conducive to rapid skimming.
- They highlight information quickly.
- They identify the most important information.

This Web page uses an inverted-pyramid style. It has a concise title, a short summary paragraph, and supporting paragraphs. However, it's not necessary to read the supporting paragraphs to understand what the page is about.

However, follow these guidelines when you use bulleted lists:

- Use them when the order of the items is not important. Use numbered lists if the ordering matters.
- Use HTML bullets, instead of fancy images, to improve download time.
- Apply bullets sparingly, or they will lose their effectiveness.
- Avoid having too many bullets in the list. Seven is usually the most you should have.

**K7 Use Embedded Links** • EMBEDDED LINKS (K7) help visitors find more information about a topic that is mentioned in an article. **Embedded links** are contained in the body of a text (as opposed to being listed at the end of an article; see Figure D7.4 for an example). Embedded links make text easier to skim because people can scan for them, but they may also distract readers.

**Experiment with Different Writing Styles for Entertainment Purposes** • If your Web site centers on fun over usability, figure out how to use humor, but carefully. Stories and humor do not need to be written in the inverted-pyramid style. Tailor your presentation to your specific audience.

**Figure D7.4**

This article from MarketWatch uses an embedded link ([Read the full government report](#)) to give readers immediate access to another article mentioned in the text of this article.

The screenshot shows a MarketWatch article from June 16, 2006. The article is titled "Jobless claims fall to 4-month low of 295,000" and is written by Rex Nutting. The text discusses the decline in new unemployment claims and includes an embedded link: "Read the full government report". The page layout includes a navigation bar with links like "News & Commentary", "Personal Finance", and "My Portfolios". There is also a "RELATED NEWS" section on the right side of the article.

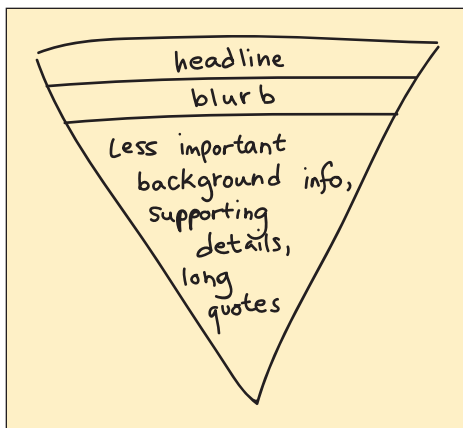
D7.4

([www.marketwatch.com](http://www.marketwatch.com), June 16, 2006)

## D7 INVERTED-PYRAMID WRITING STYLE

### \* SOLUTION

Start with a concise but descriptive headline, and continue with the most important points. Use less text than you would for print, in a simple writing style that uses bullets and numbered lists to call out information. Place embedded links in your text to help visitors find more information about a related topic. Experiment with different writing styles for entertainment purposes.



D7.5

**Figure D7.5**

For inverted pyramids, start with a good title, continue with a few blurbs, and follow up with supporting information.

### \* OTHER PATTERNS TO CONSIDER

Articulate in HEADLINES AND BLURBS (D3) why each page is *important*, *unique*, and *valuable* to visitors. Write DISTINCTIVE HTML TITLES (D9) and integrate them with WRITING FOR SEARCH ENGINES (D6) to improve search engine results. Use FAMILIAR LANGUAGE (K11) that your target visitors will understand. Provide DESCRIPTIVE, LONGER LINK NAMES (K9) for other articles to reference. Place the most important information ABOVE THE FOLD (I2) so that readers can quickly determine whether this is a page they want. Because they're easy to spot, EMBEDDED LINKS (K7) make text easier to skim.

D3

D9

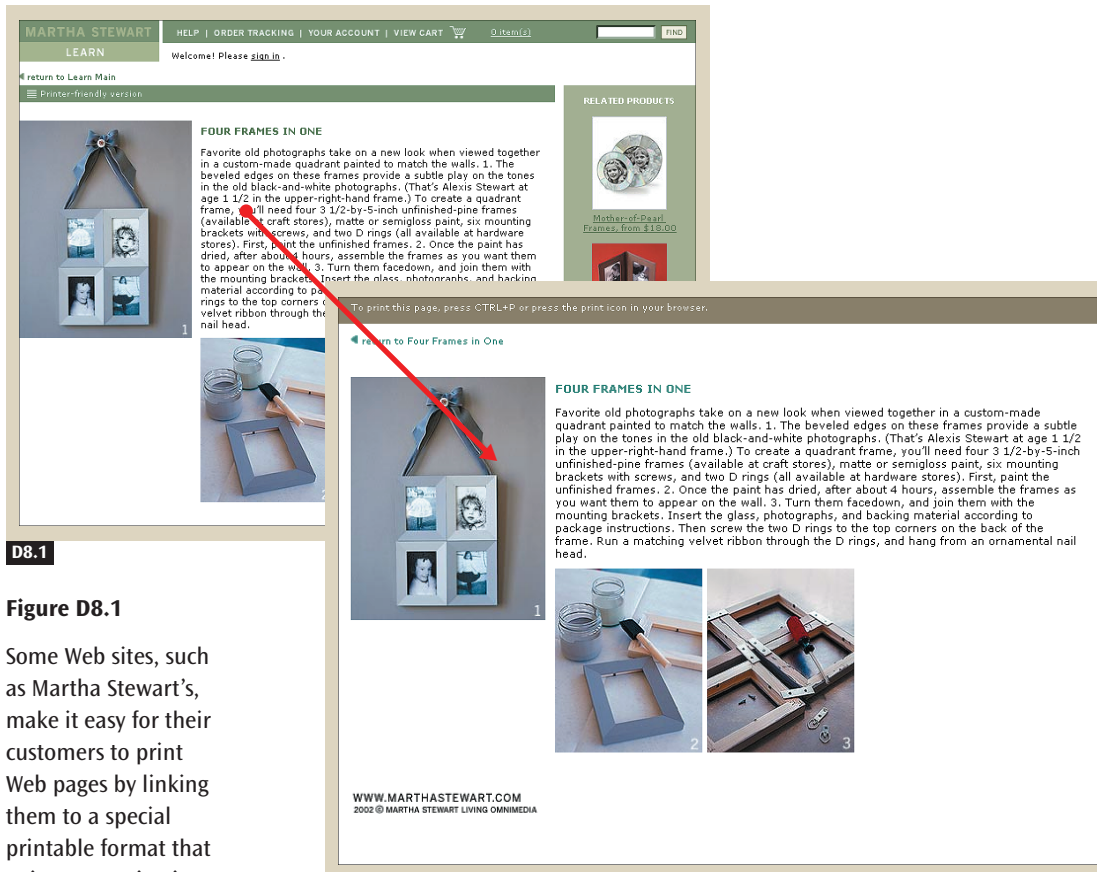
D6

K11

K9

I2

K7

**D8.1****Figure D8.1**

Some Web sites, such as Martha Stewart's, make it easy for their customers to print Web pages by linking them to a special printable format that strips out navigation elements, frames, and advertising, leaving only the logo and the content.

([www.marthastewart.com](http://www.marthastewart.com), February 20, 2002)

## ✳ BACKGROUND



Every site genre has pages that could be useful to print, especially the HOMEPAGE PORTAL (C1), CATEGORY PAGES (B8), CLEAN PRODUCT DETAIL (F2) pages, and ORDER CONFIRMATION AND THANK-YOU (F8) page. This pattern describes how to print any Web page.



## D8 PRINTABLE PAGES

### \* PROBLEM

Sometimes customers want to print what's on their screen. They become frustrated if a printed Web page chops off content, goes on and on with pages of irrelevant data, or does not offer a "printer-friendly" version.

To print a page on a Web site, a customer might hit the **Print** button on the browser and see what comes out. Sometimes the result is too short, with chopped-off key content, such as the last lines of text or important images. Or it might be too long, with pages and pages of irrelevant data. Visitors with advanced knowledge of computers might be able to save the HTML and edit it, or take a screen shot. But novice computer users are more likely to abandon the process, and perhaps abandon the site. This is unfortunate because creating a separate printer-friendly version of most pages is easy.

Modifying any existing page to make a printer-friendly version requires numerous changes that restrict your design options for images and layout. For this reason it's better to create an alternate page with the same content that is more appropriate for printing. You can do this by creating a printer-friendly PAGE TEMPLATE (D1) and then loading the content from the original page into the template.

#### Remove Extraneous Navigation and Content from the Printable Template •

To convert a PAGE TEMPLATE (D1) to a printer-friendly version, remove all frames, CONSISTENT SIDEBARS OF RELATED CONTENT (I6), and side-running NAVIGATION BARS (K2) that run vertically down a page, because these are not very useful in a printed form. STYLE SHEETS (D11) can be used to make this task much easier.

Sometimes articles are split across multiple Web pages, making it difficult to print them in their entirety. For your printer-friendly version, join split-page articles into one page each (see Figure D8.2).

**Add Labels to Help People Find the Article Online Again •** Creating a printer-friendly version of your Web page gives you a chance to pass on useful information to customers. List the title, the author, the date, and the URL of the page. Some Web sites sneak in an advertisement or two here as well.

**Take the Main Content Out of Any HTML Tables •** Tables and GRID LAYOUTS (I1) are one of the main sources of problems in printing. Unless it needs to be formatted as such, make sure that the main content is not placed within a table in the printer-friendly PAGE TEMPLATE (D1).

**Left Panel (Original Page):**

- Header: Yahoo! News, Home, Top Stories, Business, Tech, Politics, World, Local, Entertainment, Sports, Op/Ed, Science, Health, Full Coverage.
- Article Title: **Study: Some Stressors Boost Immune System Function**
- Text: NEW YORK (Reuters Health) - Nobody likes to be stressed out, but new study results suggest that certain types of stress may actually be good for you.
- Text: In their report, Dr. Jos A. Bosch of Ohio State University in Columbus and colleagues distinguish between passive stress and active stress. People experience passive stress when watching a scary movie, while active stress is what an individual feels when they are busy trying to meet a deadline, Bosch explained in an interview with Reuters Health.
- Text: According to the report, published in the September/October issue of the journal Psychophysiology, active stress boosts the immune system, increasing one's ability to fight off infection.
- Text: Bosch's team evaluated 30 male volunteers aged 18 to 34 who were exposed to two different types of stressful situations. In the active stressful event, volunteers were asked to memorize information and take a 12-minute test. For the passive stressful event, the volunteers watched a 12-minute video of "gruesome" surgical procedures.
- Text: During the experiments, each person gave saliva samples that were analyzed for immune system components known as secretory proteins. These proteins help protect the lining of organs such as the lungs and stomach, guarding against the invasion of bacteria and viruses.
- Text: While levels of secretory proteins increased during active stress, the immune response actually dropped during passive stress, Bosch told Reuters Health.
- Text: "Perhaps stress is not the big bad thing everybody is thinking it is--in fact, most acute stressors boost the immune system," Bosch said. "Only when the stress is unusually prolonged or repetitive it becomes a potential threat to health."
- Text: One exception is the body's reaction to acute stressors to which there is no way of responding, except to passively endure. These types of stressors, which people might describe by using the phrase "my heart stopped beating," have a rapid and strong suppressive effect on some aspects of immune function, Bosch explained.
- Text: "I am reluctant to tell the general public things they intuitively already know," he added. "Instead of advising ways of reducing stress I would like them to consider seeking stress: people enjoy and have a natural urge for totally useless and stressful events, such as bungee-jumping, parachuting, and seeking all kinds of thrills and challenges."
- Text: "Such events boost the immune system and may be good to your health," he added.
- SOURCE: Psychophysiology 2001;38:836-846.
- Right Sidebar: Advertisement for "Lose 10 Pounds" with a "Click Here" button.
- Bottom: Search News, Copyright © 2001 Reuters Limited, All rights reserved.

**Right Panel (Printer-Friendly Version):**

- Header: Yahoo! News, Home, Top Stories, Business, Tech, Politics, World, Local, Entertainment, Sports, Science, Health.
- Article Title: **Study: Some Stressors Boost Immune System Function**
- Text: NEW YORK (Reuters Health) - Nobody likes to be stressed out, but new study results suggest that certain types of stress may actually be good for you.
- Text: In their report, Dr. Jos A. Bosch of Ohio State University in Columbus and colleagues distinguish between passive stress and active stress. People experience passive stress when watching a scary movie, while active stress is what an individual feels when they are busy trying to meet a deadline, Bosch explained in an interview with Reuters Health.
- Text: According to the report, published in the September/October issue of the journal Psychophysiology, active stress boosts the immune system, increasing one's ability to fight off infection.
- Text: Bosch's team evaluated 30 male volunteers aged 18 to 34 who were exposed to two different types of stressful situations. In the active stressful event, volunteers were asked to memorize information and take a 12-minute test. For the passive stressful event, the volunteers watched a 12-minute video of "gruesome" surgical procedures.
- Text: During the experiments, each person gave saliva samples that were analyzed for immune system components known as secretory proteins. These proteins help protect the lining of organs such as the lungs and stomach, guarding against the invasion of bacteria and viruses.
- Text: While levels of secretory proteins increased during active stress, the immune response actually dropped during passive stress, Bosch told Reuters Health.
- Text: "Perhaps stress is not the big bad thing everybody is thinking it is--in fact, most acute stressors boost the immune system," Bosch said. "Only when the stress is unusually prolonged or repetitive it becomes a potential threat to health."
- Text: One exception is the body's reaction to acute stressors to which there is no way of responding, except to passively endure. These types of stressors, which people might describe by using the phrase "my heart stopped beating," have a rapid and strong suppressive effect on some aspects of immune function, Bosch explained.
- Text: "I am reluctant to tell the general public things they intuitively already know," he added. "Instead of advising ways of reducing stress I would like them to consider seeking stress: people enjoy and have a natural urge for totally useless and stressful events, such as bungee-jumping, parachuting, and seeking all kinds of thrills and challenges."
- Text: "Such events boost the immune system and may be good to your health," he added.
- SOURCE: Psychophysiology 2001;38:836-846.
- Bottom: Search, Copyright © 2001 Reuters Limited, All rights reserved.

D8.2

(www.yahoo.com, November 6, 2001)

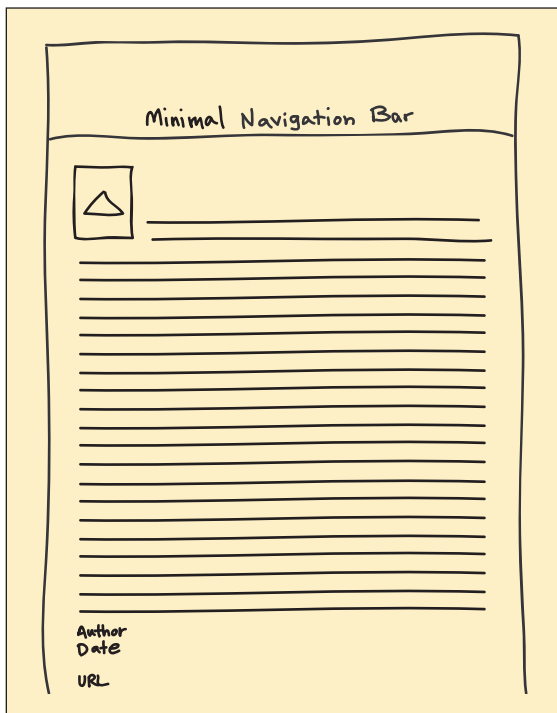
Figure D8.2

The printer-friendly version of Yahoo! News (right) is formatted in a single column and omits the sidebar of related content at the bottom of the page.

## D8 PRINTABLE PAGES

### \* SOLUTION

Create a printer-friendly page template by using a style sheet that removes frames, additional columns, navigation bars, and sidebars. Join content split across multiple pages, and label the printable page with the page title, author, and URL. Finally, be sure that the main content is not placed within an HTML table, because tables can cause serious printing problems.



D8.3

**Figure D8.3**

To make your pages more printable, simplify them by removing extraneous columns and navigation and by combining content split across multiple pages.

### \* OTHER PATTERNS TO CONSIDER

Create a printer-friendly page template by removing frames, CONSISTENT SIDEBARS OF RELATED CONTENT (I6), and NAVIGATION BARS (K2) that run next to the content going down a page. If the HTML in your Web pages is structured well, printable pages can be easily created with STYLE SHEETS (D11).

Creating printable versions of your content can help with SITE ACCESSIBILITY (B9), as well as with WRITING FOR SEARCH ENGINES (D6).

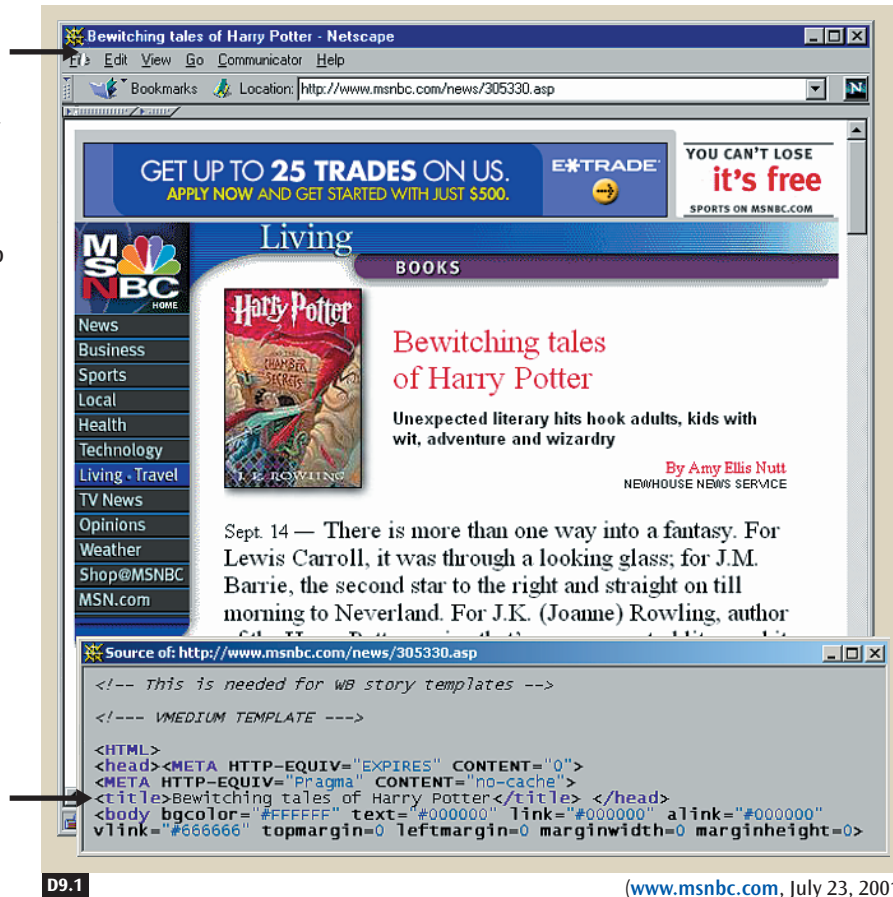
I6 K2

D11

B9 D6

DISTINCTIVE HTML TITLES **D9****Figure D9.1**

In this screen shot of an MSNBC article about a Harry Potter book, note the exceptional title in the Web browser window title bar (top arrow). The bottom window shows how to create the HTML title (bottom arrow). You need good, distinctive HTML titles for bookmarks and favorites, shortcuts, search engines, and mobile Internet devices.

**D9.1**

(www.msnbc.com, July 23, 2001)

## \* BACKGROUND

**D3 D6** In HEADLINES AND BLURBS (D3), WRITING FOR SEARCH ENGINES (D6), and  
**D7** INVERTED-PYRAMID WRITING STYLE (D7) we maintained that well-written HTML titles add to a site's value. This pattern provides the foundation of a distinctive HTML title.

## \* PROBLEM

**HTML page titles are used as browser bookmarks or favorites and as desktop shortcuts. They are also used by search engines when displaying search results. Often, however, page titles do not provide useful clues to page contents.**

Word-processing documents and spreadsheets with ambiguous file names are confusing. People are forced to open up documents with names like *foo.doc* and *misc-calculations.xls* just to see what they actually contain, and they are justifiably annoyed if there are dozens of poorly named files.

The same is true for Web pages. Customers need to remember the content of a page, whether on or off the Web. HTML titles are used as the default names for Web pages if they are saved to a local drive or stored as bookmarks or favorites in the Web browser. In addition, some search engines use HTML titles to index site pages and present search results. In this case, people use the HTML title to make an educated guess about whether this is the page they want. However, vague titles make it difficult for people to distinguish one Web page from another. You can address all of these issues at once by writing distinctive HTML titles.

**HTML Titles Are Used for Headlines and Blurbs** • The key here is to understand how HTML titles are seen by customers. Figure D9.1 shows how such titles are displayed by Web browsers. It also demonstrates that good headlines are resources for well-written HTML titles. Figure D9.2 shows that an HTML title can be reused as the name of a link to a page. See HEADLINES AND BLURBS (D3) for hints on writing good headlines that are also good HTML titles.

**HTML Titles Are Used by Search Engines** • Search engines use HTML titles when presenting ORGANIZED SEARCH RESULTS (J3). Figure D9.3 shows the results of MSNBC's site search. The first hit looks like an automatically generated title, which is not very useful when customers are trying to understand the search results. The fourth search hit, however, uses the HTML title to display the name of the page. Figure D9.4 shows what the same search result looks like in an Internet-wide search engine.

**HTML Titles Are Used by Desktop Computers** • HTML titles are also used as desktop shortcuts (see Figure D9.5), as well as bookmarks and favorites in Web browsers (see Figure D9.6).

Figure D9.2

These headlines and blurbs come from an MSNBC page.

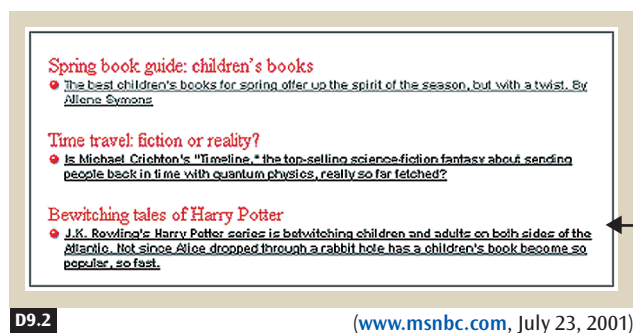


Figure D9.3

This result comes from an MSNBC search on the term *Harry Potter*.

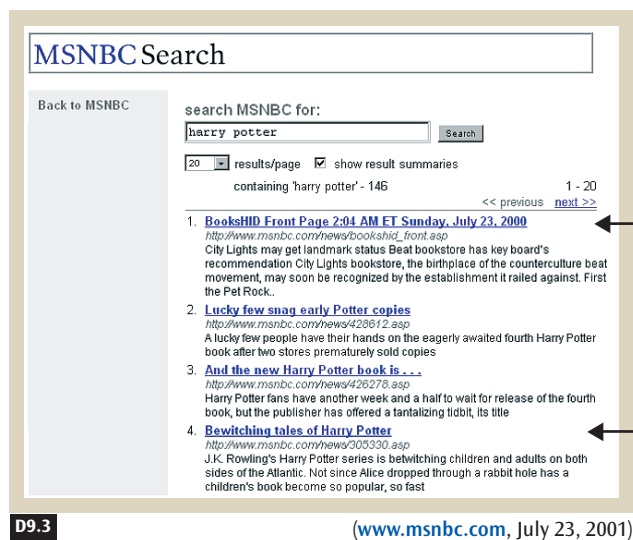


Figure D9.4

This sample result from Google, based on a search for the term *Harry Potter*, uses the HTML title of the page as the name of the hit.

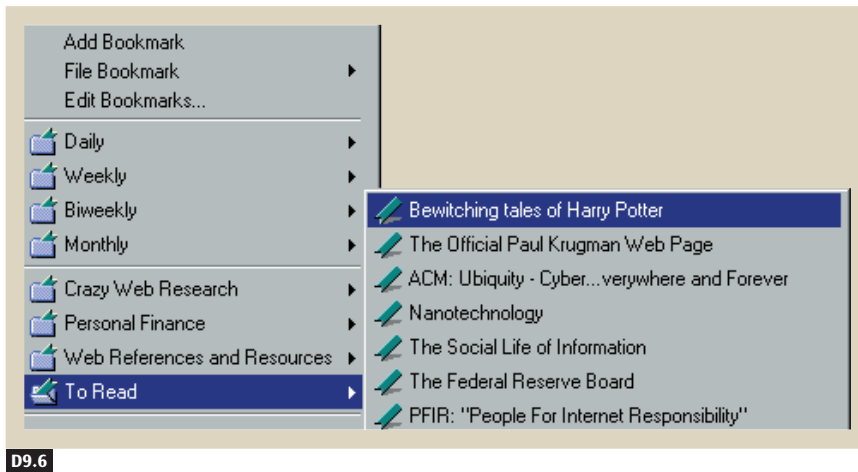


## D9 DISTINCTIVE HTML TITLES



**Figure D9.5**

Desktop shortcuts use HTML titles as names.



**Figure D9.6**

Web browsers use HTML titles as the names of bookmarks.

Distinctive HTML titles make it easier for customers to find the right page. They also provide useful link names that can be used on other pages. A poorly chosen title—or worse yet, no title—can be confusing, and it looks unprofessional. Figure D9.7 shows some examples of bad HTML titles.

**Vary Titles from Page to Page** • It would be easy to make all the titles on a site the same, but then visitors would not know which page to choose, or which page they were on. You might do this accidentally if you use a PAGE TEMPLATE (D1) and forget to change the title for each page.

D1

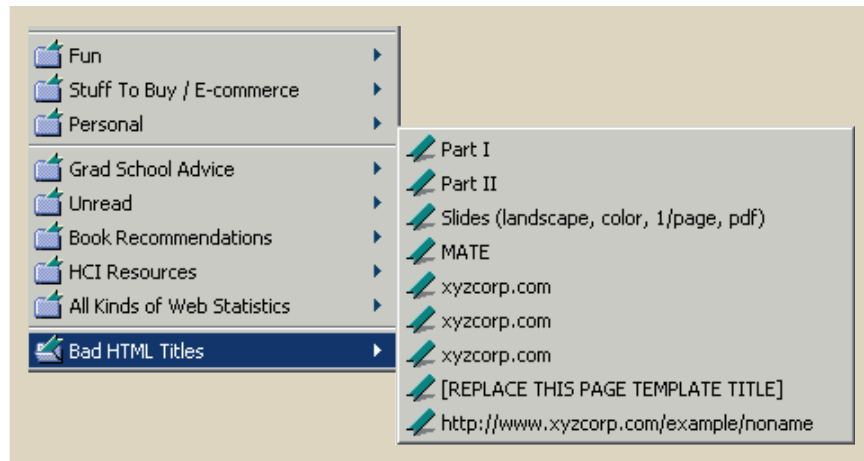
**Use Titles and Bread Crumbs** • When you add a new page to your site, you need to write a new title. Using a system similar to LOCATION BREAD CRUMBS (K6), base the title of the page on the path that a customer would

K6



**Figure D9.7**

These examples illustrate bad HTML titles. Titles like “Part I” and “Part II” are vague. One bookmark, for the fictional Web site xyzcorp.com, is listed three times because all of the page titles on its site are the same. The last bookmark, the URL, is listed that way because the page has no HTML title.



take to get there. A path-based title helps customers locate the page again later, while providing some important context about the page.

CNN takes an approach like this on its site, by using its Web site name, the article type, the article name, and the date to title its Web pages. Here are two page title samples:

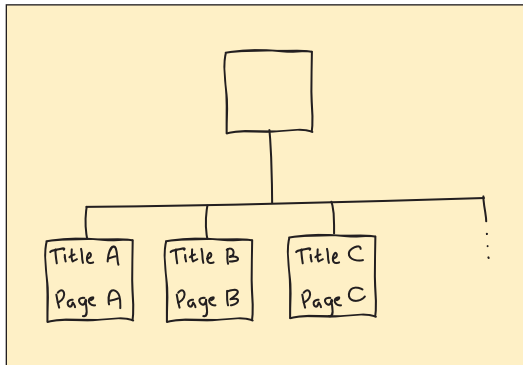
- CNN.com—Technology—Study Retail sites fall short on customer service—December 13 2000
- Technology—Global Web sites prove challenging—August 22 2000

CNET uses a similar approach, with titles such as the following:

- CNET.com—News—E-Business—How to build that elusive customer loyalty
- CNET Builder.com—Web Graphics—Conceptualize Your Site

## \* SOLUTION

Create distinct names for each page, even if the pages are generated from page templates. Consider using the site’s organizational hierarchy as the basis for titles that describe the categories and subcategories of each page.

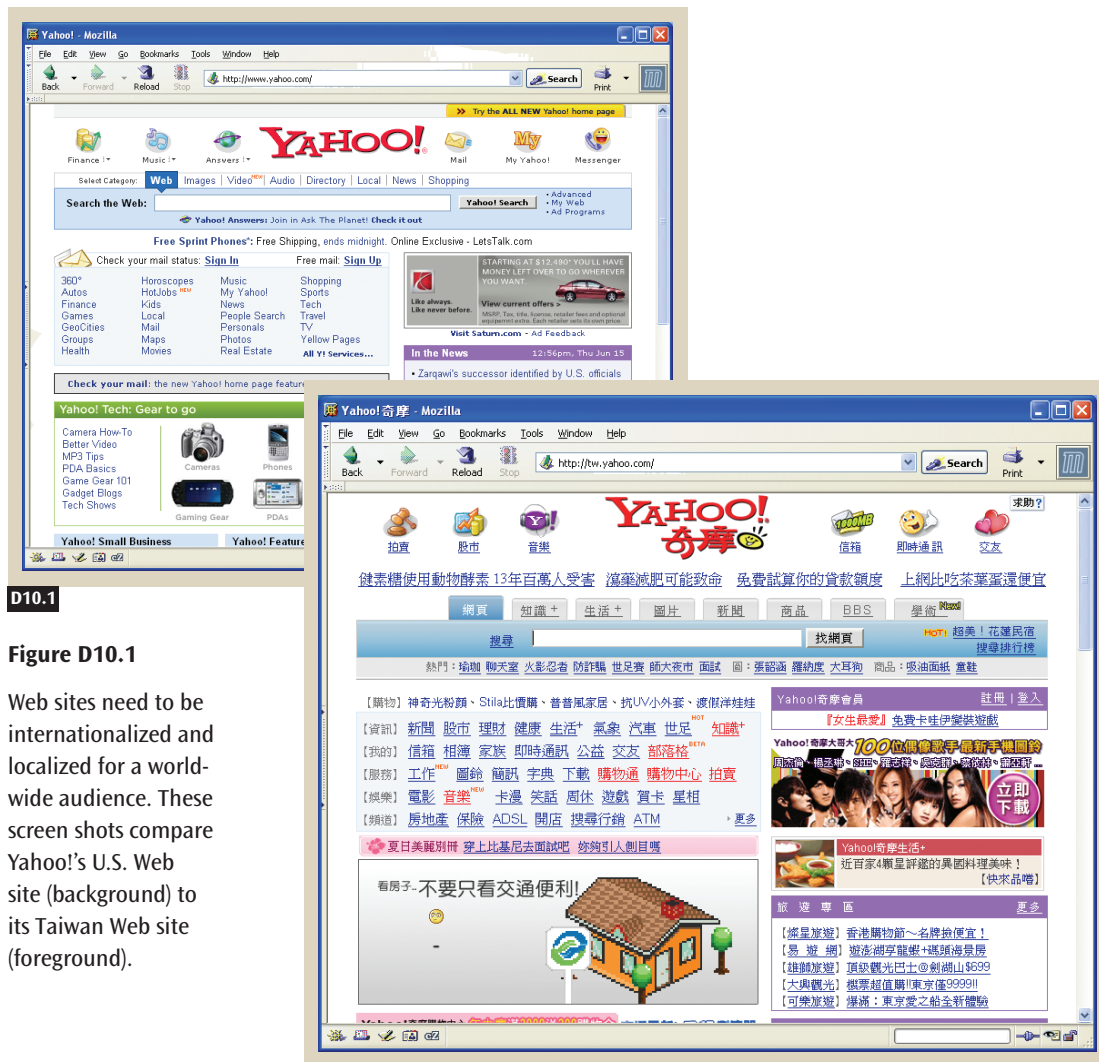
**D9** DISTINCTIVE HTML TITLES**D9.8****Figure D9.8**

Use a different name for each page on your site.

**\* OTHER PATTERNS TO CONSIDER**

The titles of pages can be the same as the paths created for LOCATION BREAD CRUMBS (K6). It is easier to create an ORGANIZED SEARCH RESULTS (J3) page if each Web page has a distinctive HTML title because titles are displayed as the name for each page. A distinctive HTML title also makes it easier to create DESCRIPTIVE, LONGER LINK NAMES (K9) to a page because the title of the page can often be used as the link itself. Having good HTML titles also improves SITE ACCESSIBILITY (B9) for people using mobile Internet devices to access your Web site.

**K6 J3****K9****B9**

INTERNATIONALIZED AND LOCALIZED CONTENT **D10****D10.1****Figure D10.1**

Web sites need to be internationalized and localized for a world-wide audience. These screen shots compare Yahoo!'s U.S. Web site (background) to its Taiwan Web site (foreground).

([www.yahoo.com](http://www.yahoo.com) and [tw.yahoo.com](http://tw.yahoo.com), June 16, 2006)

## ✳ BACKGROUND

All site genres can be created for an international audience. This pattern provides the foundation for building sites that are localized to different audiences around the world.

## D10 INTERNATIONALIZED AND LOCALIZED CONTENT

### \* PROBLEM

The Web is a global medium, but many sites do nothing for international and nonnative audiences. People from all over the world can visit a site, but they will find the experience frustrating if language, cultural, and economic transactional issues are not handled well.

Internationalization and localization are becoming increasingly important factors as more Web sites cross national borders.<sup>3</sup> Internationalization and localization range from simple issues, such as how information like a phone number is represented, to extremely complex issues, such as political and religious beliefs. **Internationalization** refers to the software changes required to support different languages, dates and times, currencies, weights and measures, and number formats. **Localization** is the process of redesigning the user interface and translating content to support a local culture.

The best solution calls for designing internationalization into a site during initial site design, and then localizing for specific audiences on the basis of need. Because most sites are not originally designed with a global audience in mind, it is often difficult to localize them when the time comes.

**Store Strings Separately from Code** • A Web site's flexibility for localization depends on how well the underlying code is designed to support internationalization. For easier translation and a simpler process when text changes are necessary, store strings of text as separate resources from site code. A modular approach to page layout allows for flexibility and substitution of elements. Many commercial localization tools exist to help manage the external assets for sites. However, you must decide how you intend to manage locale-specific assets internally.

**Do Not Rely Exclusively on Machine Translation** • Although software programs for translating from one language to another have come a long way in recent years, a lot of research still needs to be done before text can be automatically translated in a meaningful way. Computers simply do not understand context.<sup>4</sup> For example, if you use the word *cook* as a navigation element in your Web site, which form of the word do you mean? Do you mean the verb *to cook*, the noun *cook* (as in *chef*), or someone who

<sup>3</sup> Note that the terms *internationalization* and *localization* are often abbreviated *I18N* and *L10N*, respectively, because of the large number of letters in each word.

<sup>4</sup> A researcher at Microsoft once commented that computers are idiots—just really fast idiots.

has the name *Cook*, as in *Captain Cook*? A machine will translate the word only one way, and that may not be the way it was intended. Without an experienced human translator distinguishing the many meanings of various words, the result will be a shoddy translation.

**Hire Competent Translators** • The common adage “you get what you pay for” holds true for translators. Although most translators have the best intentions, if they do not devote significant time during translation to understanding the specific needs and cultural differences of your customers, as well as the specific requirements of your particular domain and application, they may make embarrassing mistakes. No one wants to appear amateurish with poor word choices, bad grammar, or nonsense statements.

**Choose Centralized or Decentralized Localization Management** • There is much to be said for both approaches. *Centralized* localization management provides translation services to the entire site team but does not usually have the domain expertise of each of the areas. *Decentralized* localization management takes advantage of domain expertise spread throughout the organization, but it lacks the localization organization to help manage the process most effectively. It is also more difficult to achieve consistency with decentralized teams because they may not know what other teams around the world are doing. Evaluate the capabilities of the organization’s resources and financial investment to decide what approach works best. In many cases, a hybrid approach, using some aspects of centralized management together with local expertise, is the best solution.

**Be Aware of Terms and Concepts That May Not Be Widely Known** • Terms like *IRS* and *MLB* may be familiar to people in the United States, but they are not as recognizable in other nations. In fact, most acronyms, except the most international ones, such as *SCUBA*, will not be known. Things like government agencies, government policies, and local laws and practices often have different names and responsibilities in other countries. Consider whether more universal concepts can convey the same point.

**Recognize Holidays, Customs, and Nonverbal Communication** • Because not every holiday in one country is a holiday abroad, you will need staff for vital services like customer support on holidays or staff who reside in the regions that you support.

Another important localization issue to be aware of is color. For example, whereas black is the color of mourning in western countries, white is the color of mourning in China and Taiwan. Colors, images, and icons that

**D10** INTERNATIONALIZED AND LOCALIZED CONTENT

have one meaning in one cultural context may be offensive in another. Take the time to understand the value of specific color choices and icons. In some cases those colors and icons contribute a great deal to brand identity and add a local feel. There is a fine balance between global structure and local appeal.

### **Transform Your Representation of Dates, Currencies, Weights, and Measures •**

A great deal of confusion can arise if special care is not taken here. For example, the date format 1/3/01 can mean either March 1, 2001, or January 3, 2001, depending on whether dates are represented as day/month/year or month/day/year. In cases like this, it is better to spell out the name of the month so that there is no room for ambiguity.

Time zones add more complexity to sites if you're executing time-sensitive functions and updates. Most contact databases do not track the time zone of the resident. If a site allows people to schedule appointments with someone in another time zone, the invitation should account for both participants' time zones.

Currencies represent a unique challenge. In the simplest case, a site must support the representation of the local currency. In more complex cases, when you're selling across national borders, your site must handle representation of the currency and the exchange rate fluctuation.

Table D10.1 lists the types of information that must be represented differently in different locales.

Type of Information	Global Format Examples
Number	100,000.00 or 100.000,00
Date	March 3, 2005, or 3 Mar 2005
Time	6:04 PM, 18:04, or 18.04
Time zone	GMT -08:00 or FMT +02:00
Currency	\$1, ¥1, £1, €1, or ₣1
Unit of measure	lb or kg
Phone number	(415) 555-1212 or 098-88-1234
Address	two lines or four lines
Postal code	90210 or BYT 123
Punctuation	Hello?, ¿Hola?, "Hello," or <<Hallo>>

**Table D10.1**

Information That  
Must Be Represented  
Differently in  
Different Locales

**Prepare for the Varying Devices That People Use to Surf Web Sites** • In many countries, mobile devices for accessing the Internet are very popular—sometimes more popular than desktop computers. You might need to make your site accessible from mobile devices as they become popular in new locales. Pay attention to **MOBILE SCREEN SIZING (M1)** and using the appropriate **MOBILE INPUT CONTROLS (M2)** to make your content remain valuable on these devices. The page description format for mobile devices also varies from region to region. Where one country might have mostly WAP (Wireless Application Protocol) devices, another country might use mostly HDML (Handheld Device Markup Language). In addition, instant-messaging protocols are sometimes popular. You might need gateways to these protocols to enhance your site's value in local markets. Some of the issues involved in designing for mobile devices are discussed in more detail in **SITE ACCESSIBILITY (B9)**.

**Understand the Local Legal Issues** • Legal issues may become important when customers start accessing your site from abroad. If your site sells products, foreign trade laws and customs might apply. These factors can affect what you can sell, what you can send, when it is sent, and how long it will take to get there. Tax laws change from country to country as well, and when products are sold overseas, international sales tax may also apply.

Your site may also need to support different privacy laws and offer more **ACCOUNT MANAGEMENT (H4)** tools to manage customer profiles. For example, the privacy laws in the European Union are more comprehensive than those in the United States, stating that, where reasonable, individuals must be able to access and manage all information stored about them. Privacy issues are discussed in depth in **FAIR INFORMATION PRACTICES (E3)**, **PRIVACY POLICY (E4)**, and **PRIVACY PREFERENCES (E8)**.

Finally, there may be issues with the legality of content. Some countries restrict content that might be on your site. For example, France restricts the sale of any Nazi-related material within its borders. Research each country before opening for business, and avoid having to remove content. If you're starting an auction site, for instance, these restrictions can be important to how you structure your service to make sure postings comply with the local laws.

**Provide Tailored Services** • Translation is not always enough; sometimes you must personalize a service to the desires and tastes of your audience. What are the local food preferences? What do customers there do for fun? How many times a week do your customers go shopping? These questions

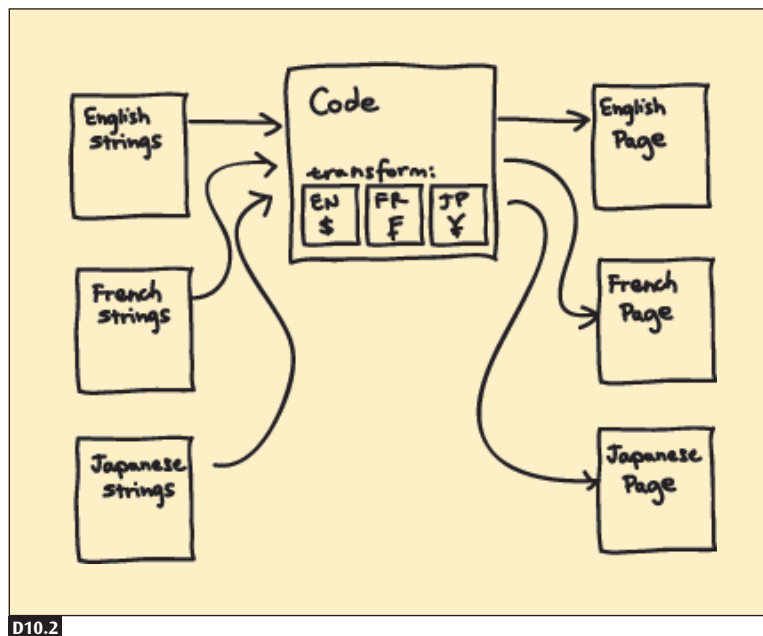


**D10** INTERNATIONALIZED AND LOCALIZED CONTENT

might have different answers, depending on where customers live. Do the research to find out. Online marketing and usability research can help, providing concrete answers without the expense and time of travel [for more information about how to do this, see Appendix E (Online Research)].

**\* SOLUTION**

Store strings separately from code so that text can be sent to your translation team easily. Do not rely on machine translation. Hire competent translators. Manage internationalization and localization processes through either a centralized or a decentralized system. Understand that certain local terms and concepts may not be widely known, and that holidays, customs, and nonverbal communication in other cultures can affect a site's design and staffing. Transform how you represent certain information, such as dates and currencies. Be aware of the devices that people use to surf Web sites because mobile customers may be a large audience for your services. Understand which legal issues might affect your business. Consider providing tailored services to locales that do not have the same practices as those you're addressing domestically.

**D10.2****Figure D10.2**

Store strings for different languages in separate files.

## \* OTHER PATTERNS TO CONSIDER

Local representations of dates, times, currencies, taxes, addresses, and shipping requirements should be reflected in the site's SHOPPING CART (F3) and QUICK-FLOW CHECKOUT (F1). Certain countries may have stricter privacy laws, which should be reflected in the site's FAIR INFORMATION PRACTICES (E3) and PRIVACY POLICY (E4).

## D11 STYLE SHEETS



D11.1a

(www.nytimes.com, May 6, 2006)

Figure D11.1

The New York Times uses a style sheet called *global.css* for displaying pages on a desktop screen (a), and one called *print.css* for displaying pages for a printer (b).

**Figure D11.1***(Continued)***D11.1b**[www.nytimes.com](http://www.nytimes.com), May 6, 2006)

## \* BACKGROUND

**A1 A12**

On every site, from PERSONAL E-COMMERCE (A1) sites to BLOGS (A12), style sheets can simplify changes, and make pages more accessible.

## D11 STYLE SHEETS

## \* PROBLEM

**Page-by-page update of a site design—including layout, colors, and fonts—is a time-consuming and error-prone process.**

As customers visit your site, you can learn something about what they like and what they don't like in terms of content and look and feel. You can also learn what works and what doesn't work in terms of navigation. You might glean this feedback from informal conversations with customers, from server logs indicating that people don't click on certain links, or from more formal usability and market research. But once you have some information about what could be improved, fixing it on your site can be daunting unless you've planned ahead.

If you have a design problem to fix on all your pages, it will be hard to justify the changes if you must edit every page. It takes time to open, edit, and save every file; then test every file; and possibly open and edit the file again if you find more problems. Only when you have severe problems might you decide to change the look and feel of your entire site, changing the color scheme, updating the page layout, and rearranging where different kinds of navigation and content appear on your pages. One reason such wholesale change can be difficult is that HTML pages mix content with presentation. That is, Web pages contain information about what content should be shown to visitors, as well as markup that describes *how* that content should be shown.

You can avoid the problem of mixed content and presentation and make it easy to modify the presentation of all of your Web pages by using **Cascading Style Sheets (CSS)**. Figure D11.2 shows one way you might structure your HTML without CSS.

Although it is not difficult to make changes to HTML structured without CSS, such changes become problematic if you have to make them for

```
<html>
  <h2 align="center">
    <font color="green" size="+4" face="Times New Roman, serif">
      <em>Example</em>
    </font>
  </h2>
</html>
```

D11.2

**Figure D11.2**

One way of creating a Web page is to mix content and presentation. Here the content is the word *Example*, and the presentation is all of the markup specifying alignment, font, color, and size.

entire sections of a Web site. *CSS offers a way of separating presentation from content.* With CSS, you specify all of your content in standard HTML files, and specify how that content should be displayed in a CSS file. Here's how the example in Figure D11.2 would be simplified by using CSS. In one file, you would have the content (Figure D11.3). In a separate CSS file, in this case named *example.css*, you would specify how various markup should be shown on the screen (Figure D11.4).

CSS offers flexible and powerful control over the layout and appearance of Web pages. In fact, whole books and Web sites are devoted to CSS, detailing all the minutiae so that you can have a pixel-perfect site. See the Resources section for references to good Web sites and books on CSS. Our goal with this pattern, however, is to focus on how CSS fits into the bigger picture of Web site design and how it influences the usability of your site. In the paragraphs that follow, we will discuss some other advantages to using CSS, as well as some site-level design issues that you will face if you're using CSS.

**Figure D11.3**

Another way of creating a Web page is to separate content from presentation. In this HTML file, only the content is specified. A separate style sheet (see Figure D11.4) contains all the information about presentation.

**Define a Standard Style Sheet as Part of Your Sitewide Page Template •** Style sheets can be used as part of your **PAGE TEMPLATES (D1)** to create flexible and attractive Web pages. You might define one default style sheet that all Web pages on your site will use—one that defines the basic look and feel of your site. Some areas where style sheets can help include creating

```
<html>
  <head>
    <link rel="stylesheet" href="example.css" type="text/css" />
  </head>
  <h2>Example</h2>
</html>
```

**D11.3**

**Figure D11.4**

This is an example of a Cascading Style Sheet. CSS makes it easy to update the look—layout, color, fonts—and feel of your Web site.

```
h2 {
  text-align: center;
  color: green;
  font: italic large "Times New Roman", serif;
}
```

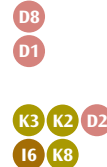
**D11.4**

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flexible GRID LAYOUTS (I1), NAVIGATION BARS (K2), TAB ROWS (K3), and OBVIOUS LINKS (K10). You can also use style sheets to specify background images, as well as the color schemes for individual CONTENT MODULES (D2).



**Define a Separate Style Sheet for Printable Pages** • It's a good idea to have a separate style sheet for creating PRINTABLE PAGES (D8). This style sheet can be a much simpler version of your PAGE TEMPLATE (D1) style sheet because printed Web pages will not display navigation elements such as TAB ROWS (K3) and NAVIGATION BARS (K2), extra CONTENT MODULES (D2) such as CONSISTENT SIDEBARS OF RELATED CONTENT (I6) or EXTERNAL LINKS (K8), or advertising. Figure D11.1 shows how the same content can be displayed in two different ways, one for the screen and one for printing.



**Define a Separate Style Sheet for Mobile Content and Mobile Input** • Creating a separate style sheet for mobile content and input can make it easy to adapt your site for MOBILE SCREEN SIZING (M1). Figure D11.5 shows how the same page appears on a standard computer screen and on a small screen. To reduce the amount of content on a page, you will need to reevaluate your PAGE TEMPLATE (D1) style sheet and probably remove some CONTENT MODULES (D2), such as CONSISTENT SIDEBARS OF RELATED CONTENT (I6), as well as advertising. Because MOBILE INPUT CONTROLS (M2) are not fluid cursor controls, we recommend moving essential navigation elements, such as NAVIGATION BARS (K2), to the very top of the page, perhaps reducing their size as well. For more information on creating mobile CSS, go to [w3.org/TR/css-mobile](http://w3.org/TR/css-mobile).



**Use Style Sheets to Make Your Site More Accessible** • Style sheets are an effective way of improving SITE ACCESSIBILITY (B9) for people with visual impairments. Before style sheets were introduced, the visually impaired had to wade through some of the markup in a Web page, including formatting and layout information that was often meaningless to them. HTML tables and the <blockquote> tags were also commonly abused to achieve a desired layout, but these workarounds only made things worse for the visually impaired.



Style sheets can also make things easier for people with poor eyesight. Custom style sheets can be specified in the Web browser by the customer, and they are cascaded (combined) with any style sheets that you've defined for your Web pages. This makes it easier for people with visual impairments to control things like font size, background, and contrast.



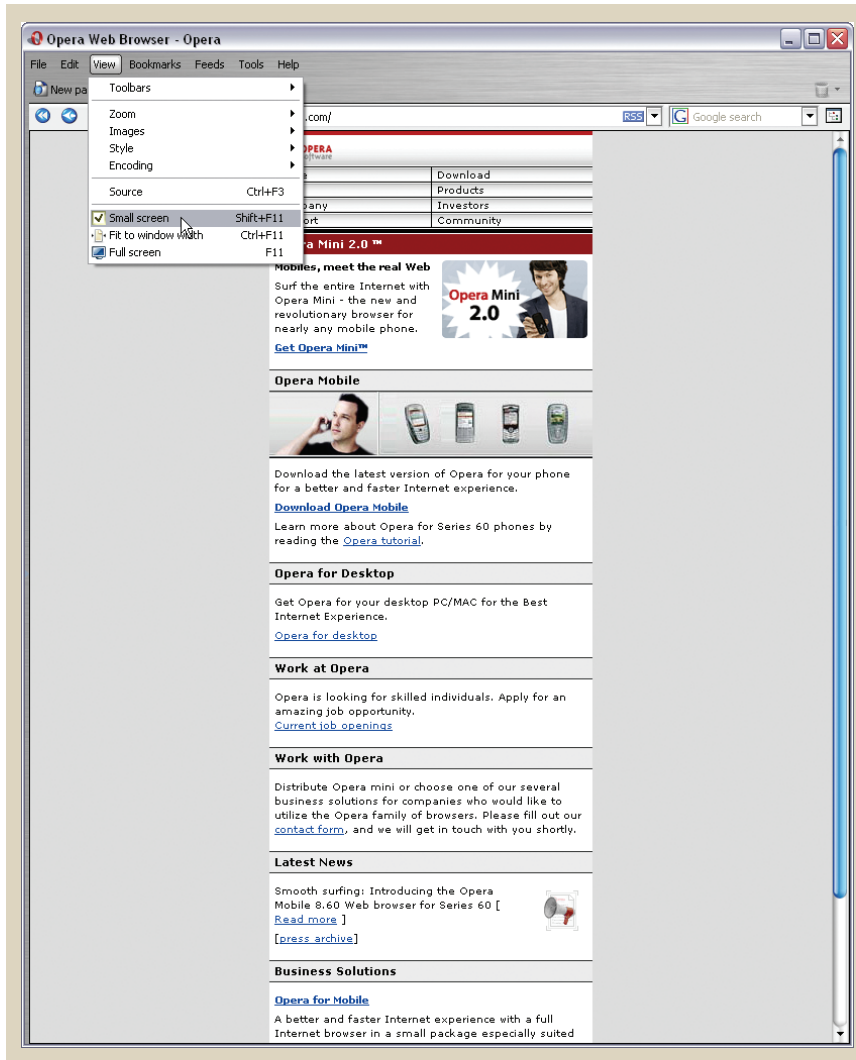
**Figure D11.5**

The Opera desktop browser makes it easy to see what your pages will look like on a small screen. A **Small Screen** setting transforms the desktop version (a) into one that works on mobile devices (b). In the small-screen version, notice that the navigation options stack, the large graphic at the top disappears, and the two-column format becomes a single column.

**D11.5a**

There are several things you can do with respect to style sheets that will improve the accessibility of your site. The first is to use HTML tags and style sheets instead of images where possible, because screen readers can more easily process normal HTML markup than images. The second is to ensure that all information conveyed with color is also available without color—for example, through context or markup. The third is to

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D11.5b

Figure D11.5

(Continued)

use style sheets to control all aspects of layout, rather than transparent images, tables, or the <blockquote> tag.

In addition, a special workaround allows you to improve the Web experience for visitors who are visually impaired. In CSS, HTML pages are often divided into separate sections by a <div> tag. For example, one <div> tag might specify the navigation on your Web page, and another might specify

the content. What's important here is that most screen readers read out this content in the order that it's specified in your HTML pages rather than in the way it appears on screen. Therefore, if the <div> tag containing navigation comes before the <div> tag containing content, visitors who are visually impaired will hear all of the navigation information first. The workaround is to put <div> tags containing content at the top of the HTML files so that they don't affect the actual appearance of your Web pages but they improve the usability of your Web pages for customers who are visually impaired.

Much of Web accessibility is a work in progress. A good source for keeping up-to-date on how to use HTML and CSS to improve accessibility is the World Wide Web Consortium's (W3C) Web Accessibility Initiative (WAI), available at [w3.org/WAI](http://w3.org/WAI).

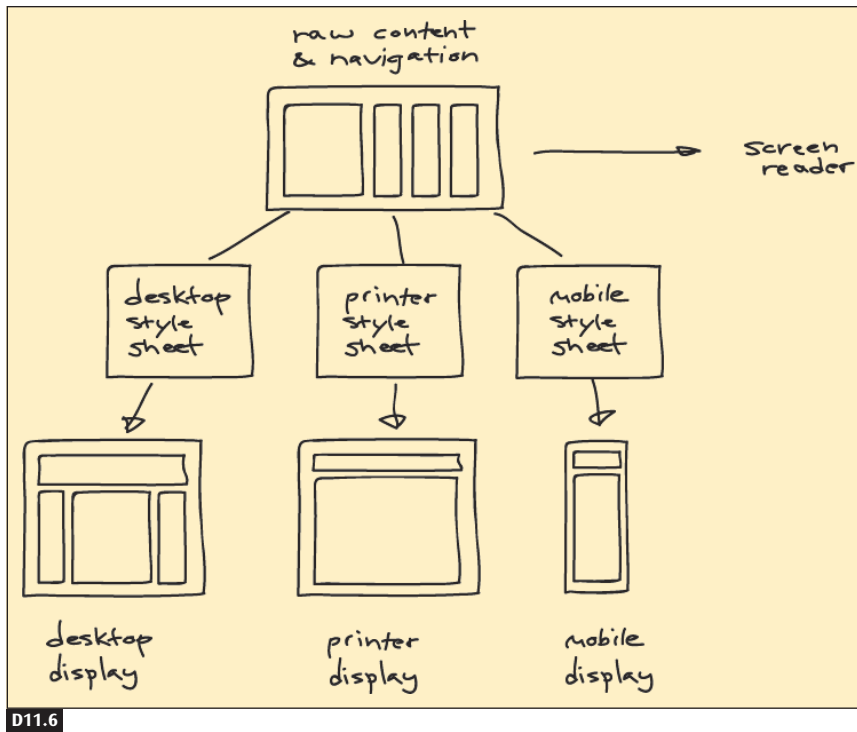
**Be Aware of Browser Incompatibilities with Style Sheets** • Currently, the W3C has specified two standard levels of Cascading Style Sheets—*CSS1* and *CSS2*—and is developing a working draft of a third level, *CSS3*. Each level specifies a certain set of features and represents a superset of the previous level. For example, *CSS2* includes all the features of *CSS1*, as well as some additional features.

As of this writing, no Web browser has full support for *CSS1* or *CSS2*, although the most common Web browsers support the large majority of the *CSS1* feature set. Furthermore, some browsers have known bugs in how they handle certain CSS features.

The upshot here is that, when using CSS, you will need to test your site with multiple browsers, and you should avoid features that are not yet fully supported across the most popular browsers. This is especially important if your target visitors are using older browsers, some of which support a minimal set of CSS features.

## SOLUTION

Start your site design using a style sheet so that changes will be easier to make later. Separate content and navigation from design and layout so that you can build different designs from your content and navigation. If your site pages are likely to be printed, create a print style sheet. If customers will want to use your site from a mobile device, create a mobile style sheet. If you build pages in this way, your site will be more accessible to everyone.

**D11** STYLE SHEETS**Figure D11.6**

Style sheets let you separate content from look and feel so that you can change each independently of the other.

## \* OTHER PATTERNS TO CONSIDER

Make a default style sheet part of your standard PAGE TEMPLATE (D1) to help foster a standard look and feel for your entire Web site. You can also define custom style sheets to help with SITE ACCESSIBILITY (B9) and PRINTABLE PAGES (D8). In addition, style sheets are a convenient way of specifying the appearance and layout of navigation and content, letting you control how and where things like TAB ROWS (K3), NAVIGATION BARS (K2), CONSISTENT SIDEBARS OF RELATED CONTENT (I6), and EXTERNAL LINKS (K8) appear on your Web pages. You can also define GRID LAYOUTS (I1) and OBVIOUS LINKS (K10) in your style sheets. Finally, style sheets can be used to define the font and color scheme for individual CONTENT MODULES (D2).

Style sheets are another way of using HTML POWER (L4).

D1

B9

D8

K3 K2

I6 K8

I1 K10

D2

L4