Tools for Hi-Fi Prototyping and Web Design

CS 147
November 6, 2006
Macromedia Flash

Interactive Vector Graphics, Line Drawing, and Animation
Basics

- Flash was created as an animation tool, but works quite well for hi-fi prototypes
- Everything follows an animation metaphor
  - A “stage,” frames and key frames, motion tweening...
- ActionScript used for programming
Drawing in Flash

- Comes with an extensive set of drawing tools
- Can aggregate drawings into Symbols and Movie Clips
  - These are the bread and butter of interactive elements
- Layers (a la Photoshop)
To Make Something Move

- Create a layer for the object
- Add a keyframe at the time when you would like the object to begin and finish its movements
To Make Something Move

- Select each keyframe and move the object to where it should appear at that point

- Tell it to Motion Tween
ActionScript

- Adds interactive functionality to your project
- Variant of Javascript
  - Untyped variables (type ‘var’)
  - Silent errors – no indication you’ve screwed up
  - Large library of built-in functions
    - Sounds
    - Movie Clips
    - Animation
    - Math, Geometry, etc.
- Good style: Always put code in a separate “Action” layer, in frame 0
ActionScript Example

```
48  this.playLoop_btn.onRelease = function() {
49    playLoop = true;
50    songPlay(songPosition());
51    if (_currentframe == 1)
52       gotoAndPlay(2);
53    else
54       play();
55  }
56
57  this.stop_btn.onRelease = function() {
58    songStop();
59    clearInterval(intervalLoop);
60  };
61
62  this.pause_btn.onRelease = function() {
63    if (playingNow) { // if we're currently playing
64      stop();
65      stopAllSounds();
66      playingNow = false;
67      clearInterval(interval);  
68      clearInterval(intervalLoop);
69    }
70  }
```
Project Examples

- Interactive Academic Planner
- Tone Deaf Revolution
- Chef--
- FEEDBack
- TeamShare
When to Use Flash

- Front-end looks are what you care about
  - Computational needs are somewhat minor
- Your product is an “interactive movie”
  - Potentially involves symbols that move or animate in response to users’ actions
  - Contains many screens
- You’re looking to craft an interface that would be difficult to create using most typical interface builders like Java Swing
Flash Resources

- Online Tutorials
  http://www.macromedia.com/support/flash/tutorial_index.html

- Ron & Bjoern’s Flash MX Tutorial:
  http://cs147.stanford.edu/flashmx
Microsoft Visual Basic

A Graphical Programming Environment and UI Designer

http://cs147.stanford.edu
What is Visual Basic?

- Programming environment based on the BASIC language
- One of the first languages to include a visual interface editor that behaves similar to a paint program
VB Screenshot
VB Basics

- Without worrying about syntax details, VB programmers can add a substantial amount of code by dragging and dropping controls, such as buttons and dialog boxes, and then defining their appearance and behavior.
- Event-driven: each object can react to different events, such as a mouse click or key press, with custom event handling code.
VB Basics

- Each VB project has two components, form and associated code. The form defines the layout of the widgets, and the code describes how they behave.

- Double-clicking on a widget brings you to the code specifying the behavior of that widget that runs in response to each event that it can trigger.
Pros and Cons

+ A full programming language, better than Flash for tasks involving real computation
+ Large library of built-in interface widgets
+ Easy to get started compared to Java or C++
  - Prototype won’t run on the web (compiles to a Windows executable)
  - Not as easy to do animation and interactive graphics
  - Standard widgets mean less flexibility in design: your prototype will look like every other Windows application
Project Examples

- Teacher Organizer
- Physician Order Entry
When to Use VB

- Your application uses fairly standard interface widgets (buttons, sliders, scroll bars, combo boxes)
- Your system requires some back-end computation for which Flash is ill-suited
- You want to build a “real” Windows application that Windows users can download and install
VB Resources

- Online tutorial for beginners: http://www.vbtutor.net/
- Lots of good VB examples with source code: http://pages.cpsc.ucalgary.ca/~saul/vb_examples/
Web Programming

Client and Server Side Solutions for Interactive Web Content

http://cs147.stanford.edu
Ways to Make Web Pages Interactive

- Client-side technologies: DHTML using Javascript, DOM
- Server-side technologies: PHP, CGI scripting (Perl/Python), database integration (mySQL), Java servlets, ASP/VBScript
“Plain” HTML

- A simple mark-up language used to create web documents
- HTML is not a programming language; no built-in interactivity
- CSS (Cascading Style Sheets) can be used with HTML to create formatting for Web pages
Dynamic HTML (DHTML)

- A group of technologies used to create interactivity on web pages, such as changes that occur from mouse actions.
- The DOM (Document Object Model) interface used in modern browsers allows programs and scripts to dynamically access and update the content, structure and style of documents; results of processing can then be incorporated back into the presented page.
Javascript

- A scripting language, originally created by Netscape, that can be embedded into the HTML of a web page to add interactivity
- Simplified, less structured version of Java
- Can interact with HTML, changing page dynamically in response to user input
- Timers, event handlers, form validation, animation, etc.
**CGI (Common Gateway Interface) Scripts**

- Small programs written in a language like Perl (most common), Python, C or C++
- Allow processing of form input, and connect HTML pages to other programs on the Web server; can be used to dynamically generate web pages in response to input
- For example, a CGI script could allow search data entered on a Web page to be sent to a database for lookup, and generate a response page of search results
- CGI script resides on the server and obtains data from the user via environment variables that the Web server makes available to it
PHP: a Hypertext “Preprocessor”

- A server-side, cross-platform, HTML embedded scripting language
- Lets you create dynamic web pages by embedding code directly into your HTML document
- When the server receives a request for a PHP document, it first runs the PHP code in the document, and then delivers the document to the client
- You can create and edit PHP documents the same way you normally create regular HTML pages
Web Programming Pros and Cons

+ Easy to get lots of users to test your application
+ Initial layout can be done in HTML, which you are probably already familiar with
+ Useful to learn, since more and more programs are becoming web-based
  - Web was not initially designed to be interactive, so programming web pages for interactivity can be awkward
  - Very limited collection of standard “widgets”
  - Difficult to do animation
  - There are still problems with compatibility across browsers and operating systems
When to build for the web

- Your proposed system is intended to be run on the web
- You want to test community-based features and need to recruit a large user community
- You want to integrate your system with a database
Web Project Examples

- iMenu
- MyStanford
- BetterBiking
- WhereToBe
- MedTrax
Web Programming Resources

- Web page for CS193i: Internet Technologies
  http://www.stanford.edu/class/cs193i/handoutsSum2004/handouts.html

- CGI Programming in Perl:

- CGI Programming in Python:
  http://www.devshed.com/c/a/Python/Writing-CGI-Programs-in-Python

- Javascript tutorial:
  http://www.w3schools.com/js/default.asp
Java and Eclipse

Full-featured Programming Language and IDE
Java Swing
Pros and Cons

+ Your app will use the standard widgets

- Your app will use the standard widgets (hard to make something that doesn’t just look like a standard application). Flash might be better in this case.

- Easy to get sucked into coding non-interface things (hooking it up to databases, etc...). We don’t want you to do this.
Eclipse

Should have seen this before CS 147. If not...

If you are coding in Java, we highly recommend using Eclipse (http://eclipse.org)

Many useful features

- Ctrl-1 (to suggest fixes for broken code)
- Ctrl-Space (intelligent auto-complete)
- For more productivity tips: http://www.javaworld.com/javaworld/jw-08-2005/jw-0829-eclipse.html
Using Swing

Online documentation for UI code:
http://java.sun.com/docs/books/tutorial/uiswing/index.html

Eclipse has a Visual Editor (installed separately) which allows you to drag and drop GUI elements, but we don’t think it is that useful.

If you are really interested:
Eclipse Visual Editor

Again, you have to understand something about writing GUI code even make sense of the visual editor (so we don’t recommend it)...

```java
public class Test extends JFrame {
    private javax.swing.JPanel jContentPane
    public static void main(String[] args) {
        /* This is the default constructor */
        /*
        public Test() {
            super();
            initialize();
        }
*/
    }
}
Java Examples

- N
- The Familiar: A Magic Deckbuilding Aid
- DigitalNotes
- SleepSoft
Mobile Phone Programming

J2ME and BREW
Mobile Programming
Pros and Cons

- **Pros**
  - Realistic look and feel
  - Phone interface built-in to the emulator
  - Familiar programming languages (Java or C++)

- **Cons**
  - May be too much depth and capabilities
  - Can get bogged down in backend programming
  - New API to learn
J2ME vs. Brew

- Java-based
- Download Netbeans or Eclipse; JRE SDK; Netbeans Mobility Pack; and J2ME Wireless Toolkit
- Information: http://java.sun.com/j2me/index.jsp
- Download: http://www.eclipse.org/ or http://www.netbeans.org/

- C/C++ natively
- Supports Java and XML
- Supported on QUALCOMM CDMA
- Information: http://brew.qualcomm.com/
- Download: https://brewx.qualcomm.com/brew/sdk/download.jsp?page=dx/3.1
Netbeans Visual Designer

- **Screens**
  - The different types of screens available to use

- **Commands**
  - Correspond to the two “special function” buttons on your phone
  - Can be applied to the entire form
  - Can be applied to individual form items such that the command is only visible when that form item is selected

- **Form Items**
  - The various UI controls available in J2ME

- **Elements**
  - Choice and list elements correspond to the ChoiceGroup form item
  - To make a radio button, you need to insert elements into a ChoiceGroup
Example screen items

- Form title
- String item
- Spacer
- DateField
- ChoiceGroup
- ChoiceElements
- Commands
History of Web Development
Learning Goals

- Be familiar with the kinds of interactive techniques that have been and can be used on the web
- Know the different technologies that are used for web development
- Understand how the basic principles of interaction design are applied in real-world web design
A Brief History of Web Interfaces

- Protocols
  - There is a stack of layers from low level (close to the machine) to higher (closer to user purposes)

- Formats
  - Readability vs. efficiency
  - Open vs. proprietary

- Tools
Arpanet (1968)

- **Goals**
  - Remote use of computers
  - Robustness in face of computer and communications failures
    - Decentralized architecture
    - End-to-end reliability
- **Unexpected major uses**
  - Human-to-human communication
  - Commerce
The Internet (1982)

- Formats
  - Domain names (e.g., hci.stanford.edu)
  - Email message format
  - ...

- Internet Protocols
  - IP/TCP: Internet Protocol / Transmission Control Protocol
  - FTP: File Transmission Protocol
  - SMTP: Simple Mail Transmission Protocol
  - ...

- Later Research Protocols at a Higher Layer
  - Gopher
  - WAIS: Wide Area Information Server
  - ...

SMTP Protocol Example

S: 220 www.example.com ESMTP Postfix
C: HELO mydomain.com
S: 250 Hello mydomain.com
C: MAIL FROM: <sender@mydomain.com>
S: 250 Ok
C: RCPT TO: <friend@example.com>
S: 250 Ok
C: DATA
S: 354 End data with <CR><LF>.<CR><LF>
C: Subject: test message
C: From: sender@mydomain.com
C: To: friend@example.com
C:
C: Hello,
C: This is a test.
C: Goodbye.
C: .
S: 250 Ok: queued as 12345
C: QUIT
S: 221 Bye
Precursors of the World-Wide Web

- Hypertext in general
  - Proposed by Vannevar Bush in 1945, implemented by Engelbart and others in the 60s
- Hypertext with images and actions
  - Hypercard, 1987
- Internet addressing
  - Domain and mail addresses from Internet Standards
- Markup Languages
  - SGML: Standard Generalized Markup Language (for documents), started in the 1970s
- Stateless protocols
  - Server doesn’t need to keep track of multiple clients
Basic Hypertext Web (Berners-Lee, 1991)

- **Formats:**
  - **URL:** Uniform Resource Locator (or Universal Resource Locator)
    - How you identify an object anywhere on the web
  - **HTML:** Hypertext Markup Language
    - How you specify what you want to appear on the page

- **Protocols:**
  - **HTTP:** Hypertext Transport Protocol
    - Stateless communication between browser and server
      - Basic model is sending independent “pages”
      - Requests, responses, status codes, ...
        - E.g., “HTTP/1.0 404 Object Not Found”

- **Browsers and Servers**
The First Known Web Page

World Wide Web

The World Wide Web (W3) is a wide-area hypertext information retrieval initiative aiming to give universal access to a large universe of documents.

Everything there is online about W3 is linked directly or indirectly to this document, including an executive summary of the project, Mailing lists, Policy, November’s W3 news, Frequently Asked Questions.

What’s out there?
- Pointers to the world’s online information, subjects, W3 servers, etc.

Help
- on the browser you are using

Software Products
- A list of W3 project components and their current state. (e.g., Line Mode, X11, Viola, NeXT Step, Servers, Tools, Mail robot, Library)

Technical
- Details of protocols, formats, program internals etc

Bibliography
- Paper documentation on W3 and references.

People
- A list of some people involved in the project.

History
- A summary of the history of the project.

How can I help?
- If you would like to support the web.

Getting code
- Getting the code by anonymous FTP, etc.
<HTML>
<HEAD>
<TITLE>SGML METADATA FORMAT</TITLE>
<meta HTTP-EQUIV="Content-Type" content="text/html; charset=ISO-8859-1">
<meta name="DC.Description" content="">
<meta name="Keywords" content="">
</HEAD>
<BODY BGCOLOR="#FFFFF">
<H1><CENTER>ANZLIC Metadata - SGML Format</CENTER></H1>
<H2>What is SGML?</H2>
<P>
<A HREF="http://www.sgmlopen.org">Standard Generalized Markup Language</A>, also known as SGML, became an International Organisation for Standardisation (ISO) standard in 1985. It is used to define the structure of electronic text files or documents. It is concerned primarily with structure and not with the content of the document.  

It consists of text contained within a series of fields called elements which are defined by markup tags at the beginning and end of each field. These tags are contained within triangular brackets, &lt;&gt;. The beginning and ending tag contain the same name however the ending tag name is preceded by a forward slash, /.  

SGML is designed primarily for defining the structure of electronic documents and not for direct viewing by the user. But if you did look at an SGML file, what would it look like? Below is an example of an extract from an SGML document:<BR>
</P>
&lt;anzmeta&gt;</FONT>
Lynx
Text-based
Browser
Adding Images: Mosaic (1993)
Beyond Read-only (1995)

- Server-side scripting
- Standard form elements
  - Text
  - Checkbox
  - Radio button
  - Pull-down list
- WYSIWYG Web editors
- Browser plug-ins
WYSIWYG HTML Editing
(Dreamweaver, FrontPage)
Getting Interactive

- **Java Applets**
  - Run as an independent program, inside the browser
  - Not connected to the rest of the HTML, etc.

- **Javascript (not related to the Java language!)**
  - Programs that run in your browser between contacts with a server (Client-side scripting)
  - Event/object-driven language (like HyperTalk, 1987, and others)

- **DHTML: Dynamic HTML**
  - **DOM: Document Object Model**
    - Uniform way to access and modify elements of the document and display
    - Separation of model from presentation
  - **CSS: Cascading Style Sheets:** Presentation specification through hierarchy of templates and classes
Getting More Interactive – RIA: Rich Internet Applications

- Director / Flash
  - Proprietary standards and mechanisms for interactive and animated content

- AJAX: Asynchronous Javascript and XML
  - Style of programming that combines advantages of server and client side processing
  - Used to develop

- XML: Extensible Markup Language
  - Standard way to easily handle content formats

- XUL: XML User Interface Language
  - Provides programming control over Firefox browser elements
Issues in Bringing Interactivity to the Web

- **Latency** - Time to get the next action done
  - Page loading time can be slow and/or unpredictable
  - Bandwidth limitations slow down large transfers
- **Directness** - Operating on the object
  - e.g., drag and drop
- **State management** - Keeping context across sessions
  - Cookies and logins
- **Compatibility**
  - What is usable across browsers and OS platforms?
- **Security** - Protecting you from bad guys
  - What can a web site do to your browser and the rest of your machine?
    - Sandboxing
    - How can information be protected from interception
      - Secure HTML, HTTP, etc.
Designing for the Web: An Introduction

Material based on James Landay, Jason Hong, and Scott Klemmer’s UC Berkeley continuing education course “User Interface Design, Prototyping, and Evaluation”
Good Website Design Matters

- NY Times, Aug 30 1999, on IBM Web site
  - “Most popular feature was ...search ...because people couldn't figure out how to navigate the site“
  - “The second most popular feature was the help button, because the search technology was so ineffective.”

- After redesign:
  - use of the "help" button decreased 84 percent
  - sales increased 400 percent
Web Design Specialties

- Graphic Design (Visual Design)
  - Visual communication of information using elements such as color, images, typography, and layout.
  - Page-oriented

- Information architecture
  - Information design
    - identifying groups of related content and structuring information into a coherent whole.
  - Navigation design
    - the design of methods of finding one’s way around the information structure
  - Site oriented
Outline

- Web Design Process, Specialties & Artifacts
- Detailed Design Example
- Web Design Patterns
Web Design Process

- Start
- Discovery
- Design
- Prototype
- Evaluate
- Refinement
- Implementation
- Production
- Launch
- Maintenance
Design Specialties

- Information Architecture
  - encompasses information & navigation design
- User Interface Design
  - also includes testing & evaluation
Artifacts of Design Process

- Designers create representations of sites at *multiple levels of detail*
- Web sites are iteratively refined at all levels of detail
Site Maps

- High-level, coarse-grained view of entire site
Storyboards

- Interaction sequence, minimal page level details
Schematics

- Page structure with respect to information & navigation
Mock-ups

- High-fidelity, precise representation of page
**New CD Releases!**

only $11.88!

Red Hot Price for the Chili Peppers' New CD: $11.88!

Evolving after the popularity of Californication, the Chili Peppers release a new album featuring the hit song "By the Way".

In-Stock Now!

**Weezer**

<table>
<thead>
<tr>
<th>Price</th>
<th>List</th>
</tr>
</thead>
<tbody>
<tr>
<td>$6.99</td>
<td>$18.97</td>
</tr>
</tbody>
</table>

**The Slim Shady LP**

<table>
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<th>List</th>
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<tbody>
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<td>$12.96</td>
<td>$18.97</td>
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</tbody>
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**Eagles**

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<th>Price</th>
<th>List</th>
</tr>
</thead>
<tbody>
<tr>
<td>$11.54</td>
<td>$24.97</td>
</tr>
</tbody>
</table>

**10, Moby**

<table>
<thead>
<tr>
<th>Price</th>
<th>List</th>
</tr>
</thead>
<tbody>
<tr>
<td>$10.99</td>
<td>$18.98</td>
</tr>
</tbody>
</table>

**Just Released: The Royal Tenenbaums for $18.45**

Wes Anderson (Rushmore) directs a motley crew of talented actors in this hysterical comedy about the rise and fall of an eccentric family.

In-Stock Now!

<table>
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<tr>
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<td>$24.99</td>
</tr>
</tbody>
</table>

**Gateway Desktop Under $400!**

$399.00

Includes an 800MHz Intel Celeron processor, 256MB RAM, 20GB hard drive, DVD-ROM drive, and more!

**Save Over $100 on Dell Latitude CPX!**

$639.00

Get the best quality at the best price with the Dell Latitude CPX featuring an Intel Pentium III@500 MHz processor, 256 MB RAM and 12 GB hard drive.

**Gateway Desktop Under $500**

$499.00

Includes a 1.33GHz Intel Pentium III processor, 256MB RAM, 20GB hard drive, CD-RW drive, 250MB ZIP Drive, and more!

More great deals...
# Weezer (2001)

**Weezer**  

Our best price: **$6.99**  
List Price: **$19.97** (Save: **$11.98**)

---

**Find out more...**  
[Full product info, Product Reviews]

Not ready to buy?  
[Add to your Wish List, Preorder this item, May we also suggest...]

---

## Like New

<table>
<thead>
<tr>
<th>Price</th>
<th>Total Price</th>
<th>Seller (Rating)</th>
<th>Seller Comments</th>
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<td>$10.20</td>
<td>custodian46 (149)</td>
<td>best buy</td>
</tr>
<tr>
<td>$8.00</td>
<td>$10.45</td>
<td>stargazer12 (2)</td>
<td>Disk, case, and liner all in excellent</td>
</tr>
<tr>
<td>$8.25</td>
<td>$10.70</td>
<td>deezvix (1205)</td>
<td>SEALED NEW BMG</td>
</tr>
<tr>
<td>$8.35</td>
<td>$10.75</td>
<td><a href="mailto:naolia@hotmail.com">naolia@hotmail.com</a> (35)</td>
<td>Perfect condition</td>
</tr>
</tbody>
</table>

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## Very Good

<table>
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</tr>
</thead>
<tbody>
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<td>perfect</td>
</tr>
<tr>
<td>$8.84</td>
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<td>steveag1 (82)</td>
<td></td>
</tr>
<tr>
<td>$9.00</td>
<td>$11.45</td>
<td>sainttimothy (18)</td>
<td>Great shape... first class ship</td>
</tr>
</tbody>
</table>
Redeeming a Gift Certificate or Coupon?

Shopping Cart

**Weezer (2001)** Weezer, Weezer (Music)
- CD, Release Year: 2001
- Seller: nainia@hotmail.com (35)
- Condition: Like New • Notes: Perfect condition

Item: $8.30
Media Mail: $2.45
(Change Shipping Method)

TOTAL: $10.75

Gift Certificates and Coupons

Redeeming your Half.com Gift Certificate or Coupon is easy. Just enter your Claim Code in the box to the right and click **'Redeem'**.
Enter your User ID and Password.

Are you a half.com user having trouble signing in? Get help now.

eBay User ID
You can also use your registered email.

eBay Password
Forgot your password?
Learn how to protect your account

Secure Sign In or Register Now

Keep me signed in on this computer unless I sign out. Learn more.

Having problems signing in? Get help now.

For more information about sign in, visit sign in help.
Step 1 - Choose Shipping Address

Ship my order to:

Jason Hong
387 Soda Hall Computer Science UC Berkeley
Berkeley, CA 94720

Use This Address

OR

Enter a new shipping address:

Name
Street address
City
State
Select State
ZIP code
Country
USA

Save Changes
**Order Summary**

Seller: naojia@hotmail.com (35)
Condition: Like New • Notes: Perfect condition

<table>
<thead>
<tr>
<th>Item</th>
<th>Media Mail</th>
<th>Subtotal</th>
</tr>
</thead>
<tbody>
<tr>
<td>$8.30</td>
<td>$2.45</td>
<td>$10.75</td>
</tr>
</tbody>
</table>

**Total Merchandise:** $8.30  
**Total Shipping:** $2.45  
**TOTAL:** $10.75

**Ship to**
Jason Hong  
387 Soda Hall Computer Science UC Berkeley  
Berkeley, CA 94720

**Bill to**
MasterCard ending with 0155  
Expires 11/2003  
Zipcode: 94709

Use this shipping and billing information as my Speedy Checkout settings.

**Place my order!**
Basic Web Design

- Let's take a closer look page by page
NEW: Counting Crows: Hard Candy $11.88 Save 37%!

The Smallest Place to Buy and Sell Books, Music, Computers, Electronics, DVDs & more...

New CD Releases!
only $11.88!

More Hot New Releases!

---

Welcome
Learn about Buying
Learn about Selling
Register Now!

Announcement Board
Updated Jun 13, 2002

---

Categories
Books
Textbooks, Fiction, Biography, Cooking, Business, & more...

Music
Rock, Hip Hop/Rap, Country, Pop, eBay items, & more...

Movies/DVDs
Action, Comedy, Children's, Romance, Animation, & more...

---

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Evolving after the popularity of Californication, the Chili Peppers release a new album featuring the hit song "By the Way."

Weezer, Weezer
Our Price: $6.99
List Price: $18.97

Gutterflower, Goo Goo Dolls
Our Price: $2.98
List Price: $18.97

The Slim Shady LP, Eminem
Our Price: $2.98
List Price: $10.90

Echoes, Pink Floyd
Our Price: $11.54
List Price: $24.97

19, Moby
Our Price: $10.99
List Price: $19.99

---

In Stock Now!
Just Released: The Royal Tenenbaums for $18.45
Wes Anderson (Rushmore) directs a motley crew of talented actors in this hysterical comedy about the rise and fall of an eccentric family.

Monter's Ball (DVD)
Our Price: $11.25
List Price: $24.99

---

Advance Orders
The Simpsons: Complete 2nd Season (DVD) $34.97
Save 30%

The Sopranos: Complete 3rd Season (DVD) $67.99 Save 32%
Tom Clancy: Red Rabbit (Hardcover) $19.40 Save 33%

---

In Computers
Gateway Desktop Under $400!
$399.00
Includes an 800MHz Intel Celeron processor, 256MB RAM, 20GB hard drive, DVD-ROM drive, and more!

Gateway Desktop Under $500
$499.00
Includes a 1GHz Intel Pentium III processor, 256MB RAM, 20GB hard drive, CD-RW drive, 250MB ZIP Drive, and more!

Save Over $100 on Dell Latitude CDPx!
$629.00
Get the best quality at the best price with the Dell Latitude CDPx featuring an Intel Pentium III 500 MHz processor, 256 MB RAM and 12 GB hard drive.

---

More great deals...
What site is this?

- Logo in top-left corner denotes the site
- Another logo at top-right to reinforce

examples of SITE BRANDING (E1)
What kind of site is this?

- Shopping cart icon
- Tab row content
- Categories on left
- Prices in content area
- Example of PERSONAL E-COMMERCE (A1)
What can I do here?

- Welcome for new visitors
- Tab row / Search on top
- "Categories"
- Prices
- Examples of OBVIOUS LINKS (K10)
New CD Releases! only $11.88!

Red Hot Price for the Chili Peppers' New CD: $11.88!
Evolving after the popularity of California, the Chili Peppers release a new album featuring the hit song "By the Way."

In-Stock Now!

- Weezer, Weezer
  Our Price $6.99, List Price $8.97
- Goo Goo Dolls
  Our Price $7.99, List Price $9.97
- Eminem
  Our Price $2.98, List Price $4.97
- Pink Floyd
  Our Price $7.99, List Price $9.97
- Moby

In-Stock Now!

- Monster's Ball (DVD)
  Our Price $11.25, List Price $24.99

- Most important info visible without scrolling
- ABOVE THE FOLD (I2)

More hot new releases!
# Weezer (2001)

**Weezer**

**Our best price:** $6.99  
**List Price:** $10.97 (Save: $4.08)

- **Find out more**
  - Full product info, Product Reviews
- **Not ready to buy?**
  - Add to your Wish List, Preorder this item. May we also suggest...

## Like New

<table>
<thead>
<tr>
<th>Price</th>
<th>Current Price</th>
<th>Seller</th>
<th>Seller Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>$7.75</td>
<td>$10.20</td>
<td>custodian46 (149)</td>
<td>best buy</td>
</tr>
<tr>
<td>$8.00</td>
<td>$10.45</td>
<td>starzazer13 (3)</td>
<td>Disk, case, and liner all in excellent condition</td>
</tr>
<tr>
<td>$8.25</td>
<td>$10.70</td>
<td>dazzylisa (1205)</td>
<td>SEALED NEW BMG</td>
</tr>
<tr>
<td>$8.30</td>
<td>$10.75</td>
<td><a href="mailto:naolea@hotmail.com">naolea@hotmail.com</a> (35)</td>
<td>Perfect condition</td>
</tr>
</tbody>
</table>

74 items in stock

- **View all Like New Items**

## Very Good

<table>
<thead>
<tr>
<th>Price</th>
<th>Current Price</th>
<th>Seller</th>
<th>Seller Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>$8.00</td>
<td>$10.45</td>
<td>lucidsky (14)</td>
<td>perfect</td>
</tr>
<tr>
<td>$8.84</td>
<td>$11.29</td>
<td>steege1 (2)</td>
<td></td>
</tr>
<tr>
<td>$9.00</td>
<td>$11.45</td>
<td>sainttimothy (10)</td>
<td>Great shape...first class ship</td>
</tr>
</tbody>
</table>

17 items in stock

- **About this album:**
  - Song List
  - Album Credits
  - Album Notes
  - Editorial
  - Customer Reviews

- **About the Artist:**
  - Other Works

- **Spread the Word:**
  - Write a Review
  - Email a Friend

- **Compare our Prices:**
  - Half.com $6.99
  - CNDW $15.66
  - AlphaCraze $15.69
  - CD Universe $15.69

- **Sell yours now!**
What site am I at?

- Logo in upper-left reinforces brand, can click to go to home
- Same font, layout, color scheme also reinforces
  examples of SITE BRANDING (E1)
Where am I in the site?

- “Home > Music” are LOCATION
  BREAD CRUMBS (K6)
- TAB ROW (K3) says “Music”
- Album cover, “Product Highlights”, and CD cover
People who bought "Weezer (2001)" also bought:

  - Weezer
  - Save $6.97 - Best price: **$5.00**

- **Pinkerton** CD, Release Year: 1996
  - Weezer
  - Save $10.95 - Best price: **$6.00**

- **Hybrid Theory** CD, Release Year: 2000
  - Linkin Park
  - Save $11.68 - Best price: **$6.29**

### About this album

**Song List**
1. Don't Let Go
2. Photograph
3. Hashpipe
4. Island In The Sun
5. Crab
6. Knock-Down Drag-Out
7. Smile
8. Simple Pages
9. Glorious Days
10. O Girlfriend

**Album Credits**
- Ken Allerdyce, Engineer
- Ric Ocasek, Producer

- **Impulse buy**
- **PESONALIZED RECOMMENDATIONS (G3)**
- **About this album**
- **Lots of unused space**
- **Still more info below...**
Album Notes
Weezer: Rivers Cuomo (vocals, guitar); Brian Bell (guitar); Matt Sharp (bass); Patrick Wilson (drums). Recorded at Cello Studios, Los Angeles, California in December 2000. In 1994 Weezer burst onto the music scene, reaching platinum status with their debut, and in the process proving that there was still room in an airbrushed MTV world for unrepentant power pop played by decidedly non-airbrushed guys. Following a brief sojourn into semi-deconstructionism, 1997's PINKERTON, the four men who make up Weezer serve up a third offering, WEEZER 2001, returning to the sound and producer of their successful debut. Nowhere does producer Ric Ocasek define his trademark refined power pop style more than with Weezer. Unlike the immediate, obvious pop hooks of the string of singles on the first album, though, the songs on WEEZER 2001 may take a few listens to settle in. However, once the subtle-yet-undeniable refrains of such tracks as "Crab," "Don't Let Go," and first single "Hash Pipe" make their way into your skull, they're there to stay, as furious, fuzzy, layered guitars compliment Rivers Cuomo's raw, vulnerable vocals. While this disc clocks in at less than a half-hour long, it packs more hooky wallop than many double live albums.

Product Reviews

Editorial Reviews
Spin (01/01/2002)
Ranked #9 in Spin's Albums of the Year 2001
 Ranked #13 in AP's 25 Best Albums of 2001
Rivers Cuomo's shrink another hot tub...O Casek defined the new C word: multi. The 10 excellent tunes in less than half an hour will leave you with zero filler and enough psychosocial content to buy leader magazines. They are the new Cars. - Alternative Press (3/02, p.65)

Customer Reviews
Rated 4.3 out of 5.0 by 29 raters.
- Read Customer Reviews
- Rate this item

- Is this product any good?
- Editorial reviews
- Customer reviews
- RECOMMENDATION COMMUNITY (G4)

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Redeeming a Gift Certificate or Coupon?

**Shopping Cart**

**Weezer (2001)** Weezer, Weezer (Music)
- CD, Release Year: 2001
- Seller: naoja@hotmail.com (35)
- Condition: Like New • Notes: Perfect condition

Move to WishList • Remove from Cart • Find another one

**Gift Certificates and Coupons**

Redeeming your Half.com Gift Certificate or Coupon is easy. Just enter your Claim Code in the box to the right and click 'Redeem'.

**Proceed to Checkout**
What site am I at?
- Logo in upper-left
- Colors, layout, font
- examples of SITE BRANDING
- Where am I in the site?
  - Last link clicked was “Buy!”
  - “Shopping Cart” and “Proceed to Checkout” reinforce that this is “the right page”
- SHOPPING CART (F3)
• **Cross-selling**
  - Possibly a pleasant surprise
  - Impulse buy
  - CROSS-SELLING & UP-SELLING (G2)
What am I going to buy?
- Easy to remove
- Easy to move to wishlist
How much will it cost?
- Shipping costs there, no nasty surprises
SHOPPING CART (F3)
What can I do?

- “Proceed to Checkout” HIGH VISIBILITY ACTION BUTTON (K5)
  - Visually distinct
  - 3D, looks clickable
  - Repeated above and below the fold
Checkout

Enter your User ID and Password.

Are you a half.com user having trouble signing in? Get help now.

eBay User ID
You can also use your registered email.

eBay Password
Forgot your password?
Learn how to protect your account

Secure Sign In or Register Now

Keep me signed in on this computer unless I sign out. Learn more.

Having problems signing in? Get help now.

For more information about sign in, visit sign in help.
Checkout

Enter your User ID and Password.

Are you a half.com user having trouble signing in? Get help now.

eBay User ID
You can also use your registered email.

eBay Password
Forgot your password?
Learn how to reset your account

Secure Sign In Register Now

Keep me signed in on this computer unless I sign out. Learn more.

Having problems signing in? Get help now.

For more information about sign in, visit sign in help.

Or sign in to eBay using:

PASSPORT Sign In

What if I don’t have a User ID?

What if I forgot my password?

SIGN-IN/NEW ACCOUNT (H2)
Step 1 - Choose Shipping Address

Ship my order to:

Jason Hong  
387 Soda Hall Computer Science UC Berkeley  
Berkeley, CA 94720

OR

Enter a new shipping address:

Name  
Street address  
City
If U.S. Military, enter APO/FPO for City.
State  
Select State  
If U.S. Military, select AE, AP or AA from bottom of list for State.
ZIP code  
Country  
USA

Save Changes
Step 1 - Choose Shipping Address

Ship my order to:

Jason Hong
387 Soda Hall Computer Science UC Berkeley
Berkeley, CA 94720

OR

Enter a new shipping address:

**Name**

**Street address**

**City**

If U.S. Military, enter APO/FPO for City.

**State**

Select State

**ZIP code**

**Country** USA

Save Changes

- **What site?**
  - Logo, layout, color, fonts
- **Where in site?**
  - Checkout, step 1 of 3
  - “Choose shipping address”
  - QUICK-FLOW CHECKOUT (F1)
Step 1 - Choose Shipping Address

Ship my order to:

Jason Hong
387 Soda Hall Computer Science UC Berkeley
Berkeley, CA 94720

OR

Enter a new shipping address:

Name
Street address
City
State
ZIP code
Country

- Note what’s different
  - No tab rows
  - No impulse buys
  - Only navigation on page takes you to next step

- This is a PROCESS FUNNEL (H1)
  - Extraneous info and links removed to focus users
Order Summary

**Weezer (2001)** Weezer, Weezer (Music)
Seller: naggio@hotmail.com (35)
Condition: Like New • Notes: Perfect condition

<table>
<thead>
<tr>
<th>Item</th>
<th>Media Mail</th>
<th>Subtotal</th>
</tr>
</thead>
<tbody>
<tr>
<td>$8.30</td>
<td>$2.45</td>
<td>$10.75</td>
</tr>
</tbody>
</table>

Total Merchandise: $8.30
Total Shipping: $2.45
TOTAL: $10.75

Ship to
Jason Hong
387 Soda Hall Computer Science UC Berkeley
Berkeley, CA 94720
Edit / Change Shipping Address

Bill to
**MasterCard** ending with 0155
Expires 11/2003
Zipcode: 94709
Edit / Change Billing

Use this shipping and billing information as my Speedy Checkout settings.

Place my order!
- Last step of process
  - Step 3, “Place Order”
  - “Place my order” button
- Two high-visibility action buttons (K5) for fold
- No nasty surprises
  - Can see order
  - Total price is same as shopping cart
  - ORDER SUMMARY (F7)
• Easy to change shipping and billing
• Easy to save this info
  - Easier to setup info in context of specific task
  - Clearer to users why this info is needed

Edit / Change Shipping Address
Edit / Change Billing

Use this shipping and billing information as my Speedy Checkout settings.
Outline

- Web Design Process, Specialties & Artifacts
- Detailed Design Example
- *Web Design Patterns*
Design = Solutions

- Design is about finding solutions
- Unfortunately, designers often reinvent
  - Hard to know *how* things were done before
  - *Why* things were done a certain way
  - *How* to reuse solutions
Design Patterns

- Design patterns communicate common design problems and solutions
- First used in architecture [Alexander]
- Ex. How to create a beer hall where people socialize?
Using Design Patterns

- Not too general and not too specific
  - Use a solution “a million times over, without ever doing it the same way twice”
- Design patterns are a shared language
  - for “building and planning towns, neighborhoods, houses, gardens, & rooms.”
  - Ex. Beer hall is part of a center for public life...
  - Ex. Beer hall needs spaces for groups to be alone...ALCoves
A Web of Design Patterns

(8) Mosaic of Subcultures

(31) Promenade

(90) Beer Hall

(33) Night Life

(95) Building Complex

(179) Alcoves

(181) The Fire
Web Design Patterns

- Now used in Web design
- Communicate design problems & solutions
  - how to create navigation bars for finding relevant content...
  - how to create a shopping cart that supports check out...
  - how to make e-commerce sites where people return & buy...
Navigation Bar

- Problem: Customers need a structured, organized way of finding the most important parts of your Web site.
Navigation Bar

- Solution Diagram
  - Captures essence of how to solve problem
Patterns Support Creativity

- Patterns come from successful examples
  - sites that are so successful that lots of users are familiar with their paradigms (e.g., Yahoo)
  - interaction techniques/metaphors that work well across many sites (e.g., shopping carts)
- Not too general & not too specific
  - you need to specialize to your needs
- Patterns let you focus on the hard, unique problems to your design situation
  - every real design will have many of these
Process Funnel

- Problem: Need a way to help people complete highly specific stepwise tasks
  - Ex. Create a new account
  - Ex. Fill out survey forms
  - Ex. Check out
Process Funnel

Redeeming a Gift Certificate or Coupon?

Shopping Cart

CD, Release Year: 2001
Seller: najia@hotmail.com (25)
Condition: Like New • Notes: Perfect condition
Move to Wish List • Remove from Cart • Find another one

Item: $8.30
Media Mail: $2.45

TOTAL: $10.75

Gift Certificates and Coupons

Redeeming your Half.com Gift Certificate or Coupon is easy. Just enter your Claim Code in the box to the right and click "Redeem".

Proceed to Checkout ...(Speedy Checkout)
Process Funnel

- What’s different?
  - No tab rows
  - No impulse buys
  - Only navigation on page takes you to next step

- What’s the same?
  - Logo, layout, color, fonts
**Process Funnel**

- Problem: What if users need extra help?
FEATURED SYSTEM

Featured Dimension 4100

The Dimension 4100 desktop offers you amazing power and flexibility at a price that won't break your budget.

- Intel® Pentium® III processor at 933Mhz
- 40GB Hard Drive
- 128MB SDRAM
- 32MB Nvidia GeForce MX 4X AGP Graphics Card

Free Ground (3-5 day) Shipping with purchase of any new Dell Home System. Offer ends 4/23/01. Click Here for Details.

Great Add-Ons For This System

<table>
<thead>
<tr>
<th>Great Add-Ons For This System</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check any item(s) you wish to add to this system, then click Customize it.</td>
<td></td>
</tr>
<tr>
<td>3 Year On-Site Service</td>
<td>Add $99</td>
</tr>
<tr>
<td>• With on-site service, you don't have to leave your home or ship your computer to us should you have a problem.</td>
<td></td>
</tr>
<tr>
<td>Epson Stylus Color 880 Ink Jet Printer</td>
<td>Add $149</td>
</tr>
<tr>
<td>• A creative and versatile printer that features super fast print speeds.</td>
<td></td>
</tr>
</tbody>
</table>

E-Value Code: 6V771-4100pol

Processor
- Intel® Pentium® III processor at 933Mhz

Keyboard
- QuietKey® Keyboard

Click Customize It
### Featured Dimension 4100

**Intel® Pentium® III processor at 933MHz**

**$1,199**

As low as $36.44 per month. No payment for 90 days.

**Customize It**

<table>
<thead>
<tr>
<th>Processor</th>
<th><strong>QuietKey Keyboard</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**E-Value Code:** 6Y71-41Rpol

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**Keyboards**

**Great Keyboard Choices to Suit Your Needs:**

- Choose from standard-size and "space-saver" designs
- Ergonomic design for added comfort
- Hot Keys provide quick, one-touch access to frequently used programs and Web sites
- USB ports allow for quick and easy access to USB peripherals, such as digital cameras, scanners and joysticks

**Dell™ Enhanced Performance Keyboard**

- 6 Quiet Key Response
- Soft "rubberdome" touch
- 1.0 Hot Keys for easy access to your internet and e-mail
- E-mail Hotkey

**Dell™ Enhanced QuietKey**

- 9 Programmable Keys
- Soft "rubberdome"

**Dell™ Enhanced Performance**

- 7 Programmable Keys
- Built-in 2 port USB hub

---

**Keyboard Type**

<table>
<thead>
<tr>
<th>Keyboard Type</th>
<th>Dell™ QuietKey</th>
<th>Microsoft Internet Keyboard, Dell Edition</th>
<th>Dell™ Enhanced QuietKey</th>
<th>Dell™ Enhanced Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dell™ Enhanced Performance Keyboard</td>
<td>Quiet Key</td>
<td>6 Quiet Key Response</td>
<td>9 Programmable Keys</td>
<td>7 Programmable Keys</td>
</tr>
</tbody>
</table>

**Benefits**

- Quiet key response
- Soft "rubberdome" touch
- 1.0 Hot Keys for easy access to your internet and e-mail
- E-mail Hotkey
- 9 Programmable Keys
- Built-in 2 port USB hub
Process Funnel
Solution Diagram
Process Funnel
Related Patterns


(H1) Process Funnel

(K2) Navigation Bars  (H8) Context-Sensitive Help
(K3) Tab Roles  (I2) Above the Fold
(K4) Action Buttons  (K5) High-Viz Action Buttons

(K12) Preventing Errors  (K13) Meaningful Error Messages
Model-View-Controller (MVC)

- Classic design pattern for application architecture
- Splits application into three main layers:
  - Model
  - View
  - Controller
Model-View-Controller

- **Model**
  - Domain-specific representation of the information on which the application operates
  - Includes raw data and operations on it
  - In web applications, this is often a database

- **View**
  - Renders the model into a form suitable for interaction
  - In web applications, the view is an HTML page

- **Controller**:
  - Processes and responds to events, typically user actions, and may invoke changes on the model and view
  - In web applications, this is often Javascript or an HTTP GET/POST handler
Advantages of MVC

- **Clarity of design:** Easy to understand how to control the model's behavior by looking at the methods in the model.

- **Modularity of design:** Any of the components can be swapped in and out as the user or programmer desires - even the model! Development of the various components can progress in parallel.

- **Multiple views:** The application can display the state of the model in a variety of ways, and change views when appropriate.
Meaningful Error Messages

- Problem: When customers make mistakes, they need to be informed of the problem and how to recover.
- Solution
  - Clear statement of problem
  - Explain how to recover
  - Position near the problem
We found an error while verifying your shipping address. We've marked the problem in red for you.

Required information is marked in GREEN CAPS.

**NICKNAME:**

*MYSELF*

Please assign a "nickname" for the person you're shipping to. You may change or delete this information.

**FIRST NAME:**

*DOUGLAS*

**LAST NAME:**

**ADDRESS:**

245 SAN JOSE RD

**CITY:**

LOS GATOS

**STATE:**

California

**ZIP CODE:**

95333

**COUNTRY:**

Select a country

**SHIPPING METHOD:**

- **Standard UPS**
  (2 business days plus processing time)

- **U.S. Postal Service**
  (Same price as Standard UPS delivery. Use for addresses not served by UPS or if you prefer U.S.)

- **Upgrade to UPS Next Business Day**
  (1 business day plus processing time, additional charge)
Clear error message?
- two messages at top

Explains how to recover?
- only implies it is missing required information

Positioned near the problem?
- error messages far
- required info differs in green/red → problem for users w/ color deficiency
Please address the 2 item(s) indicated on this page.

To continue with checkout, please sign in or create an account. Your account will enable you to retrieve your order status online and benefit from pre-filled forms on your next purchase.

**Sign In**

Already have an account? Sign in here.

- Email Address
  johndoe@johndoe.com
- Password

Forgot Password?

Sign In

**Create An Account**

Complete these fields to create a new account.

- First Name
  John
- Last Name
  Doe
- Email Address
  johndoe@johndoe.com
- Confirm Email Address
  johndoe@johndoe.com

Yes, send me exclusive Dell offers and specials by email. (You can unsubscribe at any time)

- Create Password

Password must be at least four characters in length.

- Confirm Password

Sign In
WELCOME TO CHECKOUT

⚠️ Please address the 2 Item(s) Indicated on this page.

To continue with checkout, please sign in or create an account. Your account will enable you to retrieve your order status online and benefit from pre-filled forms on your next purchase.

Sign In

Already have an account? Sign in here.

* Email Address
  john@john@johndoe.com

* Password

Forgot Password?

OR

Create An Account

Complete these fields to create a new account.

* First Name
  John

* Last Name
  Doe

* Email Address
  john@john@johndoe.com

* Confirm Email Address
  john@john@johndoe.com

Yes, send me exclusive Dell offers and specials by email. (You can unsubscribe at any time)

* New Password

Password Confirmation

* Create Password

Password must be at least four characters in length.

* Confirm Password

Sign In
Patterns Offer the Best of Principles, Guidelines, & Templates

- Patterns help you get the details right, without over-constraining your solution
  - unlike principles, patterns not too general, so will apply to your situation
  - unlike guidelines, patterns discuss tradeoffs, show good examples, & tie to other patterns
  - unlike style guides, patterns not too specific, so can still be specialized
  - unlike templates, patterns illustrate flows among different pages
- Patterns can serve as documentation for team-oriented environments
John given the task of designing a new subsite for showing maps to businesses

- listings found by typing in address
- key feature: show nearby businesses

John comes up with two design sketches

- Design #1 uses ALPHABETICAL ORGANIZATION (B5) for list of all nearby businesses
- Design #2 uses TASK-BASED ORGANIZATION (B4) for list of related nearby businesses
Design #1: Alphabetical Organization

Address:
1645 Solano Ave.
Berkeley, CA 94707

Nearby businesses:
A.G. Ferrari's Foods
Andronico's Market
Barney's Hamburgers
Berkeley Public Library
Cactus Taqueria
Celadon Fine Teas
China Village Rest.
Copy Express
Eunice Gourmet
Design #2: Task-Based Organization
Evaluating Which Design to Choose

- **Low-fidelity Usability Test**
  - sketches the rest of the key screens on paper
  - brings in 5 participants to his office
  - asks each to carry out 3 tasks while John’s colleague Sam “plays computer”
  - John observes how they perform

- **Tasks**
  1. look up 1645 Solano Ave., Berkeley CA
  2. look up 1700 California Ave, San Francisco CA & find Tadich Grill
  3. look up 2106 N 55th St, Seattle WA & find a Sushi restaurant nearby
Evaluating Which Design to Choose

- Results with Design #1 (Alphabetical)
  - Task 1: look up 1645 Solano Ave
    - no difficulties encountered - warm-up task!
  - Task 2: look up 1700 California & find Tadich Grill
    - several users didn’t notice that the list of nearby businesses was scrollable (due to paper affordances?)
    - those that scrolled took awhile to find in list of over 500
  - Task 3: look up 2106 55th St & find nearby Sushi restaurant
    - 3 users only picked restaurants that had “restaurant” in the name & thus couldn’t find “Kisaku”
Evaluating Which Design to Choose

- Results with Design #2 (Task-based)
  - Task 1: look up 1645 Solano Ave
    - no difficulties encountered -warm-up task!
  - Task 2: look up 1700 California & find Tadich Grill
    - 1 user took awhile to figure out that Tadich Grill was a restaurant & to click on the “Restaurants” link
    - all others found it in 2 clicks (Restaurants->Tadich Grill)
  - Task 3: look up 2106 55th St & find nearby Sushi restaurant
    - 3 found “Kisaku” in 2 clicks
    - 2 others asked for a listing of Japanese restaurants
General comments

- 2 users said they often want to email maps to friends who they will be meeting (task-based)
- 3 users wanted driving directions (task-based)

→ TASK-BASED ORGANIZATION (B4) worked better, but still had some minor problems
Design #2 - Revision 2
Adding HIERARCHICAL ORGANIZATION (B3) & LOCATION BREAD CRUMBS (K6)
Design #2 - Revision 3
Adding SEARCH ACTION MODULE (J1)
Further Reading

Books on Web Design

Further Reading

Websites on Web Design

- UsableWeb.com, links to other usability sites
- Usability.gov, for building accessible websites
- Web pages that suck, at http://www.webpagesthatsuck.com/
- Net tips for designers, at http://www.dsiegel.com/tips/
- User Interface Engineering, at http://www.uie.com
Further Reading

Websites on Web Design

- Webword.comusability log
- CNetBuilder.com, info on building sites
- Goodexperience.com web log
- Jakob Nielsen useit.com