

# Helping Customers Complete Tasks

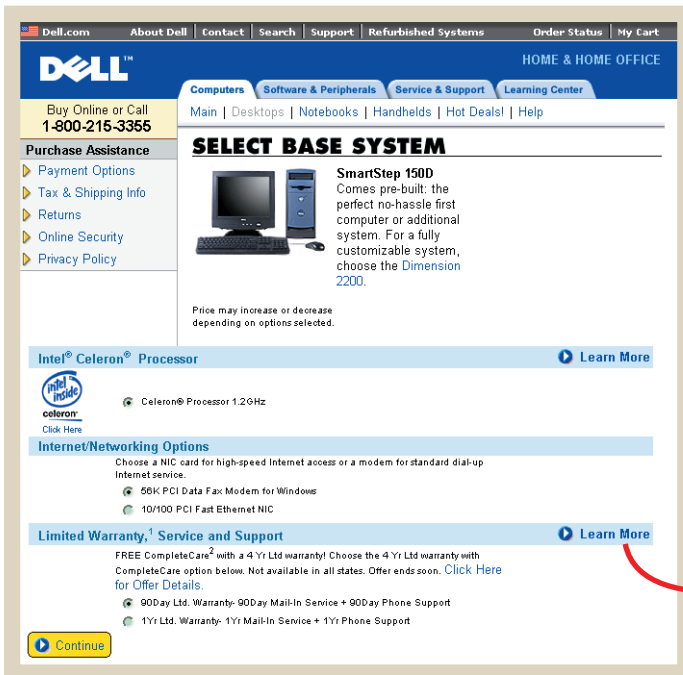
H



Sometimes customers will need help carrying out and completing a task on your Web site. This pattern group describes ways to structure your site to minimize problems and improve your task completion rate.

- H1** PROCESS FUNNEL
- H2** SIGN-IN/NEW ACCOUNT
- H3** GUEST ACCOUNT
- H4** ACCOUNT MANAGEMENT
- H5** PERSISTENT CUSTOMER SESSIONS
- H6** POP-UP WINDOWS
- H7** FREQUENTLY ASKED QUESTIONS
- H8** CONTEXT-SENSITIVE HELP

# H1 PROCESS FUNNEL



H1.1

(www.dell.com, May 18, 2002)

Figure H1.1

Dell uses a process funnel consisting of several logical steps that guide customers to quickly configure and purchase a personal computer. Information in a pop-up window shows additional details but keeps customers in the funnel so that they can continue to completion.



## \* BACKGROUND

All Web applications that lead visitors through stepped tasks—PERSONAL E-COMMERCE (A1), SELF-SERVICE GOVERNMENT (A4), WEB APPS THAT WORK (A10), and ENABLING INTRANETS (A11)—need ways to help people succeed at completing the tasks.



## \* PROBLEM

Customers often need to complete highly specific tasks on Web sites, but pages with tangential links and many questions can prevent them from carrying out these tasks successfully.

People enjoy completing the tasks they start. Yet all kinds of distractions—including links that lead off the critical path, extra steps, and extra

content—can inadvertently lead them away from accomplishing their goals. These diversions can have legitimate purposes, however, such as providing continuity, giving visitors opportunities to explore, providing instructions, or providing extra details. Striking a balance between these various forces and the actual task can be challenging.

**Minimize the Number of Steps Required to Complete a Task** • Customers find tasks daunting if there are too many steps. A process funnel should have just two to eight discrete steps. Anything less than two steps is not a process, and a process of more than eight steps is unmanageable. If there are more than eight steps, try to split the process into two or more separate process funnels, or try combining multiple steps into one page. However, this is not always a viable solution because one choice may precede another, and not every page can hold all the information that customers might need at certain points.

**Provide a Progress Bar to Let Customers Know Where They Are in the Process Funnel** • Showing a progress bar at each step lets your customers know how much farther they need to go to complete the task (see Figure H1.2). It is often not worth your time to make the individual steps on the progress bar clickable because doing so adds more complexity but little benefit for customers.

**Remove Unnecessary Links and Content While Reinforcing the Brand** • Removing links and content unrelated to the task at hand will reduce the number of distractions, making it more likely that your customers will successfully complete their tasks. Remove all NAVIGATION BARS (K2), TAB ROWS (K3), LOCATION BREAD CRUMBS (K6), and EMBEDDED LINKS (K7), leaving only the links and ACTION BUTTONS (K4) that help visitors reach their goals. Take out any content that is superfluous to the task.

Reinforce the Web site brand to minimize any disorientation customers might feel from sudden changes in navigation options. Use the same fonts, images, colors, layout, and logo throughout the Web site so that no matter where they are, people know they're still on the same site.



**Figure H1.2**

Many Web sites use a progress bar to let customers know where they are in the process funnel and how much farther they have to go.



H1.2

([www.half.com](http://www.half.com), October 24, 2001)

### Use Pop-Up Windows to Provide Extra Information, without Leading Visitors Out of the Process Funnel

• Sometimes customers need additional information that you have not provided on a page, such as extra help or product details. Provide a link to a POP-UP WINDOW (H6) containing CLEAN PRODUCT DETAILS (F2) (see Figure H1.1), CONTEXT-SENSITIVE HELP (H8), or information from the FREQUENTLY ASKED QUESTIONS (H7) page, to make the extra information less intrusive. Your challenge is to implement this extra content without detracting from the main purpose.

H6  
F2 H8  
H7

**Make Sure the Back Button Always Works** • Customers often use the **Back** button on browsers to modify answers they have typed in on previous pages. However, if the Web site is not implemented correctly, the information they have already entered may be lost when they hit the **Back** button, forcing them to type everything again. In the worst case, people get a cryptic error message saying that the posted information was lost. You can address this annoying problem by temporarily storing the information they type in on each page, redisplaying this information if customers hit the **Back** button, and then overriding the temporarily stored information on the page if it is changed.

**Always Make It Clear How to Proceed to the Next Step** • Some Web pages are longer than can be displayed on a customer's Web browser. The problem is that people sometimes get lost if the critical ACTION BUTTON (K4), the one that takes them to the next step, is hidden below the fold. Place HIGH-VISIBILITY ACTION BUTTONS (K5) both high *and* low on the page, ensuring that at least one of the critical action buttons will always be visible without scrolling.

K4

K5

**Prevent Errors Where Possible, and Provide Error Messages Whenever Errors Do Occur** • People will always make mistakes, even with the best of designs. You can provide good customer service if you use structured fields and sample input to help PREVENT ERRORS (K12). At the same time, provide MEANINGFUL ERROR MESSAGES (K13) whenever errors do occur.

K12

K13

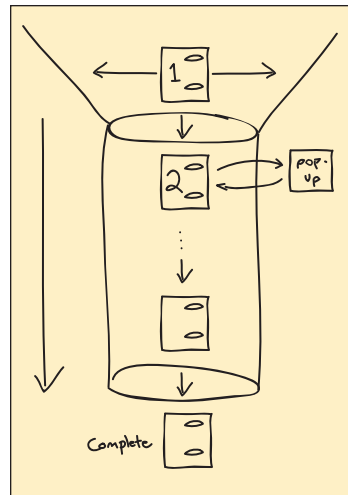
## \* SOLUTION

Minimize the number of steps required to complete a task, keeping them between two and eight. Remove unnecessary and potentially confusing links and content from each page, while reinforcing the brand to maintain a sense of place. Use pop-up windows to provide extra information, without leading people out of the process funnel. Make sure the **Back** button always works so that customers can correct errors. Make it clear how to proceed to the next step

with high-visibility action buttons. Prevent errors where possible, and provide error messages whenever errors do occur.

**Figure H1.3**

A process funnel lets people complete their goals by breaking down complicated tasks into a small number of steps, using pop-up windows for detailed information, and reducing the number of links to only the critical ones, so that people are never distracted.



H1.3

## ✳️ CONSIDER THESE OTHER PATTERNS

Many kinds of Web sites use process funnels, including sites for PERSONAL E-COMMERCE (A1), SELF-SERVICE GOVERNMENT (A4), WEB APPS THAT WORK (A10), and ENABLING INTRANETS (A11). Customers use process funnels when they finalize purchases through QUICK-FLOW CHECKOUT (F1), when they create new accounts through SIGN-IN/NEW ACCOUNT (H2), and when they post new messages to a RECOMMENDATION COMMUNITY (G4), to name some examples.

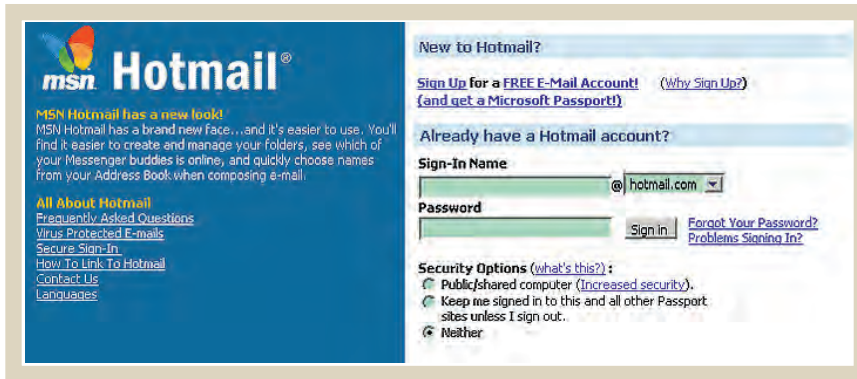
Remove NAVIGATION BARS (K2), TAB ROWS (K3), irrelevant ACTION BUTTONS (K4), LOCATION BREAD CRUMBS (K6), and EMBEDDED LINKS (K7) to ensure that customers stay on their paths. However, keep strong SITE BRANDING (E1) so that customers still know where they are.

Design process funnels to PREVENT ERRORS (K12), and provide MEANINGFUL ERROR MESSAGES (K13) when errors do occur.

Track your customers through PERSISTENT CUSTOMER SESSIONS (H5) to avoid problems with the **Back** button, and to save customer-entered information.

Move extra content, such as CONTEXT-SENSITIVE HELP (H8) and FREQUENTLY ASKED QUESTIONS (H7), to POP-UP WINDOWS (H6) to keep the main task page on the screen. Make the next action visible by keeping it ABOVE THE FOLD (I2) and by using HIGH-VISIBILITY ACTION BUTTONS (K5).

## H2 SIGN-IN/NEW ACCOUNT



H2.1

([www.hotmail.com](http://www.hotmail.com), October 26, 2001)

Figure H2.1

MSN Hotmail has an easy sign-in if customers already have an account, or if visitors create a new account on the spot.

### \* BACKGROUND

To provide PERSONALIZED CONTENT (D4), PERSONALIZED RECOMMENDATIONS (G3), and other individualized services, Web sites need a way for both returning customers and new customers to identify themselves. This pattern covers the sign-in and new account processes, describing how to structure the design of these pages, as well as common mistakes to avoid.

D4  
G3

### \* PROBLEM

One process has to handle both returning customers, who sign in and identify themselves to get personalized content, and new customers, who need to create an account before going further on the site.

The sign-in/new account pattern solves this problem by using a variation of the PROCESS FUNNEL (H1) to achieve its goals: an easy way for customers to sign in if they already have accounts, and an easy way for visitors to create new accounts. The sections that follow identify some things you should consider when creating a sign-in mechanism.

H1

### Collect the Minimum Amount of Information for Creating New Accounts •

You risk alienating potential customers if creating a new account takes too long, if you ask for too much personal information, or if the process doesn't run smoothly. If creating a new account is simple and painless, more customers will do it (see Figure H2.2).

**Make Clear Which Fields Are Required and Which Are Optional •** Splitting the information into required and optional fields can help keep account creation short. Many Web sites flag required fields with bold type or asterisks so that customers are clear on what is optional.

**Figure H2.2**

If you want visitors to create a new account, make the process simple and painless by minimizing the number of possible mistakes and by keeping it as short as possible.

The information needed to create an account is minimized.

The reason the information is needed is clearly stated.

Asterisks denote required fields.

A sample entry and separate fields for different parts of the phone number minimize the potential number of mistakes here.

Optional and required information are clearly separated.

The screenshot shows the eBay registration form with the following sections and fields:

- Registration Progress:** 1 Registration (active), 2 Check email, 3 User ID & Password.
- Welcome! Let's begin.**
- Please enter your contact information below. All required fields have an asterisk, \* \* \* .**
- Note: You must be at least 18 years old to register on eBay.**
- Personal Contact Information:**
  - Email address:** e.g., joecool@aol.com (required, asterisk). Note: In order to complete registration, we'll send a confirmation message to the email address you enter above. Be sure to include your "@serviceprovider.com" domain.
  - Retype your email address:** Please re-enter your email address. (required, asterisk).
  - Full name:** e.g., John H. Doe (required, asterisk). Split into First name and M.I. Last name.
  - Company:** (optional).
  - Address:** (required, asterisk).
  - City:** (required, asterisk).
  - State:** (required, asterisk).
  - Zip:** (required, asterisk).
  - Primary phone #:** e.g., (408) 555-1234 (required, asterisk). Split into area code, number, and extension.
  - Secondary phone #:** (optional).
- Optional Information:**
  - How did you first hear about eBay?:** Select here (dropdown).
  - Date of Birth:** Month, Day, Year 19 (MM/DD/YY).
  - Annual Household Income:** Select an income range (dropdown).
  - Gender:** Unspecified (dropdown).
  - If you have a promotional priority code, please enter it:** (optional).

H2.2

(www.ebay.com, May 16, 2002)

**Prevent Errors** • Smooth the account creation process by PREVENTING ERRORS (K12), and by providing examples of the data you expect. For example, if you need a phone number, should it be shown in the format (510) 555-5555 or 510 555 5555? Or do you need an international phone number, such as +1 510 555 5555? Develop software that accepts any possible format so that any number typed in can be translated into the format that your databases use.

K12

**Provide Your Web Site's Privacy Information** • Include a link to your PRIVACY POLICY (E4) on the account creation page, to explain your FAIR INFORMATION PRACTICES (E3). Have explanatory text describing why you need certain pieces of information, and how that information will be used. For example, e-commerce sites need to make it clear that they need their customers' e-mail addresses and phone numbers in case there are delays in shipping or problems with the order, and that these pieces of information will not be used for spamming with promotional e-mail or phone calls unless the customers choose those options.

E4

E3

**Have a Process for Handling Forgotten Passwords** • People often forget their passwords, especially if they have many accounts on different Web sites. Web sites need mechanisms for helping people remember their passwords. One approach is to send the password to a customer's e-mail address. You will already have the e-mail address from the customer's sign-up.

However, there are several potential dangers. E-mail systems are not always secure, and although doing so is difficult, hackers could break in and get your visitor's password.

Avoid sending passwords through e-mail if your Web site provides access to sensitive information, such as a student's grades or a customer's bank account. For special cases like these, one partial solution is to have customers create a security question when they open a new account. This security question requests a piece of personal information, such as a favorite pet's name, the person's city of birth, or a mother's maiden name (see Figure H2.3). If customers forget their passwords but can answer the security question, they either get a hint to what their password is, or they can reset it. Have your software check that the answer to the security question is not the same as the password. If it is the same, then provide a MEANINGFUL ERROR MESSAGE (K13) explaining the point of the security question and how it works.

K13



Figure H2.3

(a) eBay asks a security question in case a customer forgets his or her password.  
 (b) The security question is used to reset the password if the customer forgets what it is.

home | my eBay | site map | sign out  
 Browse | Sell | Services | Search | Help | Community  
 overview | registration | buying & selling | my eBay | about me | feedback | forum | safe harbor

Check out [LIVE](#) auctions on eBay.   [tips](#)  
 Search titles and descriptions

### Change your Password Hint

Your Hint question should be easy for you to answer but difficult for others to guess.  
 Note: You cannot use your eBay user ID or password as part of your Hint question or answer.

- Visit the [Password Hint help page](#) for tips on creating an effective hint.

Select or create your Password Hint question and enter the answer below.

Choose your Hint question: (required)	Pick a suggested question...
	OR Create your own question: Example: "What city would you like to visit?"
Enter the answer to your question: (required)	<input type="text"/> Example: "Rome"

Pick a suggested question...

- What is the name of the street where you grew up?
- What is the name of your favorite restaurant?
- What is the name of your favorite cartoon character?
- What is the name of your favorite fictional character?
- What is the title of your favorite book?
- Where did you go on your first date?
- What is your favorite pet's name?
- What is your best friend's last name?
- What is your dream occupation?

H2.3a

home | my eBay | site map | sign in  
 Browse | Sell | Services | Search | Help | Community

### Please Sign In...

eBay members, sign in to save time for bidding, selling, and other activities.

eBay User ID   
 You can also use your registered email.

eBay Password   
[Forgot your password?](#)

or [Register Now](#)

Keep me signed in on this computer when I sign out. [Learn more](#).

Having problems signing in? [Get help now](#).

Click [here](#) to sign in using SSL. For more information on signing in, visit [sign in help](#).

H2.3b

home | my eBay | site map | sign in  
 Register for eBay and Half.com | half.com by eBay

Check out [LIVE](#) auctions on eBay.   [tips](#)  
 Search titles and descriptions

### Your Password Hint

Provide the correct answer to the Password Hint below.

Your Password Hint question:

The answer to your question:

Click Continue and create your new password.

home | my eBay | site map | sign in  
 Browse | Sell | Services | Search | Help | Community

Check out [LIVE](#) auctions on eBay.   [tips](#)  
 Search titles and descriptions

### Create your new password

Enter your new password below. Please enter it twice to ensure you typed it correctly.

Your New password:

Retype your New password:

(www.ebay.com, May 16, 2002)

Another solution is to create a one-time URL and e-mail that to your customers. When they click on the link, the URL will take them to a unique page on the site where they can change their password. That way, the password is never transmitted, and the ability to change the password is given only once with that URL.

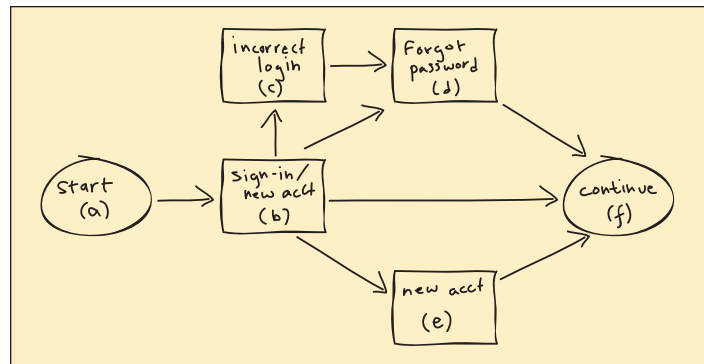
Another partial solution is to have customers go to a physical location and bring pieces of identification so that someone on your staff can reset the password. This approach makes sense for Web sites that serve a local area, such as a school or a university. It provides more security, but it is still not foolproof because people can fake identification and it can be time-consuming for the customer.

**Don't Force First-Time Customers to Sign In Too Early** • There are two reasons not to hide all your content behind a sign-in screen. First, you could reduce traffic. Pages that require a sign-in will cause most search engines to fail. This means that none of those pages will ever appear when people search sites like Google or Yahoo!. Second, visitors dislike having to create a new account just to see the content of a site, particularly when it is a shopping site. Tempt people with enough content to persuade them to stay around a little longer.

You can address both of these issues by dividing your Web site into a public portion that is accessible to everyone and a private part that requires people to sign in. The public part is a sampler, which might provide headlines, a few paragraphs of fresh content, or complete access to a few pages.

## SOLUTION

**Collect the minimum amount of information you need to create new accounts. Make it clear which fields are required and which are optional. Prevent errors where possible. Provide your Web site's privacy information. Have a process for handling forgotten passwords. Do not force first-time customers to sign in too early.**



H2.4

Figure H2.4

In general, the process of signing into a Web site should go as follows: Visitors come to an entry point (a) that requires them to sign in (b). Customers who already have an account and remember the password can sign in and continue (f). Visitors who want to create an account do so (e) and then continue (f). Returning customers who enter the wrong account information or password are blocked from continuing (c). A returning customer can ask to receive help remembering the password or to have the password reset (d).

## ✳️ CONSIDER THESE OTHER PATTERNS

**H1** The sign-in/new account pattern is actually a version of PROCESS FUNNEL (H1), which covers techniques to help customers complete highly specific tasks.

**K12** Sign-in/new account should be designed to PREVENT ERRORS (K12) and to provide MEANINGFUL ERROR MESSAGES (K13) whenever errors do occur.

**E4** Make your PRIVACY POLICY (E4), which explains your FAIR INFORMATION PRACTICES (E3), prominent when visitors sign in, or when they're creating a new account. Use a SECURE CONNECTION (E6) if sensitive personal information is involved.

**D6** Content that requires people to sign in cannot be indexed by search engines. See WRITING FOR SEARCH ENGINES (D6) for more information.

## H3 GUEST ACCOUNT

The screenshot shows the HealthGiant website interface. At the top, the logo "healthgiant.com" is displayed with the tagline "YOUR SOURCE FOR HEALTH PRODUCTS". Navigation links include "shopping cart", "check out", and "search tips". A search bar is present with a "search" button. The site offers categories for "school health", "sports health", and "general health". A promotional banner states "10% discount for online orders!". Below the navigation, a section titled "guest ordering information" contains a note: "Note: This information will be used for today's order and will not be kept in our database. If you are a School or School District and want to become a registered user, click [here](#). For all other businesses or organizations, please click [here](#)." A play button icon is next to the heading "ordering information and terms". The "Ship To Address" section contains the following form fields:

Business or Name:	<input type="text"/>
Department (optional):	<input type="text"/>
Attn (optional):	<input type="text"/>
Street:	<input type="text"/>
City:	<input type="text"/>
State/Province:	please select one <input type="button" value="v"/>
Zip:	<input type="text"/>
Country:	<input type="text"/>
Phone:	<input type="text"/>
Email:	<input type="text"/>

H3.1

([www.healthgiant.com](http://www.healthgiant.com), February 27, 2002)

**Figure H3.1**

HealthGiant lets its customers make purchases as either guests or registered members. When purchasing as a guest, customers are assured that their personal information will be used for only processing the order and will not be kept in the company's database.

## \* BACKGROUND

Some customers prefer just to use a Web site instead of having to create an account first. An example would be going through the QUICK-FLOW CHECKOUT (F1) without having to go through SIGN-IN/NEW ACCOUNT (H2). This pattern describes guest accounts in detail.

F1 H2

## \* PROBLEM

**Many customers will be put off and possibly leave the site if they have to create an account to use the Web site. However, you need information from customers in order to support them in their tasks.**

**A1** Customers may become annoyed if they have to create yet another account and password just to make a purchase on PERSONAL E-COMMERCE (A1) sites. This is especially frustrating for customers who intend to make only a single purchase and have no plans to return in the future.

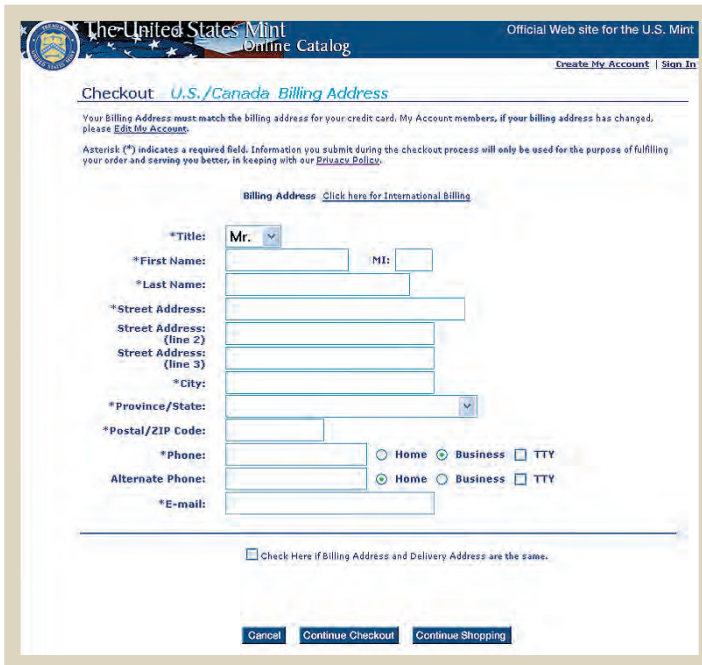
**F1** Forcing customers to create an account is just another barrier to entry, and it may cause some people to leave your site. Requiring your customers to give you personal information before making a purchase violates the standard “sales script” that people are familiar with when they shop in regular stores (see QUICK-FLOW CHECKOUT (F1)). On the other hand, you need shipping and billing information to complete a purchase. healthgiant.com makes a nice compromise by assuring its customers that their shipping and billing information will be used only for the current transaction (see Figure H3.1). The U.S. Mint’s Web site makes similar assurances to its customers (see Figure H3.2).

**F1** This is one instance where guest accounts make sense. In this case the guest account lets customers make purchases first. Once they have completed the QUICK-FLOW CHECKOUT (F1), they are given the option of creating a new account, thus saving all of the information about shipping and billing that they have just typed (see Figure H3.3). It can be helpful to inform your customers up front that they will not need to create an account before checking out (see Figure H3.4).

**A10** WEB APPS THAT WORK (A10) are another place where guest accounts make sense. For example, you might let first-time customers try out the service, and only when they want to save their information ask them to create a new account.



H3.2a



H3.2b

(www.usmint.gov, February 27, 2002)

Figure H3.2

(a) The U.S. Mint's checkout gives customers an option between **Continue Checkout** and **Member Checkout**. (b) The first option leads to the **Billing Address** page, which assures customers that the information submitted will be used only for the purpose of fulfilling the order.



Figure H3.3

Outpost.com lets people without accounts make purchases first and then create an account, if they choose. It also provides an expedited checkout process for customers who already have an account.

The screenshot shows the Outpost.com checkout process. At the top, there are navigation links: "Secure Checkout", "Enter Billing Info", "Review Order", "Thank You", and "Print Summary". Below this, there are two main sections: "1. payment options" and "2. billing address". The "payment options" section includes a dropdown menu for "Credit Card" (set to "Visa") and a "Card Number" field. The "billing address" section includes a "First Name" field. Below these fields, there is a "thank you!" message for existing users, stating that their Outpost.com order is complete and they will receive an e-mail copy of their order request. To the right, there is a "create a profile?" section with a "Yes!! I want to register for Express Checkout" button. Below this, there is a "Create a password below" section with fields for "Email Address" (pre-filled with "jasonh@cs.berkeley.edu"), "Enter Password:" (with a note "(Minimum of 6 Characters)"), and "Enter Password: (again)". A "Create Account" button is located below the password fields. At the bottom, there is a link: "No, thanks, please continue to print summary:". The footer contains copyright information: "Enter content Copyright © 1995-2001 Cyberian Outpost, Inc. Cyberian Outpost® is a registered trademark of Cyberian Outpost, Inc. All Rights Reserved."

H3.3

(www.outpost.com, October 26, 2001)

Figure H3.4

Taxpayers Australia's Web site makes it very clear to its customers that they do not need to be members of the site before purchasing tax information there.

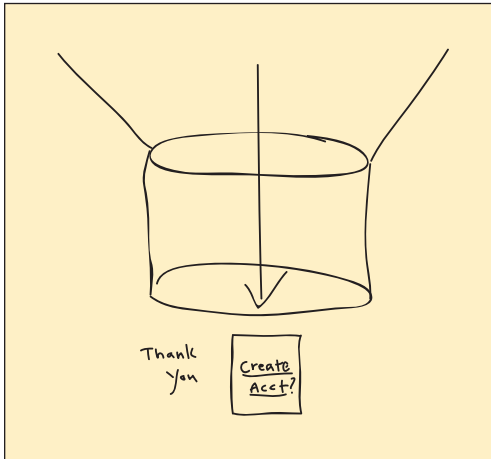
The screenshot shows the Taxpayers Australia website checkout process. At the top, there is a navigation bar with links: "Home", "Contact Us/Feedback", "Member Benefits", "e-News", "Links", "Privacy", "Summary Updates", and "Site Map". Below this, there is a search bar and a "Shop" button. The "Shop" section includes a "Quick Search" form with "Keywords:" and "Categories:" fields, and a "Search" button. The "Checkout" section is titled "Checkout" and includes a progress bar: "Select Cart Delivery Payment Done". Below this, there is a message: "There are two ways to complete the order process. Please select one of the following options:". The first option is "Option 1: Existing Member", which includes a "Member No.:" field and a "next step" button. The second option is "Option 2: Guest User", which includes a "next step" button. The footer contains copyright information: "Copyright (c) 2001. All trademarks are acknowledged and remain the property of their owners. Use of this website constitutes acceptance of the website privacy and security statement and terms and conditions. Innovation / Technology by DDBI Interactive."

H3.4

(www.taxpayer.com.au, February 27, 2002)

## \* SOLUTION

Give new visitors the option of creating an account at the end of a process, rather than forcing them to create one at the beginning.



H3.5

**Figure H3.5**

Make account creation optional, and put it at the end of the process.

## \* CONSIDER THESE OTHER PATTERNS

Guest accounts are an alternative to requiring customers to go through the SIGN-IN/NEW ACCOUNT (H2) process at the beginning of QUICK-FLOW CHECKOUT (F1).

To implement guest accounts, use temporary session IDs, as discussed in PERSISTENT CUSTOMER SESSIONS (H5).

H2

F1

H5



**Figure H4.1**

This account management page lets customers see and update all the information that Buy.com manages for them. Customers can update their e-mail address, payment information, and shipping details, as well as see the status of their past and current orders.

The screenshot shows the Buy.com account management page for Jason Hong. The page is divided into several sections:

- Navigation:** Includes links for 'basket', 'my account', and 'help'. A search bar is also present.
- Account Profile:** Displays the user's name 'Jason Hong' and provides a 'LOGOUT' button.
- Login Information:** Shows the user name 'Jason Hong' and an 'EDIT' button.
- Payment Information:** Lists a Visa Card ending in 42...9123 and an 'EDIT' button.
- Shipping Information:** Shows the shipping name 'Jason Hong' and an 'EDIT' button.
- Order History Table:** A table with columns for order date, order #, total, status, and actions (Track, Return).
 

order date	order #	total	status	Track	Return
2/13/2002	12548173	\$33.08	Complete	<a href="#">Track</a>	<a href="#">Return</a>
10/25/2000	8891517	\$91.82	Complete	<a href="#">Track</a>	<a href="#">Return</a>
9/24/2000	8497316	\$54.89	Complete	<a href="#">Track</a>	<a href="#">Return</a>
- Additional Information:** Includes a note about new orders showing up within 5 minutes, a 'Need more Help?' section, and various support links like 'Warranty FAQs', 'Shipping/Returns', and 'Buyer's Guide'.

**H4.1**

(www.buy.com, February 20, 2002)

## \* BACKGROUND

**A1** **A2** **A3**

All Web applications that provide personalization, such as PERSONAL E-COMMERCE (A1), NEWS MOSAICS (A2), and COMMUNITY CONFERENCE (A3), need a way to let customers manage personal data.

## \* PROBLEM

**Customers need to see and manage the information a Web site keeps about them.**

Web sites need to keep track of a great deal of information about their customers to create highly PERSONALIZED CONTENT (D4) for them. For example, a PERSONAL E-COMMERCE (A1) site might store shipping address, billing address, and credit card information to streamline the checkout process. A NEWS MOSAIC (A2) might store the kinds of news articles that a specific customer likes, presenting a high-value news site tailored for that individual. A COMMUNITY CONFERENCE (A3) site might store a customer's favorite message boards and favorite participants, making it easy to find new and relevant discussions. A STIMULATING ARTS AND ENTERTAINMENT (A9) site might store a customer's movie and music preferences and provide recommendations.

When you're developing a personalized Web site, remember that one of the FAIR INFORMATION PRACTICES (E3) is *access*. Individuals should be able to see the information that a Web site has about them, correct inaccurate data, and delete undesired data. This is not just a matter of fairness; it is also a matter of practicality. If customers give you their mailing addresses when creating new accounts, it makes sense to let them change them if they move.

We call any kind of system designed to help people manage their personal information an **account management system**. Account management systems are essential to any Web site that offers personalized content. In the sections that follow we offer some ideas about how to design these systems.

**Provide a Single Page That Gathers All the Account Information in One Place** • Your Web site can store a great deal of information about individuals. Consolidating all the information in one place makes it easy for people to see and manage their information. Figure H4.2 shows how the U.S. Mint Web site lets customers manage their address books, wish lists, ORDER TRACKING AND HISTORY (G7), and other information.

As another example, Figure H4.3 shows how CDNOW, a music site, groups all of the information related to an account on a profile page. This page lets customers check whether their contact information, preferences, and financial information are correct and up-to-date.

D4

A1

A2

A3

A9

E3

G7

Figure H4.2

The U.S. Mint Web site lets customers manage all their account information in one convenient place.

The screenshot shows the 'My Account' page for Mr. Jason Hong on the U.S. Mint website. The page is organized into several sections:

- Navigation:** Includes 'Catalog Home', 'What's New', 'My Account', 'Track Order', and 'Shopping Cart'.
- Search:** A search bar with 'GO' and 'Keyword of Product #'.
- Product Categories:** Lists various coin and jewelry items like 'Annual Coin Sets', '50 State Quarters™', 'Golden Dollar', etc.
- Services:** Includes 'New Users', 'Customer Service', 'Shipping and Returns', 'Subscriptions', and 'E-Gift Certificates'.
- My Account - Mr. Jason Hong:**
  - My Address Book:** 'Sending coins to others? Speed up your checkout by adding them to your Address Book.'
  - My Wish List:** 'Found some items you'd like to buy? Just not yet? Review My Wish List and add what you'd like.'
  - My Order History:** 'An easy way to track your order's progress, whether it's still in process, in the hands of the shipper, or at your doorstep.'
  - My Subscriptions:** 'Keep billing and shipping information all in one place and up-to-date at My Subscriptions.'
  - My E-mail Services:** 'The most convenient way to stay up-to-date on U.S. Mint programs and products. Sign up at Edit My Account.'
  - Mint Glossary:** 'Check here to look up any unfamiliar terms.'
  - Purchase Gift Certificate:** 'Share your interest in coins by purchasing e-gift certificates for your friends and family.'
  - Edit My Account:** 'Change your contact information, billing and shipping addresses, credit card information, shopping preferences, delivery options, e-mail services.'
  - Delete My Account:** 'Check here to delete My Account.'
- Featured Item:** 'Kentucky Quarter, Two-Roll Set' for \$32.00, with 'Add to Cart', 'Buy Now', and 'Add to Wish List' buttons.

H4.2

(www.usmint.gov, February 1, 2002)

Figure H4.3

CDNOW consolidates all of a customer's account information on a single page.

The screenshot shows the CDNOW account page for Jason Hong. The page is organized into several sections:

- Navigation:** Includes 'MUSIC', 'VIDEO/DVD', 'GIFT CENTER', 'MYCDNOW', and 'Shopping Cart'.
- Account Summary for Jason Hong:**
  - SIGN IN:** Username: JASONHONG, Password: \*\*\*\*\*.
  - ORDER STATUS:** Last Order: #36927994, Placed: February 1, 2002, Status: Processing.
  - CONTACT & BILLING INFORMATION:** First Name: JASON, Last Name: HONG, Email Address: [redacted], Day Phone: [redacted], Night Phone: [redacted].
  - DIGITAL MUSIC DOWNLOADS:** You have no DMD files waiting to be downloaded.
  - SHOPPING SETTINGS:** Rewards Program: None, Language: English, Currency: US Dollar.
  - ADDRESS BOOK:** Default Shipping Address: JASON HONG.

H4.3

(www.cdnw.com, February 11, 2002)

**Provide a Task-Based Organization Scheme to Let Customers Modify Their Information**

Use a TASK-BASED ORGANIZATION (B4) scheme that lets visitors access their account information while they are in the middle of a task, without having to go back to the account information page to add or update information. For example, Figure H4.4 shows how CDNOW provides links to let customers change their credit card information while they are checking out.

B4



**Figure H4.4**

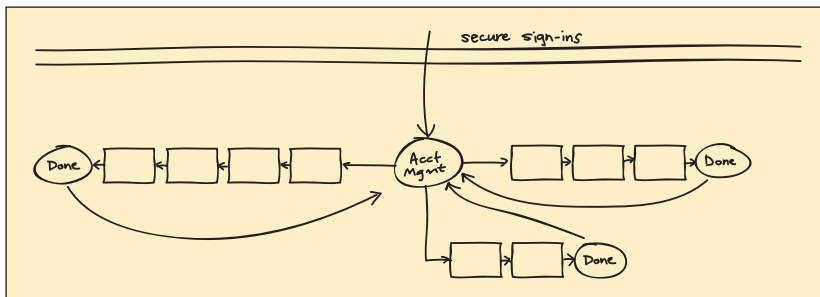
CDNOW shows customers their account information in context, when they need it for a specific task. For example, customers can change their credit card information at the checkout instead of having to go back to the account information page.

H4.4

([www.cdnnow.com](http://www.cdnnow.com), February 11, 2002)

**\* SOLUTION**

Provide a single page that gathers all the customer’s account information in one place. Use a task-based organization scheme to let people see and modify their information in the context of specific tasks.



**Figure H4.5**

An account management system should use a secure connection to protect each customer’s personal information and should guide customers through the steps needed to see and change their information.

H4.5

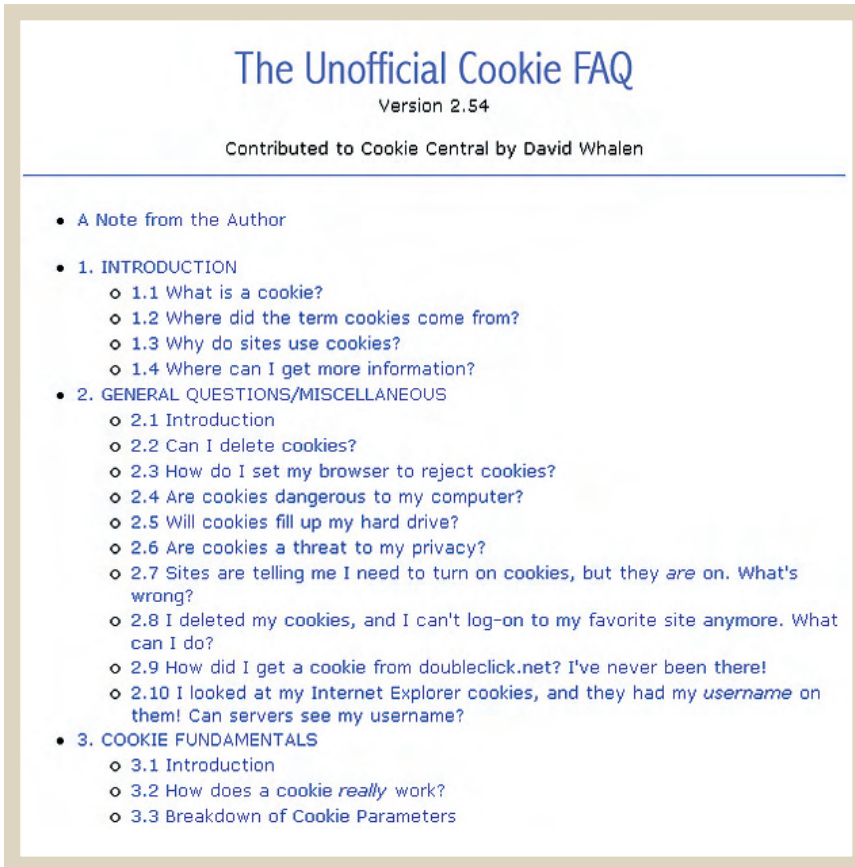
## \* CONSIDER THESE OTHER PATTERNS

**E3** As part of the FAIR INFORMATION PRACTICES (E3), every Web site that provides **D4** PERSONALIZED CONTENT (D4) must also provide an account management system to let customers manage their personal information. Such information might include customers' favorite MESSAGE BOARDS (D5), E-MAIL SUBSCRIPTIONS (E2), address books for QUICK ADDRESS SELECTION (F4), shipping preferences for QUICK SHIPPING METHOD SELECTION (F5), PAYMENT METHOD (F6) information, and ORDER TRACKING AND HISTORY (G7).

Use a centralized organization scheme, with all the information in one **B4** place, as well as TASK-BASED ORGANIZATION (B4), where the information is spread out according to task.

The more sensitive the data is, the more protection customers need. If the account management system contains sensitive personal or financial information, use a **E6** SECURE CONNECTION (E6) with extremely strong encryption to protect the data.

## H5 PERSISTENT CUSTOMER SESSIONS



H5.1

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

**Figure H5.1**

Cookies are the most common way of implementing persistent customer sessions, which are necessary to provide personalized services. However, cookies pose several implementation and privacy problems.

### \* BACKGROUND

All Web applications that provide any degree of PERSONALIZED CONTENT (D4), such as PERSONAL E-COMMERCE (A1), COMMUNITY CONFERENCE (A3), and WEB APPS THAT WORK (A10), need a way to identify and track customers.





## \* PROBLEM

To provide personalized services, Web sites need to identify and track their customers while the customers are on the site.

**HyperText Transfer Protocol (HTTP)** is the means by which pages are downloaded from a Web server to a Web browser. When HTTP was first invented, it was designed to be stateless, meaning that Web servers had no memory of who was requesting pages or which pages customer had seen. All customers saw exactly the same Web pages.

F3 H1  
D4

This limitation made it difficult for designers to provide personalized services, such as SHOPPING CARTS (F3), PROCESS FUNNELS (H1), and PERSONALIZED CONTENT (D4). It also made it impractical to provide fee-based services, such as an online news site that customers would pay monthly subscription fees to view. Customers would have to enter their identity and password for *every* page they downloaded. What was needed was a way of providing **customer sessions** so that Web servers could keep track of who their customers were and what they were doing on-site.

Cookies were invented to solve this problem. **Cookies** are small pieces of data used by Web servers to uniquely identify customers. However, it is more useful to think of this problem in terms of *temporary* and *persistent* customer sessions.

**Temporary Customer Sessions** • Sometimes Web servers remember customers for a short period of time, usually until the customer closes the Web browser. **Temporary customer sessions** are useful when a Web site needs to maintain only short-lived information about customers, such as what items are in the customers' SHOPPING CART (F3) or which part of the QUICK-FLOW CHECKOUT (F1) they're in.

F3  
F1

There are two ways of implementing temporary customer sessions. **Session IDs** temporarily store the identity of a customer in Web addresses. The session ID is usually a long, nonsensical string, such as `http://www.website.com?sessionid=$qoijlgsk185794q$`. This string is passed along in every page the customer sees, but it is discarded when the customer leaves the site. **Session cookies** also temporarily store the identity of a person. When a customer closes his or her Web browser, however, the session cookie is deleted, making it impossible to track people over long periods of time. The chief difference between session IDs and session cookies is that session cookies are sent to Web servers through HTTP, instead of through the Web address. For all practical purposes, though, the two are equivalent when used to implement temporary customer sessions.

**Persistent Customer Sessions** • Compared to temporary sessions, **persistent customer sessions** let Web servers remember customers for longer periods of time. Persistent customer sessions are useful when you want to maintain permanent information about a customer, such as when your site generates PERSONALIZED RECOMMENDATIONS (G3) or shows customers their ORDER TRACKING AND HISTORY (G7) information. A good rule of thumb is that if your customers ever need to go through the SIGN-IN/NEW ACCOUNT (H2) pattern, you probably need to use persistent customer sessions.

G3

G7

H2

Persistent customer sessions are implemented with **persistent cookies**, which are similar to session cookies but are stored on customers' hard drives, allowing your Web site to track customers over longer periods of time.

**Differences between Temporary and Persistent Customer Sessions** • Table H5.1 not only shows the differences between the two kinds of customer sessions, but also describes when one should be used over the other, as well as which patterns require use of a particular type of customer session.

Most of the patterns you can implement through temporary customer sessions can also be implemented with persistent customer sessions. For example, you can implement INTERNATIONALIZED AND LOCALIZED CONTENT (D10) with temporary customer sessions, by having each customer select a specific language on the homepage. All of the subsequent pages will be displayed in that language, as long as the customer's Web browser remains open. However, once the Web browser is closed, that information is lost. If you used persistent customer sessions, the Web site could store customers' language preferences so that they would not have to select the language every time they visited.

D10

The only pattern unique to temporary customer sessions is GUEST ACCOUNTS (H3), which describes how to implement temporary accounts. This pattern applies when customers are certain they want to purchase something now, but they do not plan to return. A guest account would let customers add items to their SHOPPING CARTS (F3) and proceed through the QUICK-FLOW CHECKOUT (F1) without having to go through the SIGN-IN/NEW ACCOUNT (H2) process of creating a new account and a password.

H3

F3

F1

H2

**Choosing between Temporary and Persistent Customer Sessions** • Two factors to consider when you're choosing between temporary and persistent customer sessions are complexity and privacy. Temporary customer sessions are easier to implement because you do not need to store most of



**Table H5.1**

Temporary and Permanent Customer Sessions Compared



	Temporary Customer Sessions	Persistent Customer Sessions
Mode of implementation	Session IDs, session cookies	Persistent cookies
Context for use	You want to keep track of and use temporary information, or privacy concerns are important.	You want to keep track of and use permanently stored information, such as the customer's identity, to provide personalized content.
Patterns involved	<ul style="list-style-type: none"> <li>INTERNATIONALIZED AND LOCALIZED CONTENT (D10)</li> <li>PROCESS FUNNELS (H1)</li> <li>GUEST ACCOUNT (H3) (which implies SHOPPING CARTS (F3) and QUICK-FLOW CHECKOUT (F1) as well)</li> </ul>	<ul style="list-style-type: none"> <li>PERSONALIZED CONTENT (D4)</li> <li>MESSAGE BOARDS (D5)</li> <li>INTERNATIONALIZED AND LOCALIZED CONTENT (D10)</li> <li>QUICK-FLOW CHECKOUT (F1)</li> <li>SHOPPING CARTS (F3)</li> <li>PERSONALIZED RECOMMENDATIONS (G3)</li> <li>RECOMMENDATION COMMUNITY (G4)</li> <li>ORDER TRACKING AND HISTORY (G7)</li> <li>PROCESS FUNNELS (H1)</li> <li>SIGN-IN/NEW ACCOUNT (H2)</li> <li>ACCOUNT MANAGEMENT (H4)</li> </ul>

the information permanently. With persistent customer sessions, however, the customer's preferences and customized information need to be stored in a database, and this data must be retrieved every time the customer returns.

Temporary customer sessions are also better for consumer privacy because lots of data is thrown away after customers close their Web browsers, making it difficult to track a customer's browsing habits over an extended period of time. On the other hand, persistent customer sessions make it easier not only to track customers, but also to provide streamlined, personalized services.



Because of privacy concerns, SELF-SERVICE GOVERNMENT (A4) Web sites are restricted in their use of customer sessions. In June of 2000, the Office of Management and Budget published a memorandum establishing U.S.

federal policy on the use of cookies.<sup>1</sup> In general, the OMB stated, a self-service government Web site should not use cookies unless it

- Provides clear and conspicuous notice of their use
- Has a compelling need to gather the data on the Web site
- Has appropriate and publicly disclosed privacy safeguards for handling information derived from cookies
- Has the personal approval of the head of your organization

Although the memorandum does not explicitly say so, the government is more concerned about the use of persistent cookies than session cookies on government Web sites. Here, use session cookies rather than persistent cookies because session cookies do not pose the same privacy concerns.

**Two Warnings about Customer Sessions** • Avoid putting any sensitive data in session IDs. Occasionally customers will see a URL like this:

```
http://www.xyzzyz.com/index.html?user=jhong
```

or worse:

```
http://www.xyzzyz.com/index.html?user=jhong&password=xyzzyz
```

making it easy for snoopers to see the password.

Similarly, cookies are not securely transmitted, meaning that clever hackers can see the cookie data being passed back and forth. If you designed your Web site improperly, a hacker would be able record a customer's cookie data as it was sent, and then could impersonate that individual.

The first step in solving this problem is to understand the difference between **identification** and **authentication**. A user name is an example of identification, stating who someone is. Passwords are examples of authentication, proving that customers really are who they say they are. Cookies help streamline identification, but they should not be used for authentication unless there is nothing sensitive to protect.

If sensitive information is involved, divide the Web site into secure pages (those that require authentication) and insecure pages (those that customers can always view). Many e-commerce sites are designed so that customers can browse the site and add items to the SHOPPING CART (F3), but so that to start the QUICK-FLOW CHECKOUT (F1), they must have a SECURE CONNECTION (E6) and go through the SIGN-IN/NEW ACCOUNT (H2) process.



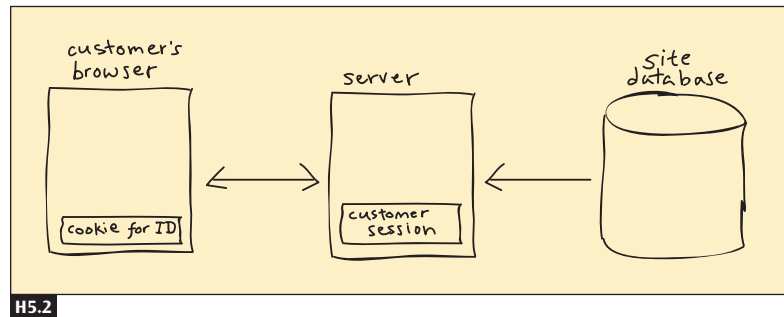
<sup>1</sup> OMB Memorandum 00-13, June 2000.

## \* SOLUTION

Use customer sessions to provide personalized services. Use temporary customer sessions for short-lived temporary data or when privacy concerns dictate, such as on self-service government Web sites. Use persistent customer sessions for long-lived data, or when the customer's identity needs to be known. Avoid placing any sensitive data in session IDs. Use cookies for identification, but not for authentication.

**Figure H5.2**

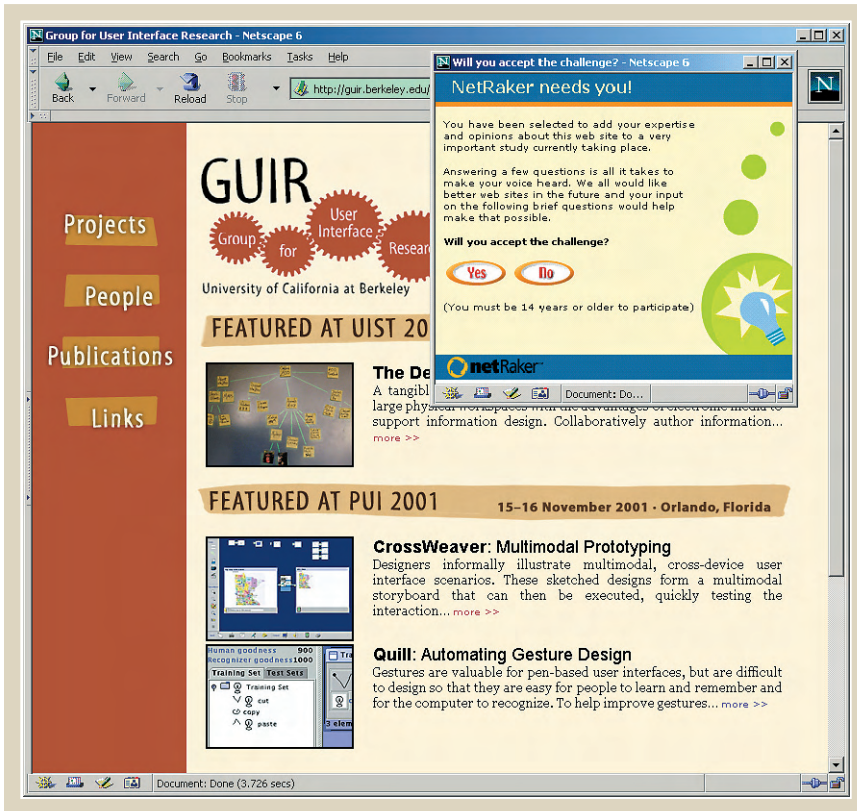
Persistent customer sessions are maintained by a small piece of information passed between the Web browser and the Web server. This information can be used to create personalized content and services.



## \* CONSIDER THESE OTHER PATTERNS

- H2** Any Web site that requires visitors to go through the SIGN-IN/NEW ACCOUNT (H2) pattern, or that provides any form of PERSONALIZED CONTENT (D4), requires persistent customer sessions.
- D4**
- E4** Every Web site needs a clear and well-thought-out PRIVACY POLICY (E4) that explains the FAIR INFORMATION PRACTICES (E3) and how your site uses persistent customer sessions.
- E3**
- E6** Consider using SECURE CONNECTIONS (E6) when you use persistent customer sessions, especially if potentially sensitive data is involved. Financial information, the authority to make purchases, and personal data are examples of sensitive data.

## H6 POP-UP WINDOWS



H6.1

([guir.berkeley.edu](http://guir.berkeley.edu), May 18, 2002)

Figure H6.1

Use pop-up windows to keep the main browser window visible while displaying another page. Pop-up windows are useful for surveys and advertisements, and for showing extra information while maintaining a specific context. In this example, a survey window asks visitors to evaluate the usefulness and usability of the Web site.

### \* BACKGROUND

Some PROCESS FUNNELS (H1), CONTEXT-SENSITIVE HELP (H8), and EMBEDDED LINKS (K7) need to display information in addition to the current page, without taking visitors to another Web page. This pattern describes how pop-up windows can be used for this purpose.



## \* PROBLEM

**You need to show the customer extra information, while maintaining context and keeping the customer's Web browser on the same page.**

Sometimes customers need additional information that is not on the current Web page, but at the same time they need to stay there. For example, you want customers to remain on the main path of a PROCESS FUNNEL (H1), but you also want them to read extra information that might be useful.

H1

K7

As another example, you want to use EMBEDDED LINKS (K7) to let your customers see potentially useful and interesting content on other sites. At the same time, however, you want to keep your customers on the same page, to maintain coherence in the text and to keep them on your site.

One solution is to use pop-up windows to create new browser windows, letting customers see other Web pages while keeping their original browser windows on the same page. However, too many pop-up windows can be confusing and overwhelming. In this section we describe some ideas for using pop-up windows.

### **Use Automatic Pop-Up Windows for Showing Unrelated Information When People Enter or Exit a Web Site**

• There are two kinds of pop-up windows: automatic and link based. **Automatic pop-ups** appear simply as a result of a customer's arrival at or departure from a Web site. These kinds of pop-up windows usually contain advertisements or surveys for improving the quality of a Web site.

Many people find advertisements in automatic pop-up windows annoying, but some Web sites have found success with them. One recent innovation is the **pop-under** advertisement, which places an advertisement pop-up window under the customer's browser window so that customers will not see the window until they close their browsers. If you want to show pop-up advertisements, there are many factors to consider, including usability, customer satisfaction, and business revenues. We cannot say for sure whether pop-up windows are good or bad for a Web site. This is something that has to be judged on a case-by-case basis.

Another use of pop-up windows is for surveying your customers, a powerful tool for understanding the needs of customers and how well the Web site is meeting those needs. Using a bit of JavaScript, you can randomly select customers so that only a few will be shown the pop-up survey. Figure H6.1 shows an example of a pop-up survey.

**Use Link-Based Pop-Up Windows to Show Related Information in a New Window, While Maintaining Context** • A link-based pop-up appears when customers click on a link designed to open a new window. Use link-based pop-ups with EMBEDDED LINKS (K7), EXTERNAL LINKS (K8), and PROCESS FUNNELS (H1) to display information related to the current page.

Figure H6.2 shows an example of how to use pop-up windows with EMBEDDED LINKS (K7). Clicking on the link opens a new window to the specified Web page, letting customers see and explore related information without having to leave the original Web site.

Pop-up windows are especially useful for PROCESS FUNNELS (H1), like QUICK-FLOW CHECKOUT (F1) and SIGN-IN/NEW ACCOUNT (H2). Pop-up windows let customers see extra information, such as CONTEXT-SENSITIVE HELP (H8) or an answer to a FREQUENTLY ASKED QUESTION (H7), while keeping them in the funnel. Figure H6.3 shows how Dell uses pop-up windows to show extra details about a laptop computer, while not leading customers off the Web page where purchases are made.

**Use Pop-Up Windows Sparingly** • Minimize the number of automatic and link-based pop-up windows your Web site creates because they can quickly overwhelm and frustrate visitors.

Use automatic pop-ups when visitors first come to your site and when they leave. Also consider using cookies and PERSISTENT CUSTOMER SESSIONS (H5) so that people see your pop-up windows only once.

K7 K8

H1

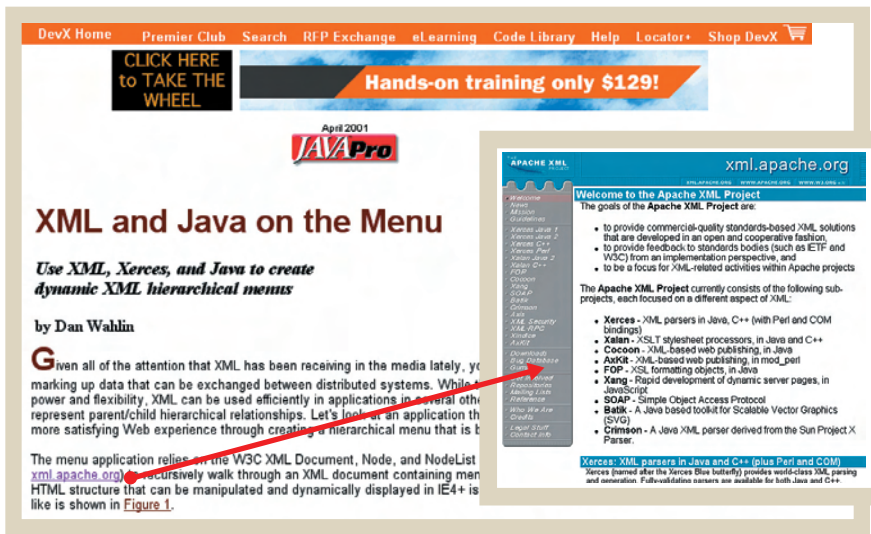
K7

H1

F1 H2

H8 H7

H5



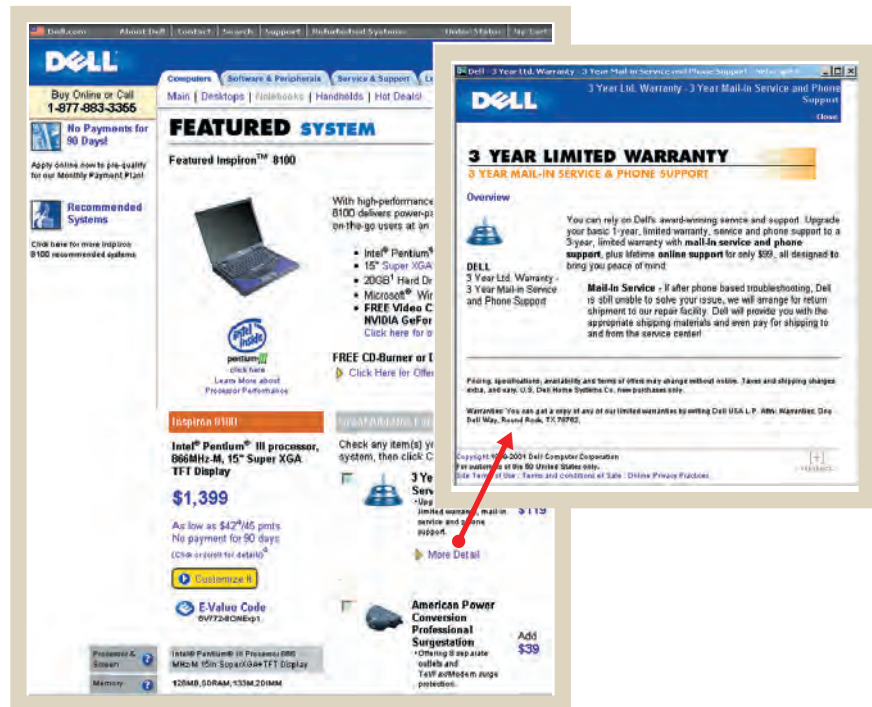
**Figure H6.2**  
This magazine article has an embedded link to another Web site. The site opens a new Web browser window rather than going directly to that Web site, letting visitors continue reading the main article.

H6.2 (www.java-pro.com, xml.apache.org, May 17, 2002)



Figure H6.3

Dell uses pop-up windows to show context-sensitive help in a process funnel, while maintaining context.



H6.3

(www.dell.com, October 24, 2001)

If you're using link-based pop-ups, you can reuse previously opened pop-up windows. This makes it easier for customers because only two browser windows are open at a time. You can do this with both JavaScript and plain links. The following JavaScript fragment is an example of how to create a new pop-up window, in this case a window from this book's Web site:

```
window.open ('http://designofsites.com', 'wnd')
```

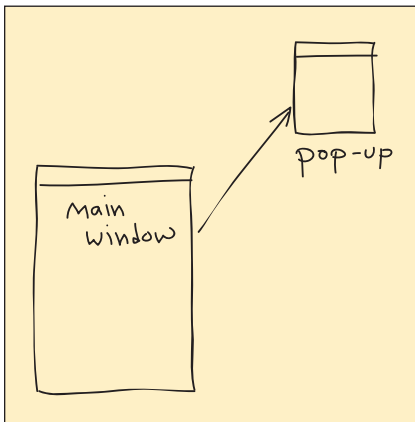
The part labeled 'wnd' is the internal name of this window. You can make this new pop-up window go to another site with the following fragment:

```
<A TARGET="wnd" HREF="http://anothersite.com">link</a>
```

Alternatively, if the pop-up window 'wnd' does not already exist, this link will create a new pop-up window for you.

## \* SOLUTION

Use automatic pop-up windows for showing unrelated information when customers enter or exit your Web site. Use link-based pop-up windows to show related information in a new window, while maintaining context. Minimize the use of pop-up windows.



H6.4

Figure H6.4

Use pop-up windows to display extra information while still maintaining context.

## \* CONSIDER THESE OTHER PATTERNS

Use link-based pop-up windows whenever you need to display information related to the current page, such as a FREQUENTLY ASKED QUESTION (H7) or CONTEXT-SENSITIVE HELP (H8), but do not want visitors to leave the current page. This is an issue in the PROCESS FUNNEL (H1), EMBEDDED LINKS (K7), and EXTERNAL LINKS (K8) patterns.

H7 H8

H1

K7 K8



Figure H7.1

Snapfish has extensive help that offers a FAQ page and several categories of answers to common questions. The categories and a “top 10 list” make it easier for customers to find their question in a large set. Snapfish also offers a page for customers who need more help.



H7.1

(www.snapfish.com, February 11, 2002)

**\* BACKGROUND**

**A1**  
**A3**

Customers often have the same questions when browsing through a Web site, whether they are on a PERSONAL E-COMMERCE (A1) or a COMMUNITY CONFERENCE (A3) site. A good way to answer these repeated questions is through a **frequently asked questions (FAQ)** page. This pattern describes how to gather the questions, what the basic structure of a FAQ page is, and where to place the FAQ page so that it is easy to find.

## \* PROBLEM

**Customers often ask the same questions on a Web site, and it can be expensive and time-consuming to answer the same questions over and over.**

Whether on a PERSONAL E-COMMERCE (A1) site, a GRASSROOTS INFORMATION SITE (A6), or an EDUCATIONAL FORUM (A8), visitors usually ask the same kinds of questions. Although Web sites must answer these questions, it can be expensive to answer the same questions repeatedly.

A1  
A6 A8

Let your visitors help themselves by providing a frequently asked questions (FAQ) page, a list of common questions and their answers. A FAQ page makes it easier for people to search for answers themselves, while reducing help desk or response time costs for you.

**First Identify Some Frequently Asked Questions** • Start with a list of questions from your design team. Get everyone on the design team—from business and marketing, to design and usability, to programmers—involved in brainstorming. Draft a list of questions, but don't spend too much time organizing and grouping the questions yet.

**Examine Your Competitors' FAQ Pages** • Ask yourself which questions on your competitors' Web sites apply to your Web site, and see if their answers have better solutions than yours. Keep these in mind for the next iteration of your Web site.

Collect competitors' questions that are relevant for your Web site, but don't copy the answers. Provide answers that are relevant and appropriate for your Web site instead.

**Supplement Your Questions with Those Collected from People in Close Contact with Customers** • Collect questions and answers from people who have a great deal of contact with your customers. One such source is the people who conduct usability tests. What questions did customers ask when they were using your Web site? Were they unfamiliar with certain concepts? For example, if you have an auction site, did the testers understand how bidding works? If you offer wish lists, did people understand how they work? What were their concerns? Were they worried about having their credit card information stolen? Were they worried about returning products?

Another source of questions is the help desk staff. Find out which questions customers repeatedly ask by phone or by e-mail. Does the help desk already have a database to help answer questions? Can you get a

copy of the help desk's e-mails and replies so that you can see what questions people asked and what answers were sent back?

Also talk to the marketing and sales staff. Inquire about the questions customers ask about the products. What features interest them? What concerns do they have?

- 3** See Chapter 3—Knowing Your Customers: Principles and Techniques for more information about understanding the needs of your customers.

**Group Related Questions Together** • After collecting questions and answers, decide how to organize the questions. If there are more than 40, use an organization scheme. For example, Figure H7.1 shows how Snapfish uses a combination of POPULARITY-BASED ORGANIZATION (B7) (see the “top 10” list on the right) and HIERARCHICAL ORGANIZATION (B3) to group frequently asked questions.

B7

B3

On the other hand, if there are only a few questions, the easiest thing to do is to put all of them on one Web page, at the top, and then link the questions to the answers below (see Figure H7.2).

- If There Are Many Questions, Add a Search Feature** • Browsing through a long list of questions can be dull. Adding a SEARCH ACTION MODULE (J1) makes it easier to find answers to common questions quickly.

J1

**Use Redundant Navigation to Make It Easy to Find Your FAQ Page** • Have multiple links to your FAQ page, including one from the NAVIGATION BAR (K2) to the FAQ page, labeled **FAQ** or **Help**. You can also locate the FAQ page under ABOUT US (E5) and on the PAGE NOT FOUND (K14) page.

K2

E5

K14

B4

Use a TASK-BASED ORGANIZATION (B4) scheme to link to specific questions on the FAQ page. For example, if the FAQ page contains information about shipping policies, make this information easily accessible on the QUICK-FLOW CHECKOUT (F1) pages, where customers are more likely to need it.

F1

**Use the FAQ Page Only as a Temporary Fix for Usability Problems** • Do not rely on the FAQ page to help your customers overcome usability problems. Design the Web site to help customers successfully accomplish their tasks. Consider the FAQ page a redundant source of information. Your customers' goal is not to browse through the FAQ page, but to accomplish a particular task, and the FAQ page is just one way of helping them do it.

Help • A-Z Index • Search

THE SOURCE FOR JAVA™ TECHNOLOGY  
java.sun.com

**JAVASERVER PAGES™**  
**FREQUENTLY ASKED QUESTIONS**

**General FAQ**  
[What is JavaServer Pages™ technology?](#)  
[How does the JavaServer Pages technology work?](#)  
[What is a servlet?](#)  
[Why do I need JSP™ technology if I already have servlets?](#)  
[Where can I get the most current version of the JSP specification?](#)  
[How does the JSP specification relate to the Java 2 Platform, Enterprise Edition?](#)  
[Which web servers support JSP technology?](#)  
[Is Sun providing a reference implementation for the JSP specification?](#)  
[How is JSP technology different from other products?](#)  
[Where do I get more information on JSP technology?](#)

**Technical FAQ**  
[What is a JSP page?](#)  
[How do JSP pages work?](#)  
[Does JSP technology require the use of other Java platform APIs?](#)  
[How is a JSP page invoked and compiled?](#)  
[What scripting languages can I use with JSP technology?](#)  
[What is the syntax for JavaServer Pages technology?](#)  
[Can I create XML pages using JSP technology?](#)  
[Can I generate and manipulate JSP pages using XML tools?](#)  
[How do I use JavaBeans components \(beans\) from a JSP page?](#)  
[What does the JSP 1.1 specification include?](#)

**General FAQ**  
**What is JavaServer Pages technology?**

JavaServer Pages (JSP) technology provides a simplified, fast way to create web pages that display dynamically-generated content. The JSP specification, developed through an industry-wide initiative led by Sun Microsystems, defines the interaction between the server and the JSP page, and describes the format and syntax of the page.

**How does the JavaServer Pages technology work?**

JSP pages use XML tags and scriptlets written in the Java™ programming language to encapsulate the logic that generates the content for the page. It passes any formatting (HTML or XML) tags directly back to the response page. In this way, JSP pages separate the page logic from its design and display.

H7.2

(java.sun.com, October 20, 2001)

Figure H7.2

In many FAQ pages, questions are grouped together at the top and linked to the answers below or on separate pages.

**Encourage Your Community Site to Create a FAQ Page** • The FAQ page can be a significant community-building effort for COMMUNITY CONFERENCE (A3) sites. Usually a few people take the initiative to create the first version of the FAQ page, and they post it to the community site. They collect comments, new questions, and new answers from other members of the community and then iteratively improve the FAQ page (giving due credit to the contributors, of course). Figure H7.3 shows an example of a community conference FAQ page.

A3

**Figure H7.3**

Many community conference sites feature a FAQ page. This example shows a portion of the rec.birds newsgroup FAQ page, developed with the help of many members of the community.

```

Archive-name: birds-faq/wild-birds/part1
Last-modified: May 30, 2001
Posting-frequency: Every 37 days

rec.birds Frequently Asked Questions (FAQ) (Part 1/2)

This is part 1 (of 2) of the Frequently Asked Questions list for the Usenet
newsgroup rec.birds. The FAQ is posted every five weeks. Its current editor
is Lanny Chambers; send suggestions for new questions and other comments to
him. Remember the FAQ is intended as a living document about rec.birds,
constant updating is welcome!

This section of the FAQ contains information about rec.birds and about
wild birds. The other section of the FAQ contains pointers to more
information about wild birds.

Do not send articles to the FAQ editor for posting. rec.birds is an
unmoderated newsgroup, so you may post articles yourself. If you are a
newcomer to Usenet, please read the official articles about etiquette
in the newsgroup news.announce.newusers before you post.

Contents:

1.0. All-purpose rec.birds etiquette
1.1. I have a question about pet birds.
1.2. Are domestic cats Satan? --A Non-judgmental Attempt at Consensus.
1.3a. Can I "count" this bird?
1.3b. What are "listers"?
1.4. I found an injured bird; what can I do?
1.5. I found an abandoned nestling; what can I do?
1.6. A wild bird is annoying me; what can I do?
1.7. What is the Migratory Bird Treaty?
1.8. I saw a rare bird! What do I do?
1.9. Why does everybody seem to hate Starlings and House Sparrows so much?
1.10. Why does everybody seem to hate Cowbirds so much?
1.11. I saw a bird which I can't identify. Can someone help me?
1.12. How do I keep squirrels out of my feeders?
1.13. How can I make homemade hummingbird nectar?
1.14a. What kind of binoculars should I buy?
1.14b. What kind of scope should I buy?
1.15a. I found a dead bird with a band. What do I do?
1.15b. I saw a banded or marked bird. What do I do?
1.16. If we throw rice at our wedding, will birds eat it and explode?
1.17. Does providing food at feeders during summer keep birds from migrating?
1.18. If I stop feeding birds, will they die?
1.19. Does anyone archive rec.birds?
1.20. ETHICS FOR BIRDERS
1.21. Acknowledgements

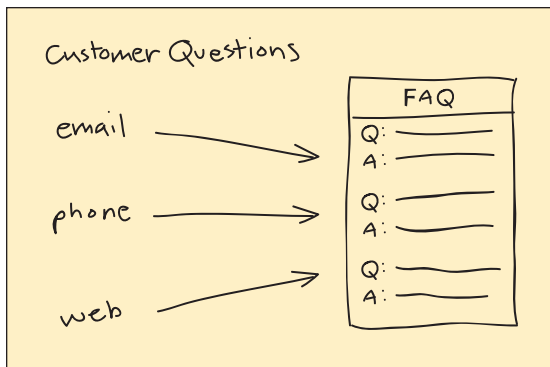
```

**H7.3**

(news://rec.birds, August 24, 2001)

## \* SOLUTION

Start by identifying some frequently asked questions with the entire design team. Review the questions and answers in your competitors' FAQ pages to identify any questions your team might have missed. Supplement your questions with those collected from people in close contact with target customers. Use an organizational scheme to group related questions. Add a search feature if there are many questions. Use redundant navigation to make it easy to find the FAQ page on your site. Use the FAQ page only as a temporary fix if there are usability problems.



H7.4

**Figure H7.4**

A FAQ page contains commonly asked questions and answers, helping customers help themselves.

## \* CONSIDER THESE OTHER PATTERNS

FAQ pages are useful for all kinds of Web sites, including PERSONAL E-COMMERCE (A1) sites, GRASSROOTS INFORMATION SITES (A6), EDUCATIONAL FORUMS (A8), and COMMUNITY CONFERENCE (A3) sites.

Short FAQ lists are usually organized on a single page; longer ones might use HIERARCHICAL ORGANIZATION (B3) and possibly POPULARITY-BASED ORGANIZATION (B7). Large FAQ lists should have a SEARCH ACTION MODULE (J1) to let people quickly search through the FAQ page.

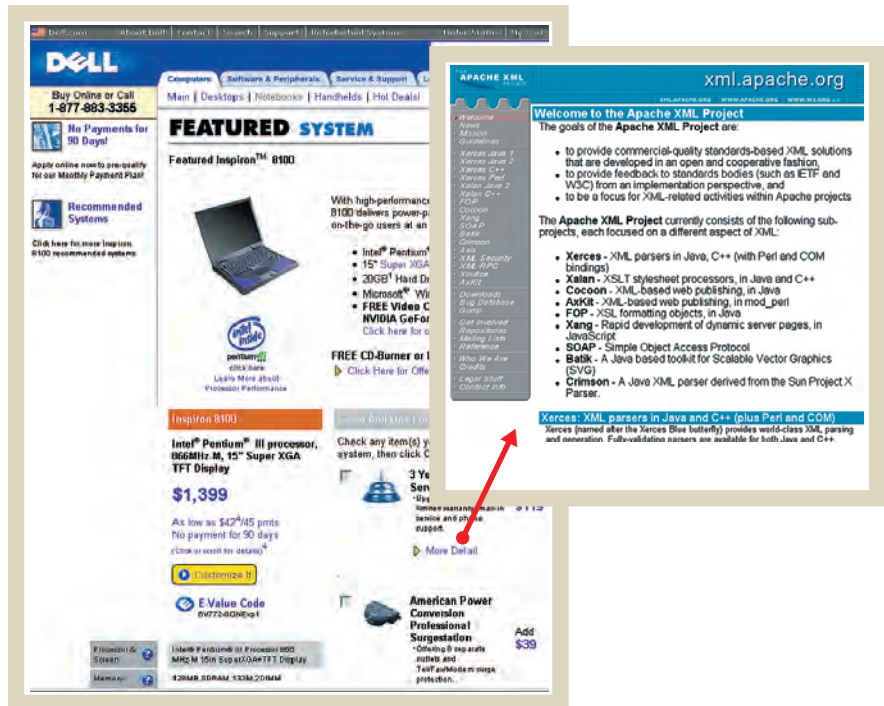
Link the FAQ page from the main NAVIGATION BAR (K2) as **Help** or **FAQ**, or put it on the ABOUT US (E5) and PAGE NOT FOUND (K14) pages. Use TASK-BASED ORGANIZATION (B4), with pages linking to a specific question and answer on the FAQ page, depending on the task.





**Figure H8.1**

Dell provides links to context-sensitive help to give customers detailed descriptions of features. This context-sensitive help is contained in a pop-up window, letting customers maintain the context of the task while seeing the information they need.

**H8.1**

(www.dell.com, October 24, 2001)

## ✳ BACKGROUND

**H1**

People will always encounter problems, finding that they need more information to complete a task. This may even occur when they are trying to complete a task in a PROCESS FUNNEL (H1). Help your customers by offering context-sensitive help that provides additional information related to the current task. This pattern describes context-sensitive help in general, presenting guidelines for how to use it most effectively.

## \* PROBLEM

Customers sometimes need highly specific help to complete a task.

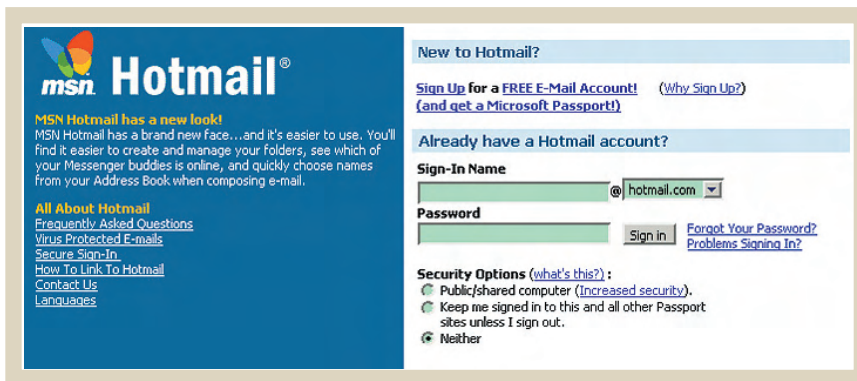
Sometimes, in the middle of a task, customers have questions that cannot be answered on the current page. Your Web site might already have a help page, but it does not make sense to force your customers to go to that page and lose the context of their work.

Address this problem by providing context-sensitive help. This means providing appropriate answers, both in text and links, near where customers are likely to have questions. The content might include any of the following:

- An example of what is expected, helping to PREVENT ERRORS (K12)
- A MEANINGFUL ERROR MESSAGE (K13) describing the problem and how to solve it
- Detailed descriptions (such as the POP-UP WINDOW (H6) in Figure H8.1 describing a feature in great detail)
- Steps describing how to do the task
- Part of the FREQUENTLY ASKED QUESTIONS (H7) page

In this section we describe some ways of using context-sensitive help on your Web site.

**Place Context-Sensitive Help near Where It Is Needed** • Place links and text to help your customers spatially. As Figure H8.2 shows, MSN Hotmail puts a “Why Sign Up?” link right next to links letting customers sign up for an e-mail account on its SIGN IN/NEW ACCOUNT (H2) page. MSN Hotmail also has “Forgot Your Password?” and “Problems Signing In?” links right next to where customers can sign in and check their e-mail.



H8.2

(www.hotmail.com, October 26, 2001)

K12

K13

H6

H7

H2

**Figure H8.2**

MSN Hotmail offers a great deal of context-sensitive help on its sign-in/new account page. Help appears in the form of friendly questions, such as “Why Sign Up?” “Forgot Your Password?” and “Problems Signing In?”



H6

**Consider Using Pop-Up Windows to Let Customers Maintain Context** • Use a POP-UP WINDOW (H6) to display help when people need to see the help page and stay on the same page. The résumé builder service provided by Monster.com, shown in Figure H8.3, has links to sample titles and objectives. Clicking on one of these links opens a pop-up window that contains examples, letting people see the information and still type in their information in the text fields.

**Figure H8.3**

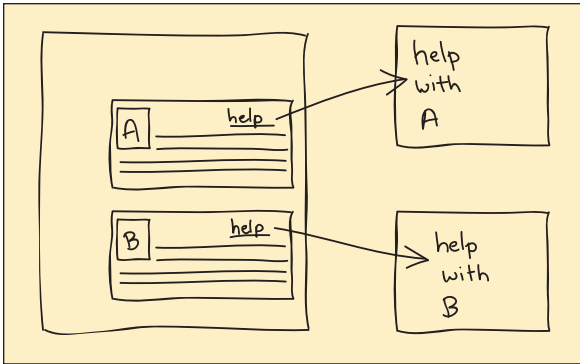
Monster.com, a Web site that matches job seekers with employers, provides a service where prospective job hunters build online résumés. This screen shot shows the step of the résumé builder in which job hunters are expected to enter in a title and objective. To help, Monster.com provides links to examples, which appear in pop-up windows.

**H8.3**

([www.monster.com](http://www.monster.com), October 26, 2001)

**\* SOLUTION**

Help your customers by placing context-sensitive text and links near where they are needed on a page. Consider using pop-up windows to display the help, letting people continue with their tasks.



H8.4

**Figure H8.4**

Context-sensitive help should be placed near the content that needs it.

**\* CONSIDER THESE OTHER PATTERNS**

Use context-sensitive help to PREVENT ERRORS (K12) and to provide MEANINGFUL ERROR MESSAGES (K13). Link context-sensitive help to a specific FREQUENTLY ASKED QUESTION (H7), or display it in a POP-UP WINDOW (H6) to let people maintain the context of a task.

- K12
- K13
- H7 H6