Guidelines for Designing Web Navigation

Greg Elliott & Anthony Tran
Information Overload

- Information Overload (Bush 1975)
and cooks girlfriend before leaping to death in New Orleans...

VIDEO...

SONG FOR JONG...

N Korea informs China of plan to conduct 3 more nuke tests...

Bush warns against selling nuclear arms...

Calif. city may bar illegal immigrants from renting...

U.S. Skeptical over NFL 'Dirty Bomb' Internet Threat...

FBI Yet to Find Evidence of Foley-Page Sexual Contact...

Florida court bars signs for Foley replacement...

NYT FEATURED COUPLE AS FRENCH QUARTER 'KATRINA HOLDOUTS'...

NEWHOUSE PROFILED HALL AND BOWEN IN '05...

EXCLUSIVE: Bert Fields Can Put Pellicano Scandal Behind Him; 'Done And Over'...

PELICAN FILES: Lawyers Called to Grand Jury in Wiretap Case...

SICK: 7 funeral home directors plead guilty in Stolen Body Parts Case...

SWEET: VIACOM to Pay Ousted
Web Navigation

- Why call it ‘navigation’?
  - successively displaying screens?
  - naturally apply knowledge of wayfaring in physical world to the digital?
Navigation

• Critique:
  • Nothing ‘natural’ about digital browsing
  • Rooted in mathematical & A.I. metaphors
  • Graph Theory, Nodes, Links
Navigation

• “The experience of the web ... can be understood as nodes ... and we navigate from node to node via electronic pathways we call links.”
Hypertext Theory

- Hypertext & Hypercard on Mac (1987)
- Nodes & links
- Traversing nodes via links
Hypertext Theory

• Networks of nodes and links are often referred to as information structure or information architecture

• Derived from mathematics

• Graph theory, the web and the matrix
Figure 1. The major information structures.
Hypertext Theory

• "The hierarchy is by far the most prevalent structure. This is true because human beings naturally order their world by establishing categories and subcategories."
Hypertext Theory

- Metaphor is a hold over from A.I.
- Hierarchies are useful in websites for several reasons, not because we naturally ‘order’ the world using hierarchies
Hypertext Theory

“The hierarchy is by far the most prevalent structure. This is true because human beings naturally order their world by establishing categories and subcategories.”
Guidelines Excuse?

- "Furthermore, the guidelines assume what can be broadly termed informational Web sites and users with an interest in efficient navigation. These guidelines, therefore, may not apply to sites for game players, art sites, and sites intended for whimsy and fun."

That’s a big assumption...

How much time do you waste aimlessly browsing the internet?
Assume we want efficiency?

- Efficiency is great for:
  - Corporate businesses, Wikipedia, etc.

- Why should we assume ‘most’ of the web should be designed for efficiency?
Designing an Effective Link
Designing an Effective Link

- Underlined text
- Raised buttons
ACCEPT JESUS, FOREVER FORGIVEN!

Behold, now is the accepted time; behold, now is the day of salvation. - 2 Cor.6:2

For the wages of sin is death; but the gift of God is eternal life through Jesus Christ our Lord.

-Romans 6:23
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Welcome to your first symbiotic relationship with a machine.

PersonalSoundtrack, a tiny wearable computer, detects your walking or running speed and plays songs from your music library that match your pace. Song speed is adjusted in real-time to match subtle variations in your gait; while larger, deliberate pace changes cause the device to change songs. You simply put it on and begin moving; that's it.

Most computational devices require the user to adapt to the machine. PersonalSoundtrack offers, instead, a symbiotic relationship: both human and machine actively adapt to each other in real-time. The 'interface' is one's natural gait. There is no optimal or pre-defined experience, encouraging meandering, wasting time, and loitering.

In April, at CHI 2006, Bill Tomlinson and I published a paper discussing my first prototype.
Designing an Effective Link

- Layout & Formatting
- Reduce clutter
- Highlight Links / Pathways
- Non-icon graphics not seen as links
- Still true?
- Example of bad formatting
Computers

Linux Computers that fit in the palm of your hand!

netstix 200xm-cf
netstix 400xm-cf

FFC Class A certification for business use

Top Selling Accessories:
- null modem cable
- usb cable
- student pack

Check out all the accessories available for computers... View All >>

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waysmalls come in 200Mhz and 400Mhz, with or without bluetooth

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netstix computers
Ethernet and Compact Flash in a computer that fits in your hand.

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200MHz - $186.50
400MHz - $206.50

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Buy

Volume Pricing

Communicate to Users

- Make options clear
- Nielson
  - Let users know what can be clicked and what can’t be clicked
Designing an Effective Link

• Certain phrases are assumed links:
  • Products
  • About us
  • Home
  • Contact
  • etc.
Designing an Effective Link

• Vertical list of phrases when boxed are more obvious links
Ask Slashdot: Selective DNS Caching/Forwarding

Posted by Cliff on Wednesday October 18, @09:47PM
from the resolve-only-what-you-want-to dept.

PostroPC asked me to check around online, and I have found several people wanting to do the same thing, but no one seems to have figured it out yet. What I am wanting to do (and before you go further, understand this is for work, i.e.: no innocent people will be harmed in the implementation) is to set up a name server that selectively forwards queries. For example, I would like to create a list of acceptable domains (less than 20) using wildcards such as *.google.com, that the name server will forward a query on to and reply to normally. For anything not in the list, I want it to reply NXDOMAIN or some such. I've looked at RInD and there doesn't appear to be a way to do what I'm wanting; it can either have recursion on or off, and any specific zones of type forward still do not forward if it is off. The solution doesn't have to be pretty, but it can just be a simple DNS proxy, but I'm not adept at coding, so it needs to be installable by a regular sysadmin on Linux. Has anyone heard of something like this?

Peter Gabriel Wants You to Re-Shock the Monkey

Posted by samzenpus on Wednesday October 18, @09:40PM
from the daddy-wants-more-cowbell dept.

PrescherTom writes

"The party line for the music industry has been clear: discourage music downloads at all cost. However, singer Peter Gabriel is taking things in a different direction. In order to promote his own label, he is actually encouraging people to not only download his music, but also adapt it into something more modern. In doing so, he actually posted a song clip of Shock the Monkey..."
Still Designing Effective Links

- ‘Photographs are not assumed links’
- Still true?
- Flickr?
- Type of image? Size?
Still Designing Effective Links

- Avoid Clutter
Do we really need to see why again?
Still Designing Effective Links

- Avoid clutter
- “Below the fold” & cues to scroll
RadioActive
Aaron Zinman
Sociable Media Group

Concept

RadioActive allows large-scale audio-based conversations on mobile phones. It functions as a mobile audio forum, where users leave posts by recording voice messages. Other users can navigate through, listen to, and respond to these messages using the audio or optional visual interface. RadioActive’s chat space is persistent, allowing users to drop in and out of discussion as they wish. The combined interface is unique for persistent audio chat spaces, and provides an easy way to navigate at a global level. An automated playback mode also allows users to put the device in their pocket and listen passively.

RadioActive’s principal focus is to support public discussions within an urban context. By becoming the communications foundation for the eLens project, RadioActive chat rooms can be created for buildings or sites tied to visual markers, dynamically groups, and disparate communities.

Current Status

We are putting the finishing touches on the final mobile-based version 4.
Still Designing Effective Links

- Avoid clutter
- “Below the fold” & cues to scroll
  - Screen Resolution
- Place higher priority links higher
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Still Designing Effective Links

- Avoid clutter
- “Below the fold” & cues to scroll
- Screen Resolution
- Place higher priority links higher

- Make many options available to aid choice
Advancing the world's most advanced operating system.

Mac OS X Leopard Sneak Peek

Still Designing Effective Links

• Make link destinations clear
  • Javascript rollovers
  • Text links augmented by descriptions
  • Flawed faith in icons
What would these icons mean without words?

**Figure 4.** An icon with two additional layers of information: a label and a rollover label.
Windows Vista

Try Windows Vista
Windows Vista Release Candidate 1 (RC1) is available through the Customer Preview Program. Try this pre-release version of Windows Vista now.

Windows Vista Capable PCs
Getting ready to buy a Windows XP-based computer? Here’s how to make sure it will be able to run Windows Vista.

Open "http://www.microsoft.com/windowsvista/experiences/default.mspx" in a new tab
Icons

• Icons are most effective at grabbing attention, not communicating ideas

• Only a few icons communicate well due to standard usage

• arrow pointing down = download
Indicating Link Type

• Explanation
• Further Details
• More Information

• Instead of Click here or Amazing
Managing Large Numbers of Links
Breadth vs Depth

• Generally, prefer breadth over depth
• Trade-off between breadth and depth
• Try to group links to ease clutter
100% Breadth, 0% Depth
Breadth vs. Depth

• “Although researchers can determine highly navigable ratios, in practice the depth and breadth of any hierarchy is greatly affected by the constraints the designer faces in dividing the content into meaningful and usable groupings.”
Translation

Every site is different.

We don’t know what to tell you.
Primary & Secondary Links

- Links that define main structure are called primary links
- Secondary links provide multiple pathways
- Trade-off between clutter and secondary links
**Branch Convergence**

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**Structure as an editorial tool**

Here’s part of a structure for an interactive company brochure. Among its goals are:

- To introduce each of the company’s divisions.
- To highlight the major accomplishments of each division.

Since one of the goals is to spotlight major accomplishments, they are grouped into sections that can be accessed directly from the main screen. But this solution raises a new problem: moving the “Great Things” category up in the hierarchy has eliminated the accomplishments from each division.

To solve this problem, the new section remains available at the top level, but a new link is added for access from each division.
Revealing Underlying Structure

- Homepage should provide cues and structures that reveal structure of site
- Situational Awareness (Whitaker)
- Users need broad view of pathways to navigate (Fumas)
Check out Delicious Library

Catalog, browse, and share all your books, movies, music, and video games with Delicious Library.

The built-in manual brings dozens of in-depth tutorials and tips from every corner of Delicious Library into one easily accessible area. From the Help menu, choose Delicious Library Help and then browse by category or search to quickly find topics you want to learn about.

Get your Mac, a webcam, and Delicious Library and rediscover your home library. Just point any FireWire digital video camera, like an Apple iSight®, at the barcode on the back of any book, movie, music, or video game. Delicious Library does the rest. The barcode is scanned and within seconds the item's cover appears on your digital shelves filled with tons of in-depth information downloaded from one of six different web sources.
Provide clear, brief, and highly conspicuous orientation information

- Users need to know:
  - Name
  - General Purpose
  - Sponsors

- Orientation must be conspicuous
  - Advertising banners

- Sub site should have:
  - Sub site’s identify and purpose
  - Relationship to the main site

- Withhold orientation information?
Provide Orientation Information

• Provide orientation information on lower-level pages to support continued exploration.

• Include site name/logo to maintain identity

• Use orientation elements to show differences among sections

• Headers, logos, recurring colors and fonts
Augmenting Link-to-Link Navigation

• Employ site maps to show the global structure of a site and to provide direct access to nodes.

• Site maps should show all branches of the hierarchy

• Space limitations may limit # of levels

• Site maps should include “Last page visited” marker.

• Large web sites?
Augmenting Link-to-Link Navigation

• Provide a search facility or an index for direct access to content
  • Search facility should be provided
    • Exception: very small Web sites.
  • Things to consider:
    • Size of the site
    • Way information is organized
    • Information needs of the users
  • Search interface
    • Configured for both simple and complex searches
  • Results listed in most appropriate order and provide enough information
  • Indexes generally give better results
    • Expensive and difficult to maintain
Augmenting Link-to-Link Navigation

- Provide a link to the home page throughout the site
  - Purpose
    - User disoriented – familiar location
    - New information seeking task
    - Home page orientation information
  - Logo as link to the home page
  - Many sub sites
    - Direct link back to sub site’s home page
    - Direct link back to main Web site.