



Designing Navigation that Works

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Today's Topics

1. Define navigation
2. Design principles, usability & standards
3. Critique of library navigation
4. Types of navigation
5. Navigation implementation
6. Navigation guidelines
7. Evaluating existing navigation
8. Developing a navigation plan
9. Resources
- Appendices

Part 1: Define Navigation

Have you ever
gotten “lost” on a
website?

Ever had a hard time finding a resource you
knew was there, somewhere?

Ever searched in vain
for contact information,
or an event calendar?

Why worry about navigation?

Chances are, your users have, too.

Define Navigation

Define Navigation	5
Metaphorical Illustrations	6-9
Purposes of Navigation	10-11

Define Navigation

Website navigation *provides a sense of location, direction & scale*, thus orienting visitors so that they can confidently proceed to access resources and accomplish tasks.

Frames the User Experience



Reveals Site Structure & Extent



Lights the Way; Provides Shortcuts



Connects Users to Resources



Define Navigation

Purposes of Navigation

1. Frames the user experience; grounds & orients users
2. Reveals the site's structure & extent; provides cues on how to use the site
3. Illuminates the way; reveals the possible choices; provides multiple access points & shortcuts
4. Connects users to resources
5. Done correctly, builds trust & credibility

Define Navigation

Purposes of Navigation

Clear, well thought out navigation is one of the best opportunities a site has to create a good impression.—Steve Krug

Part 2: Design Principles, Usability & Standards: Rising Above the Rest



Design Principles, Usability & Standards

4th Law, Updated	14
Illustration of Why We Do It	15
Ensure Effortless Interactions	16
Principles of Good Design	17-19
Description of the Well Designed Interface	20
Testing for Good Interface Design	21
Related Interface Design Issues	22-29

Design Principles, Usability & Standards

Why bother?

*Save the time of the reader ... who
is your e-library visitor & user. —*

Ranganathan's 4th Law of Library Science,
updated

Design Principles, Usability & Standards Why We Do It



Design Principles, Usability & Standards Ensure Effortless Interactions

- The use of design principles & usability standards ensures that visitors to your library's website will *effortlessly*:
 - **Understand what you have**
 - **Find what they want**
 - **Do what they came to do**
 - **Discover a reason to return**

Design Principles, Usability & Standards

Principles of Good Design

(Don Norman)

- Visibility
- Consistent Conceptual Model
- Valid Mappings
- Feedback

Design Principles, Usability & Standards

Principles of Good Design, 1-2

- **Visibility:** The user can see the state of the device & the alternatives for action—the choices for what can be done—at a glance.
- **Consistent Conceptual Model:** The designer has provided the user with a conceptual model that is consistent in the presentation of the system image, operations & results.

Design Principles, Usability & Standards

Principles of Good Design, 3-4

- **Valid Mappings:** It is possible to readily deduce the relationships between actions & results, controls & their effects & between the system state & what is visible.
- **Feedback:** The user receives full & continuous feedback about the results of every action.

Design Principles, Usability & Standards

The Well Designed Interface

- “... as soon as you see it, you make guesses about how it will work, and your guesses turn out to be right.”—David Gelernter
- How can we tell whether an interface is well designed and has appropriate navigation? Test it.

Design Principles, Usability & Standards

Visit any page; in 5 minutes:

(with a bow to Steve Krug)

1. What is the site & who publishes it?
2. What page are you on?
3. Your options at the level you're on?
4. How is where you are situated in respect to the rest of the site?
5. What are the major site sections & resources?
6. What shortcuts & helpful aids exist?
7. Can you search the catalog, renew or reserve materials & accomplish other tasks?

Design Principles, Usability & Standards

Design & Communication

- Graphic design is fundamentally about communication.
- Tacit communication: the medium chosen to deliver the message
 - Includes size, shape, color, layout & other presentation choices
- Explicit communication: the message as expressed in the text & images.
- What are the tacit & explicit elements of navigation?

Design Principles, Usability & Standards

Consistency & Standards

- Consistency is considered one of the most powerful ways to meet users' expectations: "... when things always behave the same, users don't have to worry about what will happen ... they know what will happen based on earlier experiences."

Design Principles, Usability & Standards

Web Design & Use: Time-Savers

1. Use logical, hierarchical site structure & organization.
2. Apply graphic standards to page layout & web standards to text organization; follow accessibility guidelines.
3. Provide multiple, consistent, predictable navigation pathways to content & to quick, easy ways to accomplish things.

Design Principles, Usability & Standards

Information Hierarchies

- The careful organization of information into clear, logical categories is the basis for an information hierarchy.
- Hierarchies can be represented visually using graphic elements.
- The visual hierarchy should correspond to the logical hierarchy.
- A clear visual hierarchy should be displayed on each page of the site.

Design Principles, Usability & Standards

Visual Hierarchies

- The organization & display of elements on a page provide context, indicate relationships & proffer choices. Consider the ...
 - **Relative size of the elements**
 - **Placement or position; including the ordering of groups**
 - **Color & contrast**
 - **Movement (tacit: eye scan of the layout; explicit: animation, video)**

Design Principles, Usability & Standards

Navigation & Information Architecture

- Navigation creates a sense of place by embodying the site's hierarchy.
- Devise multiple access points by using a combination of topic, task & utility based navigation.
- When the logical structure is not supported or is contradicted by visual cues, confusion and frustration mounts. Muddled IA & labeling=messy navigation. For more information, see the appendices & the resources.

Design Principles, Usability & Standards

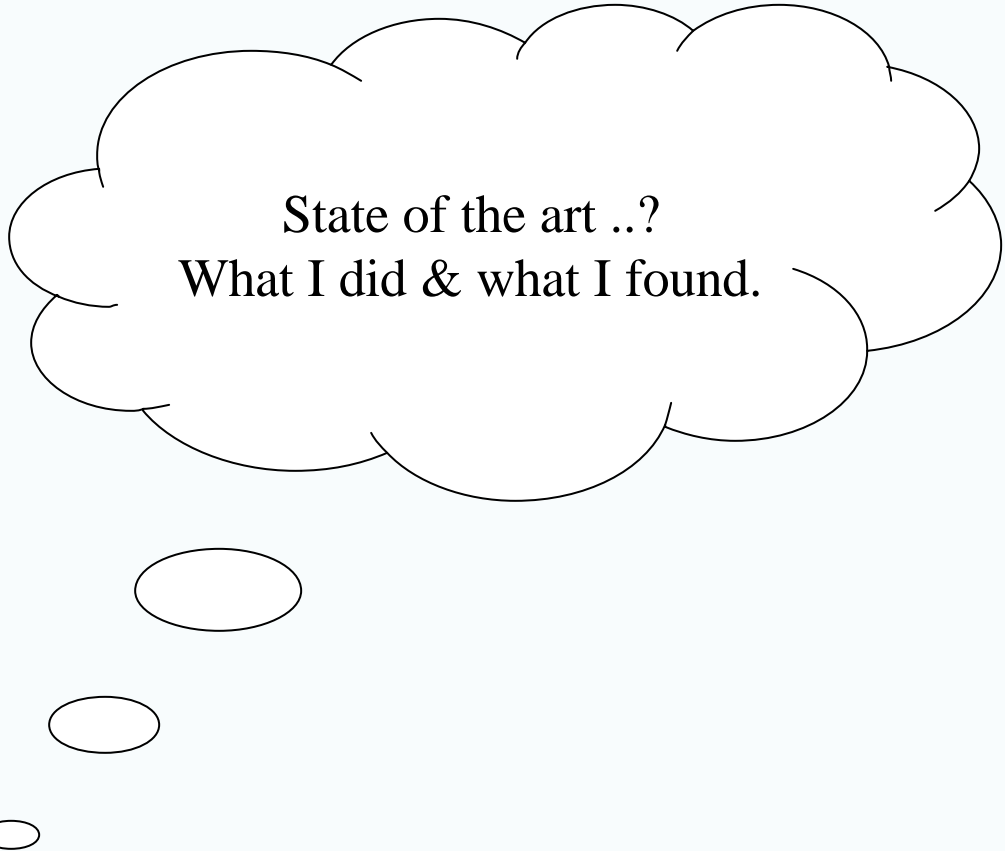
Beautiful Illusions that Work

- Strive for Gelernter's *inevitability illusion*, the sense that you wouldn't want it any other way than as it is.
- “When the illusion succeeds, the outcome is technology that works beautifully and that *is* beautiful.”
- The application of design principles & standards creates functional, usable, beautiful sites.

Design Principles, Usability & Standards In Other Words ...

- Users should be able to rapidly:
 - **Perceive**
 - **Comprehend**
 - **Understand**
 - **Respond**
- In well designed systems, users:
 - **Experience**
 - **Learn**
 - **Enjoy**
 - **Return**

Part 3: Critique of Library Navigation: Real World Examples



State of the art ..?
What I did & what I found.

Critique of Library Navigation

Library Usability Project Description	32
Engaging Integration	33
Summary of Findings	34
Branding	35-37
Labels & Ordering	38-40
Home Page	41-42
Standards & Implementation	43-44
Home Page & Navigation Critiques	45-55
Critique Exercise	56
Conclusion	57

Critique of Library Navigation

What I Did

- Examined information architecture, navigation schemes & usability at:
 - Illinois libraries of all kinds from one region of the state
 - 51 state & District of Columbia libraries
- Seeking evidence of:
 - Proper integration of information architecture, navigation & interaction design in support of content access.
 - Incorporation of graphic & navigation design standards

Visitors should engage with the site, not just gawk, wander about & leave; designs should integrate:

Structure
Navigation
Interaction
Content

Critique of Library Navigation

What I Found

- None of the visited sites look as bad as the Library of Celsus but none met all standards.
- Many are just in need of a little tweaking here and there; a few need complete overhauls.

Critique of Library Navigation

State of the Art: Branding

- Every library should develop a brand identity in the form of a logo & 6-8 word tagline to differentiate the website & online services.
- The logo & tagline should be used as the site identification, preferably as the Home button in the global navigation bar.
- The ID should be used throughout the site, on every single page. No exceptions.

Critique of Library Navigation

What I Found:

Very Little Branding

- Logos & taglines are rarely employed.
- When used, implementation is inconsistent.
- Taglines do not always differentiate the organization or express the value provided.

Trend spotted: A few separate virtual library sites have been spun off from their state libraries. These sites are more likely to be branded & have their own logos.

Critique of Library Navigation

Examples of Branding & Taglines



more than a library

Critique of Library Navigation

State of the Art: Labels & Ordering

- The home page icon should always be labeled, except on home.
- Subjects, tasks & utilities should be clearly labeled & grouped in the global navbar. (About Us should be considered a utility.)
- All over the site, proffered choices in navbars & menus should be grouped in logical hierarchies.

Critique of Library Navigation

What I Found:

Labels & Ordering

- Home icons go unlabeled on site pages.
- Icons & labels may be inappropriate, inaccurate or out of order. For example, this looks more like “kiss a librarian” to me:



- Lists of options are often disorderly; they do not mirror the site’s IA or any other system, like alphabetization.

Critique of Library Navigation

What I Found: Labels & Ordering

who we are

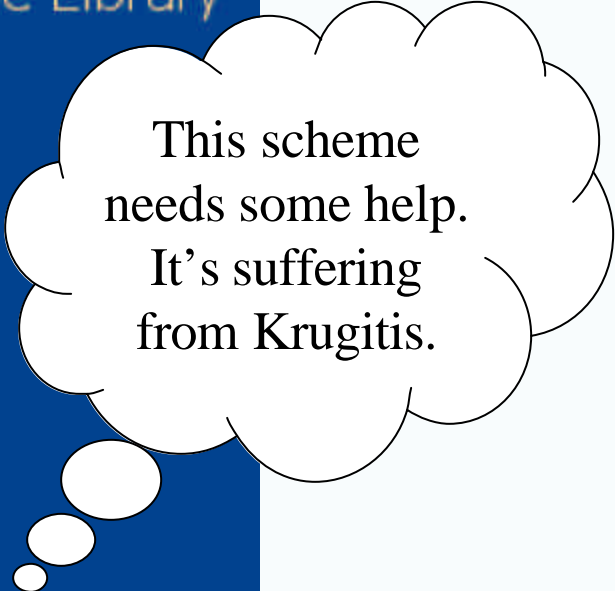
Visitors Guide | Employment | Support the Library

what we have

Search Collections | Research Guides

what we do

Services | Programs | Projects



This scheme
needs some help.
It's suffering
from Krugitis.

Critique of Library Navigation

State of the Art: Home Page

- Site architecture should be clear from the choices on Home.
- Standards for design include a site ID, global navigation bars; a bottom of the page text directory of global navigation; & accessibility.
- Content should be limited to a concise welcome statement; brief introduction to site resources & updates.
- Home should include linked text & other navigation & orientation cues & devices.

Critique of Library Navigation

What I Found:

Messy Home Pages

- Poorly thought out site structure muddled by inappropriate selection & organization of navbar links
- Cluttered, often with too many poorly organized choices
- Long welcome messages or other information
- Oversize layouts; some dramatic & creative

Critique of Library Navigation

State of the Art: Standards & Implementation

- Alternate text & use of <H> labeling for text readers
- Organization & categorization of navbars to provide access to global, regional & local levels of the site
- Consistent graphic expression (color choices, fonts, text size)
- Page title on every page.

Critique of Library Navigation

What I Found: Standards & Implementation

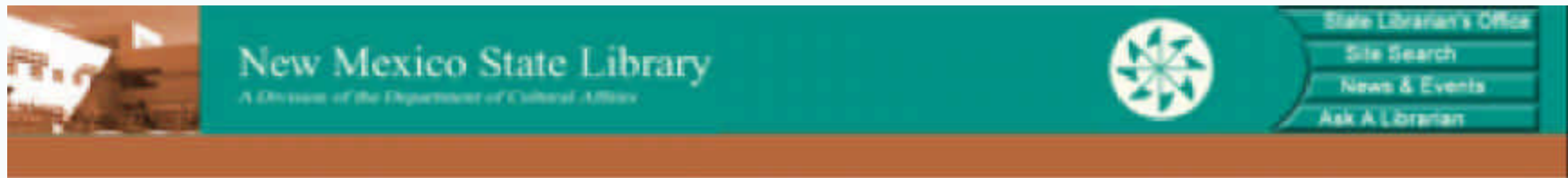
- Improper categorization of sections, tasks & utilities in global navigation
- Little consistency of application across the site for other types of navbars & text directories
- Subject hierarchies inconsistent & disorganized in regional navigation
- Graphic layout inconsistent at various levels

Critique of Library Navigation

Home Page & Navigation Critiques

- The two state library sites critiqued here were chosen because funds had clearly been invested in IT & graphic arts.
- Nevertheless, the sites violate various usability standards.
- However, with just a little reorganization ...

Artistic Home Page



LIBRARY PROGRAMS

Rural Services
Library for the Blind &
Physically Handicapped
Circulation/Interlibrary Loan
State Depository Program
Federal Depository Program
Youth Services

RESOURCES FOR RESEARCH

SALSA Library Catalog
Ask a Reference Librarian
Interlibrary Reference
Magazines Online



DEVELOPMENT SERVICES

New Mexico Libraries Directory
Librarian Training Calendar
Sourcebook for NM Libraries
Librarian Certification
Consulting Services
State Aid
E-Rate

LIBRARY COLLECTIONS

Southwest Special Collection
Foundation Center Collection
State of New Mexico Publications
Federal Government Publications

Librarians: Check out what's going on at [WebJunction New Mexico!](#) (It's an online community just for you).

Looking for Jobs at the State Library? Check out our [current job listings](#).

[Home](#) | [About the State Library](#) | [Hours/Location](#) | [Staff Directory](#) | [New Mexico Links](#) | [Search](#) | [Reports & Plans](#)
[Services for State Agencies](#) | [Services for NM Libraries](#) | [Services for Library Users](#) | [Tribal Libraries](#) | [Hitchhiker](#)

Critique

Specified user groups
in eye-catching custom
graphic on home page
suggest site
organization is based
on types of users.



[for libraries](#) | [for the public](#) | [for government employees](#) | [hitchhiker newsletter](#)

[Books by Mail](#)

[Rural Bookmobiles](#)

However, on site pages, the small text top navigation bar is murky & label names change.

More Issues



Nice thumbnail picture, but departmental identification is not a tagline.

It's not a button. However, the list below is hypertext, partially alphabetized.



Upper right corner of navigation bar is reserved for tasks, followed by site utilities.



[SALSA Library Catalog](#)
[Ask a Reference Librarian](#)
[Interlibrary Reference](#)
[Magazines Online](#)

The bottom of page navbar should reprise the site's global navigation choices. It does, and adds more.

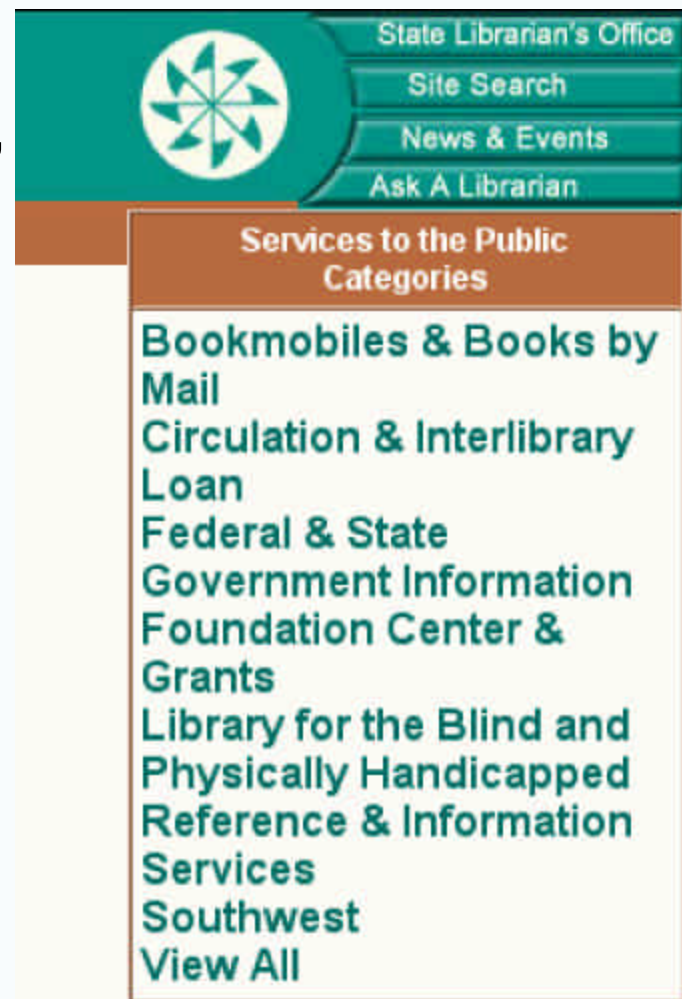
Looking for Jobs at the State Library? Check out our [current job listings](#).

[Home](#) | [About the State Library](#) | [Hours/Location](#) | [Staff Directory](#) | [New Mexico Links](#) | [Search](#) | [Reports & Plans](#)
[Services for State Agencies](#) | [Services for NM Libraries](#) | [Services for Library Users](#) | [Tribal Libraries](#) | [Hitchhiker](#)

Some Navigation Standards Violated



1. Home is not labeled.
2. Global navigation is scattered about, color in graphic treatment of text bar murky & text small.
3. Links not consistently labeled.
4. Links don't change color after visitation.
5. Regional navigation menus are at the far right of the page.
6. Lists need more spacing between items to help with text scanning.
7. Pages lack titles.



Home Page: Traditional Layout

The screenshot shows the Indiana State Library home page. At the top, there is a banner image of Native Americans with the text "Indiana State Library". Below the banner is a yellow navigation bar with links: Home, Catalog, INSPIRE, Site Index, Newsletter, Contact Us, What's New!, and a Search box. A dropdown menu is open under the Search box, showing "Our Site", "Our Catalog", and "The Web". On the left side, there is a vertical teal navigation menu with links: Ask a Librarian, Who We Are, What We Have, What We Do, When We're Open, Help, Databases, Events, Support the Library, Other Libraries, Related Agencies, and Web Quick Guide. Below the menu is the address: 140 W. Senate Avenue, Indianapolis, IN 46204, 317.232.3675. The main content area features a large "Welcome" heading, a quote: "Our vision is to ensure that state government, other libraries and all residents of Indiana have access to whatever information and services they need today to help them plan for tomorrow.", and a paragraph: "We encourage you to visit us in downtown Indianapolis, via our website, or through our [Blog](#)." On the right side, there is a "Featured Division" section for the "Indiana State Data Center", which is a federal and state cooperative between the Census Bureau and the State of Indiana, coordinated by the State Library, the Indiana Business Research Center, and the Indiana Department of Commerce. It lists services: providing demographic and economic statistics, and providing training and technical assistance.

Indiana State Library

Home Catalog INSPIRE Site Index Newsletter Contact Us What's New! Search

Our Site
Our Catalog
The Web

Welcome

"Our vision is to ensure that state government, other libraries and all residents of Indiana have access to whatever information and services they need today to help them plan for tomorrow."

We encourage you to visit us in downtown Indianapolis, via our website, or through our [Blog](#).

Featured Division

Indiana State Data Center

A federal and state cooperative between the Census Bureau and the State of Indiana coordinated by the State Library, the Indiana Business Research Center, and the Indiana Department of Commerce.

The Indiana State Data Center services include:

- Providing demographic and economic statistics from the Census Bureau and other federal and state agencies.
- Providing training and technical assistance in accessing and using all

Critique

What is the rationale for the categories & order of the links chosen for the top of the page navigation?

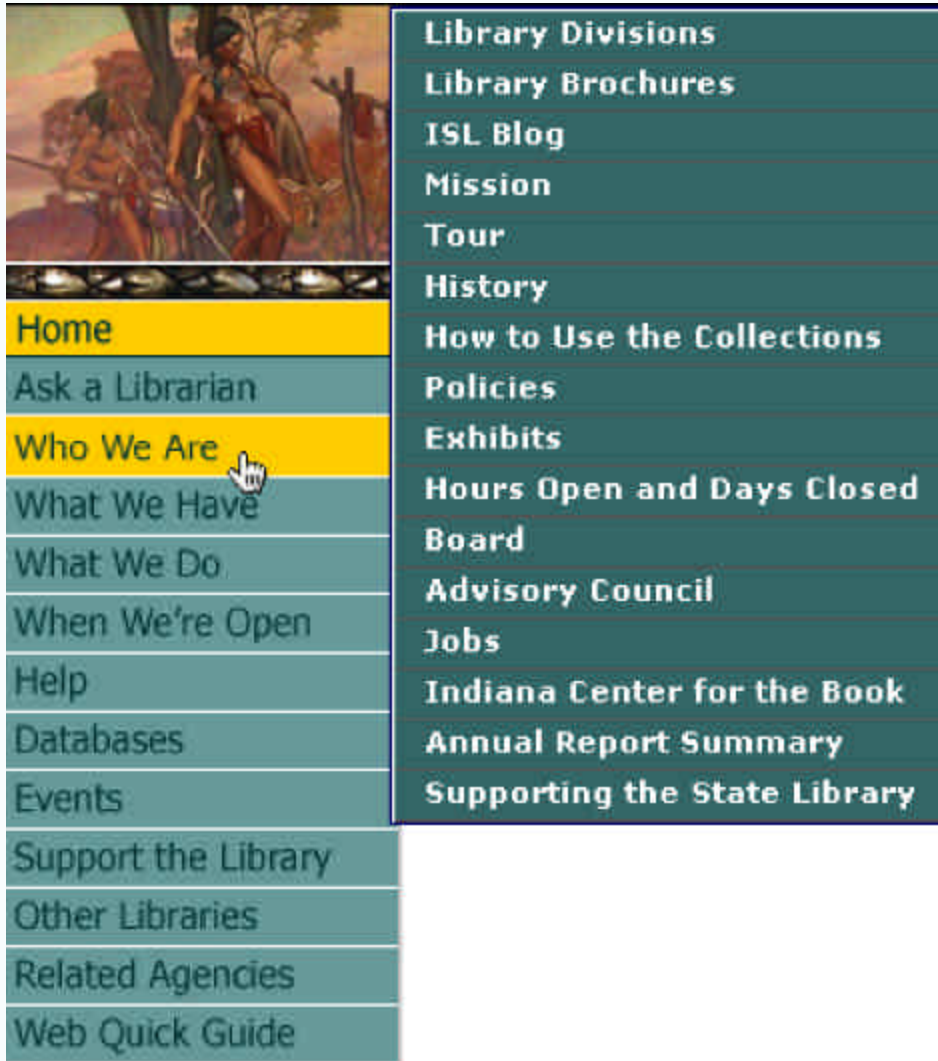



Missing links! There's *no* bottom of the page global navigation.



Are the pop-up menu items site divisions, or “aboutness” information?

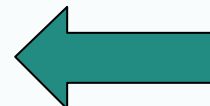
More Issues



	Library Divisions
	Library Brochures
	ISL Blog
	Mission
	Tour
	History
Home	How to Use the Collections
Ask a Librarian	Policies
Who We Are	Exhibits
What We Have	Hours Open and Days Closed
What We Do	Board
When We're Open	Advisory Council
Help	Jobs
Databases	Indiana Center for the Book
Events	Annual Report Summary
Support the Library	Supporting the State Library
Other Libraries	
Related Agencies	
Web Quick Guide	

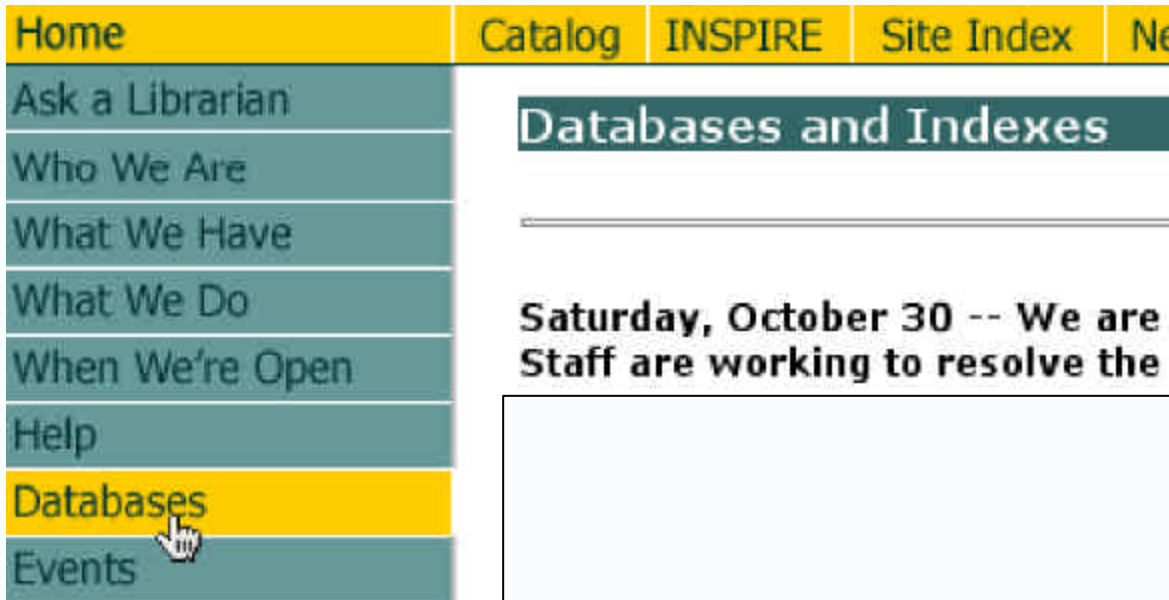
This is a long list. I'm not sure whether it really corresponds to the *who we are* label. Are these even the right menu items?

I edited out a long combined welcome - mission statement.



Even More Issues

A helpful dropdown box lists search choices. What do you think of the order?



The page title is properly displayed but dated information is a no-no. (Screenshot from 1-18-05.)

Help!

Aside from the green border, there are no graphic similarities to other site pages. This page continues with more categories & many links below the fold. Internal page directories should be added.

The site architecture should be deepened & widened with separate portal page for each major category.

Serving Indiana since 1825		ISL Quick Guide	178 years and still growing!	
ISL HOME PAGE			Reference Division	State Data Center
ASK A LIBRARIAN			Reference CD Collection at the State Library	CENSUS 2000 DATA
Search Indiana State Library Catalog			AsiERIC Database	U.S. Census Bureau
ISL DATABASES			FedWorld.gov	U.S. Bureau of Economic Analysis
http://www.statelib.lib.in.us/www/isl/rl/sdcfaq.html			FirstGov	U.S. Bureau of Labor Statistics
			FirstSearch	Indiana Business Research Center
INSPIRE Periodical & Abstract Databases			GPO Access	Indiana Department of Commerce
READY REFERENCE		ONLINE TOOLS		Statewide Affiliate Network
DICTIONARY		ENCYCLOPEDIA		Data Center
AMERICAN HERITAGE DICTIONARY		Encyclopedia Britannica		Maps
			HeritageQuest	Publications
			Cemetery Locator File Database	Business Resources
				Important Statistical Links
				State Data Center FAO

Some Navigation Standards Violated

1. The site organization is unclear. Global & regional navigation is scattered about.
2. There are no bottom of page navbars.
3. Organization of links in menus is confusing.
4. Site pages need internal navigation devices.
5. Site depth & breadth require expansion.
6. Site needs tagline & home graphic.

Hours

Days Closed

Directions

Map of Downtown Indianapolis

Parking Information

Nearby Hotels and Restaurants

Home Page: Artsy/Simple

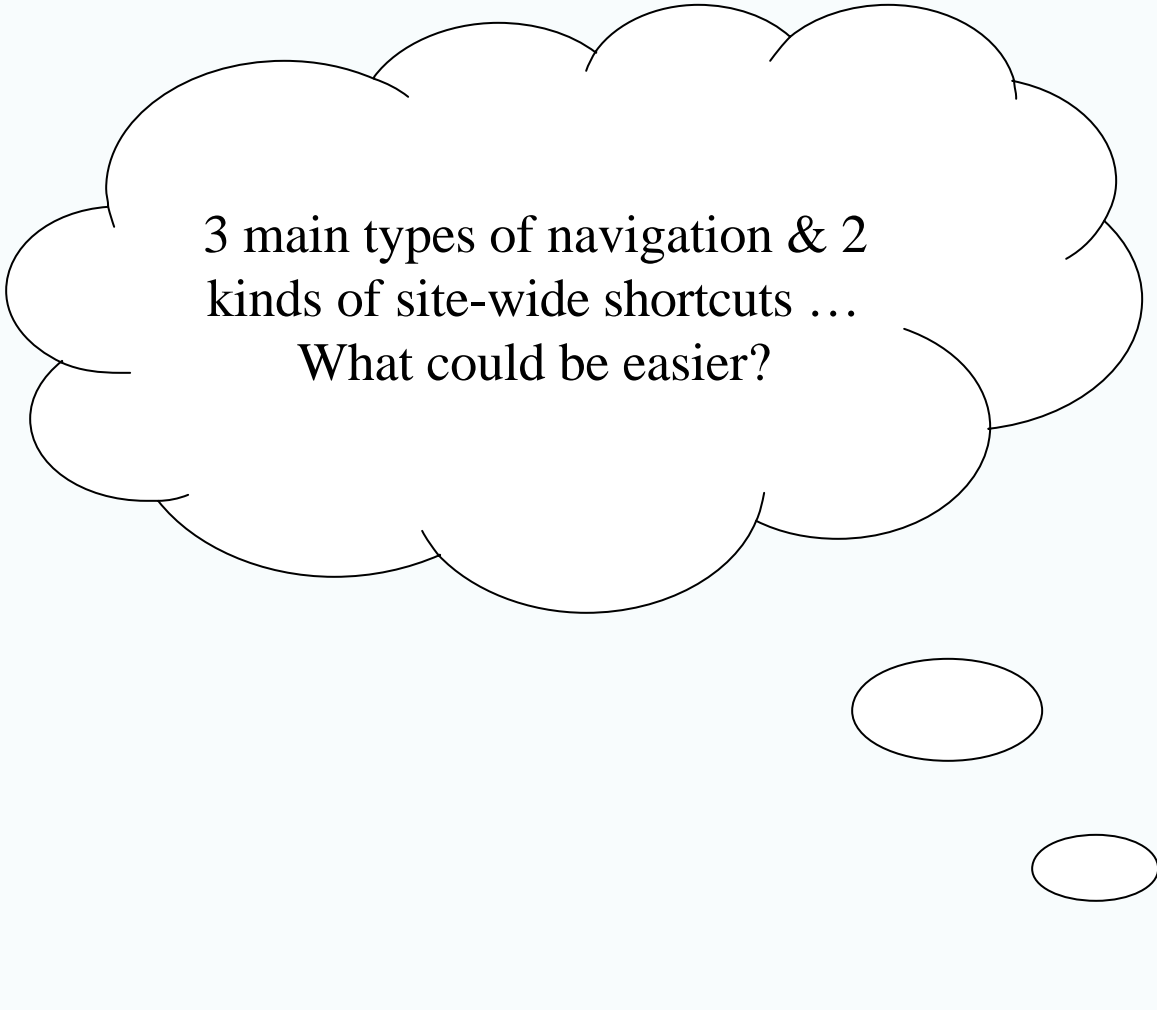
Let's critique this one together.

<p>Resources for the Public</p>					
 <p>GEORGIA PUBLIC LIBRARY SERVICE</p>		<p>Resources for Libraries</p>			
<p>The Georgia Public Library Service improves the quality of life for all Georgians by providing information and by encouraging reading, literacy and education through the continuing support and improvement of Georgia's public libraries.</p>			<p>Resources for Kids</p>		

Critique Conclusion

- Excellent navigation cannot fully compensate for structural problems in site organization.
- Understanding & using appropriate navigation (including labeling & grouping) increases site usability.
- Beauty should be a value,—but creativity & artistry are not a substitute for consistent standards.
- Have a viable rationale when departing from standards.

Part 4: Types of Navigation



3 main types of navigation & 2
kinds of site-wide shortcuts ...
What could be easier?

Types of Navigation

Precept	60
Major Types of Navigation	61
Book Navigation	62
Cues & Devices	63
Global Navigation	64-71
Home Page Differences	72-73
Regional Navigation	74-77
Local Navigation	78
Putting It All Together	79
Specific Shortcuts & Examples	80-81
Site Wide Shortcuts, Examples & Tip	82-86

Types of Navigation

Precept

In navigation design, it's cruel and unusual punishment to offer chaos instead of guidance, self expression instead of shared communication.

—Jennifer Fleming

Types of Navigation

Major Types of Navigation

1. **Global** (primary or persistent)
 - Access to major sections of the site, also tasks & utilities
2. **Regional** (secondary or section)
 - Provides access to section organization & content at that level
3. **Local** (tertiary, page)
 - Provides access to end level content—there's no going on, only elsewhere (on shallow sites, 2 & 3 are the same.)
4. **Specific Shortcuts**
 - Devices that direct users by offering a narrow, specific choice.
5. **Site-Wide Shortcuts**
 - Wide area access devices: search, site map, index

Types of Navigation

Book Navigation Devices

What's a bibliography like in web terms?

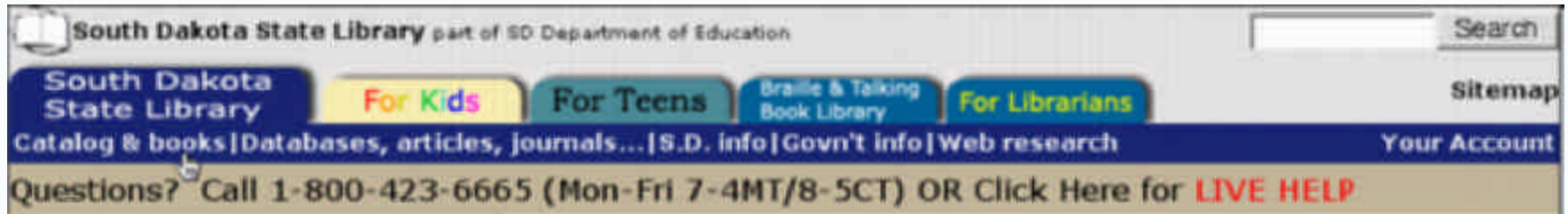
- Nonfiction Book (global)
 - Title, author, size/scale, table of contents (*sequential*), bibliography, index (*alphabetical by topic*)
- Chapter (regional, section)
 - Chapter title, may have brief table of contents or abstract
- Page (local)
 - Header, Footer & Footnotes: book title, chapter title, page number
 - Layout & Graphic Standards: paragraphing, negative space, widgets
 - MetaMessages: Communications, Advice & Instructions
 - *More on this in chapter 5.*
 - Sidebar (equivalent to hypertext link to additional information)

Types of Navigation Cues & Devices

- The major items in use are:
 - Home Page, Link to Home & Browser Back Button
 - Global & Regional Navigation Bars
 - Directories, Hypertext Links & Page Anchors
 - Alternate Text & <H> Coding
- More than 15 categories & 50 items; see the list in the appendix.

Types of Navigation

Global Navigation

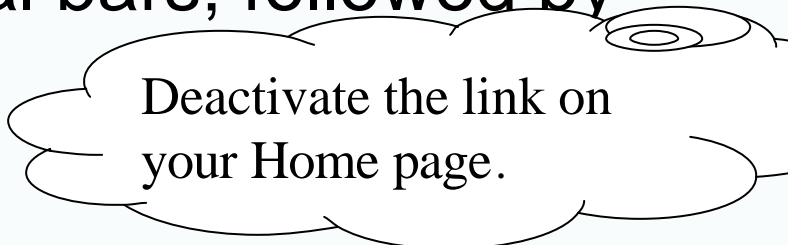


- It flies users to major areas of the site, thus needs to be available on every page—**persistent**.
- It manifests the site's IA, and might be the first place most users will click—**primary**.

Types of Navigation

Global Navbar Cues & Controls

- Labeled link to *Home* positioned at the far left of horizontal bars, top of vertical bars; followed by section links.
- Site ID & tagline
- Group functions & utilities at the upper right of horizontal global navbars, bottom of vertical bars on short lists, top otherwise
- Text directory of the GNB is always at the end of every page



Deactivate the link on your Home page.

Types of Navigation

Bottom of Page Directory & Footer

But where is the link to Home?

[Hours](#) | [Directions/Parking](#)

[Search the State Library Sites](#) | [State Library Catalog](#) | [Other CT Library Catalogs](#)

[About CSL](#) | [Using The Library](#) | [History & Genealogy](#) | [Government Information](#) | [Law & Legislation](#)
[Library For The Blind](#) | [Ask a Reference Question](#) | [About Connecticut](#) | [Museum Of CT History](#)
[State Archives](#) | [Public Records](#) | [Services To Libraries](#) | [iCONN](#) | [New & Noteworthy](#)

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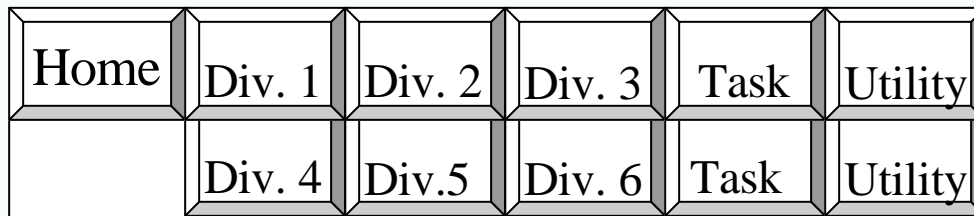
Types of Navigation

Setting Up the Global Navbar

- Categorization & Position (l to r)
 - Section Links (site content divisions)
 - Function Links (shortcuts to things to do on site)
 - Utility Links (help traversing the site: map, index)
 - Search box is often at the far right, or doubledeckered
- When there is no compelling hierarchy, set up section & all other headings & lists using alphabetization—it helps users quickly scan text.

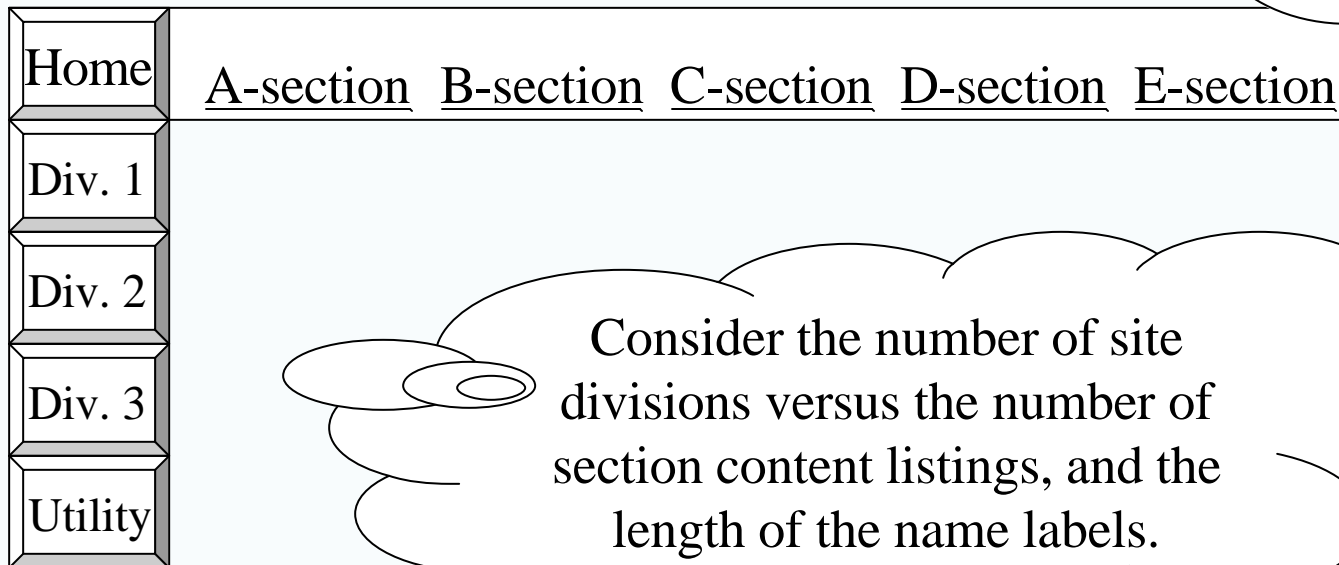
Types of Navigation

Global at Top or Left Side?



Top is more of a standard. While the space at the left is theoretically unlimited, the top *can* also be 2-3 levels deep.

All
About
A
All
About
B
All
About
C
All
About
D

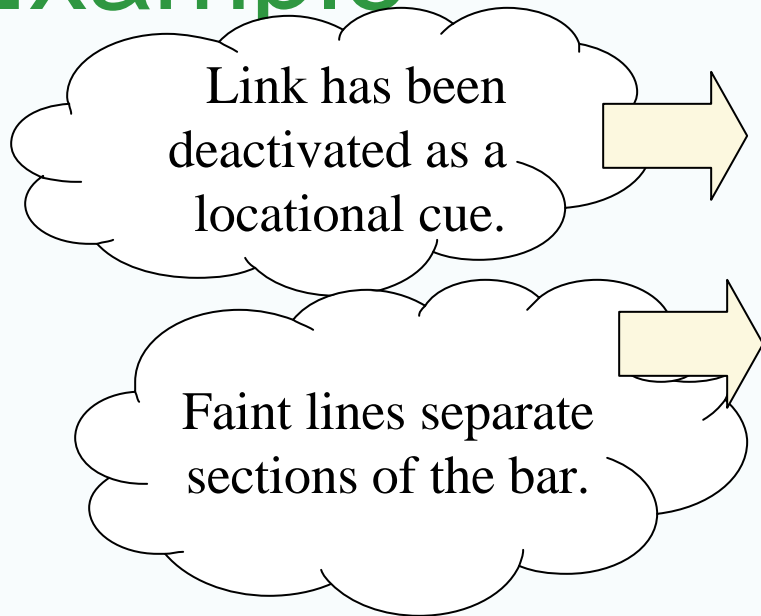


Consider the number of site divisions versus the number of section content listings, and the length of the name labels.

Types of Navigation

Vertical Global Navigation

Example



Home

Book Clubs

Children's Services

Just for Teens

Articles & More

Ask a Librarian

Catalog & Book Search

Get On the Web

Login to My Account

About the Library

Contact Us

Site Index

Site Map

Imagine it with buttons!

Types of Navigation

Vertical Global Navbar Sample

- Note the categories for the 3 sections:
 - Resources
 - Services
 - About the Library
- The catalog is listed first, a good usability feature.



Types of Navigation

Horizontal Global Navigation

**Home Adults - Book Clubs - Kids - Teens
Article Databases - Get On the Web - Library Catalog
Login to My Account - Reference Department
About Us - Contact Us - Site Index - Site Map**

- Sites rich in resources can stack links 2 - 3 deep on a horizontal navigation bar.
 - Grouping & alphabetization are essential.
 - Limit to 18; try for less.
 - Tabbed folder graphics load quickly. Use color coding & other graphic tricks to differentiate.

Types of Navigation

Home Page Differences

- *Always* deactivate the link to home.
- Switch the global navigation bar orientation if the layout requires it, but:
 - Maintain graphic standards & (near) identical link names.
 - Don't do it anywhere else!
- Keep the page sleek.
 - Use *Home* to orient users to the resources; they can follow links to find the director's message or the library board minutes.
 - Limit content to brief welcome, updates, login & specials or teasers.

Types of Navigation

Optional Home Page Navigation

- Reveal high level &/or popular section content using rollovers, drop down boxes, or small hypertext directories placed underneath the top navigation bar:

Children's Department

- [Homework Resources](#)
- [Just for Kids Book Club](#)
- [Story Hour Schedule](#)
- [More](#) (*this is the only acceptable alphabetical violation*)

Types of Navigation

Regional (or Secondary) Navigation

- Reveals resources available in the section level of the hierarchy, & orients users.
 - When space allows, reveal subdirectories in the navigation bar.
- Shuttles users to the resources.
- Usually located at the left side of the screen; however, can be ganged under global navbar.
- When breadcrumbs are used, they make *skipping back over* possible.

Types of Navigation

Regional Cues & Controls

- Navigation bar
 - Organize using an appropriate system: table of contents if information is related, numerical, date order, or alphabetical otherwise
- Page name & location:
 - In a consistent font, properly <H> tagged, and in the same location on every page; color may vary according to the plan.
- *You are here* cues in the form of:
 - Color changes, pointers, and deactivated links.
 - Section introduction page that briefly tells about each subsite or topic area, and provides text links in addition to the navbar.
 - Optional: Breadcrumbs show users how they got there.

Types of Navigation

Regional Navbar Sample

- The list is alphabetized but not categorized. Tip: Subheads would be helpful.
- Expert users are assumed; there are many acronyms. Tip: Add rollovers or pop-ups to clarify content.

Resources for Libraries

Children's Services
Collection Development
Consulting Services
E-rate
Events Calendar
GACL
Georgia Information
GALILEO
GLASS
GPLS
GOLD
Jobs in Libraries
Library Directories
Library Related Links
LSTA
PINES
Professional Licensing
Public Library Info
PR & Advocacy

Types of Navigation

Regional Navigation Example

Home/Logo

This top navbar is for the global links.

**Children's
Department**

Children's Department

Book Clubs

Our Public Library ►► Children's Department ►► Calendar of Events

► Calendar of
Events

Calendar of Events

This is the content
of the selected page.
Note the page title.

• Puppet Show

Select from the list below, or
view monthly calendar of all
library events.

• Story Hour

• Poetry Slam

Homework Help

Story Hour Times

Teen Scene

• Puppet Show

• Story Hour

• Toddlers (2 & up, with adult)

• Pre-school (3 -5)

• 6 & up

• Poetry Slam

Types of Navigation

Local Navigation

- Connects users to sub-site or page level content.
 - Pages at this level may require many specific shortcuts (anchors, etc).
- Differentiated from the regional level by:
 - Format & location—a top of the page text directory is a good format when the top of the page has the global, and the side the regional navigation bars.
 - Color, typeface &/or size of font used
- Customize navigation for special purpose pages
 - Pages with specific functions, like forms & search pages, should have custom navigation developed.

Types of Navigation

Putting It All Together

Home

[Book Clubs](#) - [Children's Dept](#) - [Just for Teens](#) - [Reference](#) - [Catalog](#) - [Magazines & Databases](#) - [Renew Books](#) - [Site Map](#) - [Contact Us](#)

Children's Department

Book Clubs

▶ Calendar of Events

• Puppet Show

• Story Hour

• Poetry Slam

Homework Help

Story Hour

Teen Scene

Our Public Library ▶ Children's Department ▶ Calendar of Events

Calendar of Events

Select from the list below, or view monthly calendar of all library events.

• Puppet Show

• Story Hour

• Toddlers (2 & up, with adult)

• Pre-school (3 -5)

• 6 & up

• Poetry Slam

On this site, local navigation is limited to text links. Once everything is properly organized, it can be fancied up.

[Home](#) - [Book Clubs](#) - [Children's Department](#) - [Just for Teens](#) - [Reference](#) - [Catalog](#) - [Magazines & Databases](#) - [Renew Books](#) - [Site Map](#) - [Contact Us](#)

Types of Navigation

Specific Short Cut Aids

- Anchors

A-D • **E-H** • **I-L** • **M-P** • **Q-Z**

- Alphabet Bars
- Heads & Subheads; Top & Bottom of Page

- Directories & Menus

- Dropdowns
- Rollovers
- Pop-ups
- Tables of Content

- Communication & Feedback Notices

- For example, more*

*Used at the end of short descriptive paragraphs, to connect to *more* information.

Types of Navigation

Specific Short Cut Examples



My Library Account

- Renew Library Materials
- Update Personal Info
- View Items Checked-Out



A B C D E F G H L M N P R S T V W

A

[ABOUT Academic Search Premier](#)

[ABOUT AccessScience \(McGraw-Hill Encyclopedia of Science & Technology\)](#)



- Available everyday 3 – 10 pm
- [Click here](#) to connect to a tutor
- First-time download required

Libraries by Type/Kind



[Return to top](#)

[Chat with a librarian.](#) available 8:a.m. - 4:p.m. M-F

New!

Types of Navigation

Site-Wide Shortcuts

- Search Boxes/Results Pages
- Site Map
 - A hypertext representation of all levels of the site hierarchy, shown in hierarchical outline form.
- Site Index
 - An alphabetized hypertext list of all the site's page titles. (Granularity can be finer, if desired.)

Types of Navigation

Site-Wide Example

This is a hybrid.
Site headings are in alphabetical order, listings by position in hierarchy

Also note the global navbar & breadcrumbs.

The screenshot shows the South Dakota State Library website's Sitemap page. The header includes the library's name, a search bar, and navigation buttons for 'South Dakota State Library', 'For Kids', 'For Teens', and 'Braille & Talking Book Library'. A secondary navigation bar lists 'For Librarians', 'Catalog & books', 'Databases, articles, journals...', 'S.D. info', 'Govn't info', and 'Web research'. A breadcrumb trail reads 'SD State Library > sitemap>'. The main content is titled 'Sitemap of the South Dakota State Library's website:' and is organized into several sections: 'About Us' (Mission, FAQs, personnel, State Library Board, laws/policies/more..., publications), 'Books' (library catalogs/sites, reviews/advice, booklists, booksellers, e-books), 'Braille and Talking Books' (books, magazines and machines), 'Government Info' (SoDakLIVE, South Dakota each of the 50 states, United States laws, rules, etc., directories, statistics, more..., international/foreign, depositories for government publishing), 'Grants' (Library Service & Technology Act/LSTA Grants, Solo Artists in Libraries/SAIL Grants, South Dakota Grant Directory), 'IP addresses', and 'Literacy'.

SOUTH DAKOTA STATE LIBRARY part of SD Department of Education

Sitemap

South Dakota State Library For Kids For Teens Braille & Talking Book Library

For Librarians

Catalog & books | Databases, articles, journals... | S.D. info | Govn't info | Web research

SD State Library > sitemap>

Sitemap of the South Dakota State Library's website:

About Us

- [Mission](#)
- [FAQs](#)
- [personnel](#)
- [State Library Board](#)
- [laws/policies/more...](#)
- [publications](#)

Books

- [library catalogs/sites](#)
- [reviews/advice](#)
- [booklists](#)
- [booksellers](#)
- [e-books](#)

Braille and Talking Books

- [books, magazines and machines](#)

Government Info

- [SoDakLIVE](#)
- [South Dakota each of the 50 states](#)
- [United States](#)
 - [laws, rules, etc.](#)
 - [directories](#)
 - [statistics, more...](#)
- [international/foreign](#)
- [depositories for government publishing](#)

Grants

- [Library Service & Technology Act/LSTA Grants](#)
- [Solo Artists in Libraries/SAIL Grants](#)
- [South Dakota Grant Directory](#)

IP addresses

Literacy

Types of Navigation

Site Map Hierarchy Example

[Return to top](#)

[Commonwealth Libraries](#)

[LEARN ABOUT](#)

[State Library of PA](#)

[About Us: Hours & Location](#)

[Collections](#)

[Federal Documents](#)

[Genealogy/Local History](#)

[General Collection](#)

[Law](#)

[Newspapers](#)

[Pennsylvania Publications](#)

[Rare Books/Assembly Collection](#)

[Directory of Staff](#)

[Genealogy/Local History](#)

[Interlibrary Loan](#)

[Orientations and Tours](#)

[State Employee Orientations](#)

[School Groups](#)

[Other Groups](#)

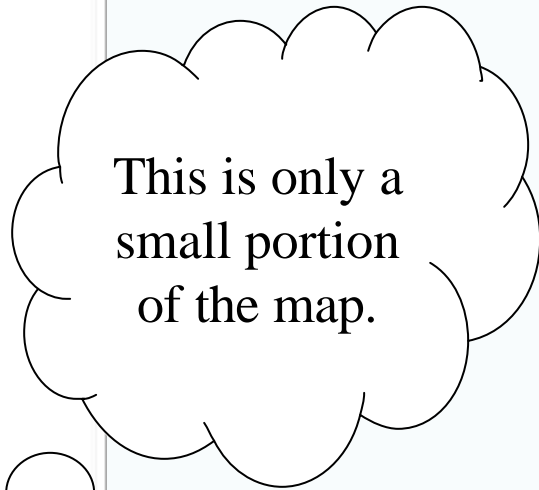
[Reference Services](#)

[State Library Computer Use Policy](#)

[State Library History](#)

[Services and Information for Pennsylvania Libraries](#)

[Advisory Services For Libraries](#)



This is only a
small portion
of the map.

Types of Navigation

Site Index Example

KY Department for Libraries and Archives

Search for:

?

Go

Site Index

A B C D E F G H I J K L M N O P R S T U V W

[About KDLA](#)

[Aging - Legal Issues - Resource List](#)

[Aging - Nutrition - Resource List](#)

[Aging - Physical Aspects - Resource List](#)

[Aging - Wellness - Resource List](#)

[Annual Report, KDLA - 1998-1999
Archived Issue](#)

[Annual Report, KDLA - 1999-2000
Archived Issue](#)

[Annual Report, KDLA - 2000-2001
Archived Issue](#)

[Annual Report, KDLA - 2001-2002
Archived Issue](#)

Organizations Quick List

[Friends of Kentucky
Public Archives, Inc.](#)

[Kentucky Book Fair](#)

[Kentucky Library
Trustees Association](#)

[State Advisory Council
on Libraries](#)

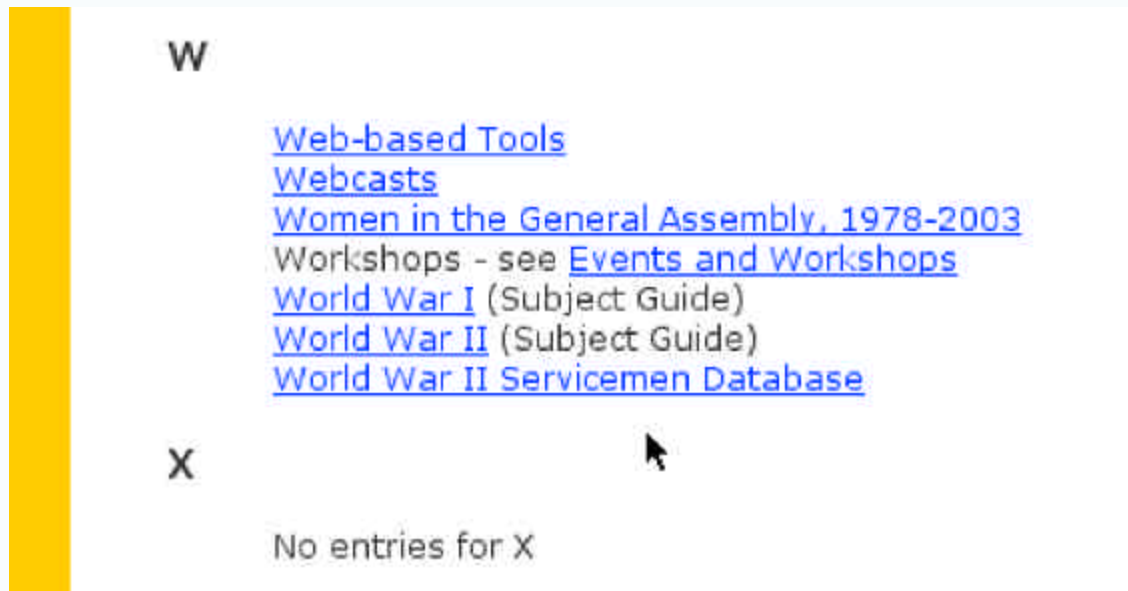
[State Archives and
Records Commission](#)

[State Historical
Records Advisory
Board](#)

Quick List shortcuts are a nice usability feature.

Types of Navigation

Helpful Index Usability Tip



It's helpful to note the type & format of the resource. For example, PDFs should be labeled.

Part 5: Navigation Implementation



Navigation Implementation

Universal (Site-Wide)	89
Global Navbar	90
Regional Navbar	91
Page Level Navigation	92
Specific Shortcuts & Cues	93
Site-Wide Shortcuts	94

Navigation Implementation

Universal (Site Wide)

- Alternate text for images, icons, tables
- Bottom of page text directory of the GNB
- Color & graphic cues
- Deactivated link(s) for current page
- Footer (copyright notice, etc.)
- Global Navigation Bar (GNB)
- Home page icon says *Home**
- HTML <H> headings & subheadings
- Page titles
- Pointers (*You are here.*)
- Section Navigation Bars
- Site ID & tagline
- Visited link color changes
- Optional: Breadcrumbs⁸⁹

*Everywhere except on the Home Page.

Navigation Implementation

Global (Top) Navbar

- Home Link
 - Site ID & Tagline
- Section & Task (Function) Links
 - Optional: Subdirectories
- Utility Links
 - Site Index Link
 - Site Map Link
 - Contact Us Link
 - Optional: Help

If you need help deciding how to organize your site, see the resources list, and in particular, *Web Site Design with the Patron in Mind* by Susanna Davidsen & Everyl Yankee.

Would you locate
search the site
differently from
search the catalog?

Navigation Implementation

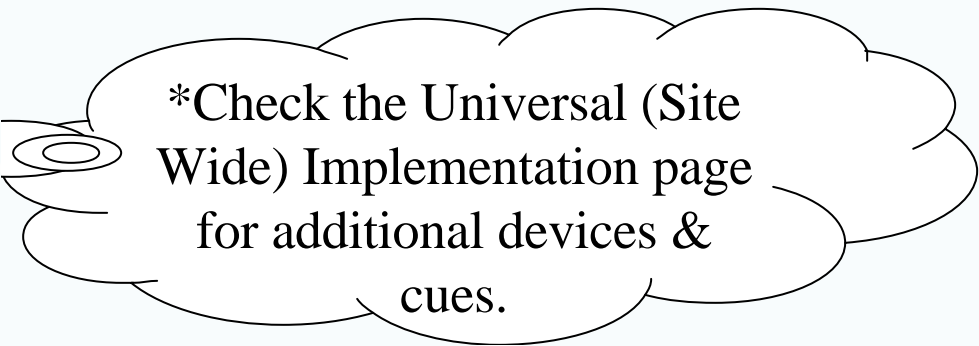
Regional (Side) Navbar

- Use an appropriate hierarchical organizational scheme to display choices—a table of contents, for example.
 - In the absence of a compelling hierarchy that reveals logical relationships, order the sections & subsections alphabetically.*
- Do not confuse the content revelation & access role of the Regional Navbar with the site-wide functions of the Global Navbar.

Navigation Implementation

Page Level Navigation

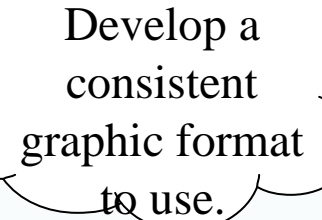
- Routine Use*
 - Anchors
 - Bottom & top of page
 - Headings & subheadings
 - Page directory &/or table of contents
 - Text links, when relevant
- Notices/Links
 - Long Scrolling Page
 - More,
 - New
 - Updated
- Instructions & Directions
 - As needed.



*Check the Universal (Site Wide) Implementation page for additional devices & cues.

Navigation Implementation

Specific Shortcuts & Cues



Develop a consistent graphic format to use.

- Devices
 - Menus
 - Dropdown | Popup | Rollover
 - Selection Devices
 - Buttons
 - Check Boxes
 - Images/Icons
 - Radio Boxes
 - Specialty
- Advice, Directions & Instructions
 - *This long page requires scrolling.*
 - *You must login to check out materials. Click on “My Account” to begin.*
- Feedback
 - Acknowledgement messages (after form submittal, task completion)

Navigation Implementation

Site-Wide Shortcuts

- Search Boxes/Results Pages
- Site Index
 - An alphabetical hypertext list of page titles; if the budget allows, organize also by concepts, &/or refine granularity to the subhead level.
- Site Map
 - A graphical representation of the site organization & contents showing structural relationships; text should be clickable.

Part 6: Navigation Guidelines



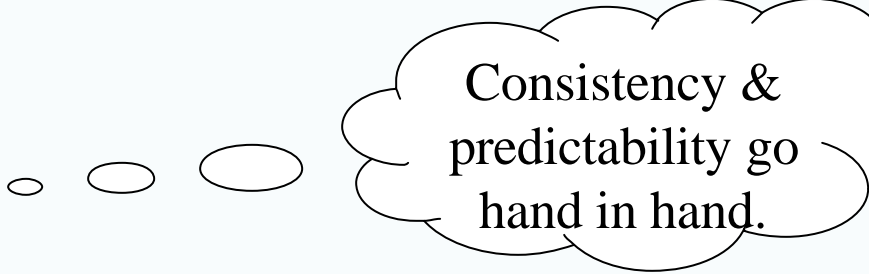
Navigation Guidelines

A Dozen to Do 97-99

A Half Dozen to Avoid 100-101

Navigation Guidelines

A Dozen to Do



Consistency & predictability go hand in hand.

Be consistent in the way you use navigation.

- Use the site ID & tagline on all pages, since users may click in from a search engine.
- Always add the word *Home* to the image/icon used as a link to that page.
- Deactivate all links to the page the user is on (do not remove them).
- Separately group links to sections, tasks & utilities in navigation bars.

Navigation Guidelines

A Dozen to Do

- Alphabetize link presentation unless topic, user studies or Web standards indicate otherwise.
- Be sure link labels match up to page titles.
- Provide a bottom of each page hypertext directory with the same links as the global navbar.
- Use subtle cues like pointers & color changes.
- Use breadcrumbs if possible.

Navigation Guidelines

A Dozen to Do

- Use internal page anchors/links, like *back to top* notices & other shortcuts, especially on long scrolling pages.
- Page titles should always be in same place, font, size & color for their place in the hierarchy. Do use alternate text & meet ADA standards.
- Provide a site map; content rich sites should also provide a site index.

Navigation Guidelines

A Half Dozen to Avoid

- Not having an established hierarchy; muddling up global & regional or regional & local navigation.
- Organizing links by guessing at users' interests—group &/or alphabetize systematically & consistently; users will rapidly learn how to navigate your site.
- Arranging page layouts & navbars so that horizontal scrolling is required.

Navigation Guidelines

A Half Dozen to Avoid

- Stretching out resources to provide the illusion of a larger site. Properly organizing them will save work when the site expands.
- Stranding users on *form* or any other pages with no way back.
- Content errors, like filling up Home with a large picture of the library, text-heavy messages, or outdated information.

Part 7: Evaluating Existing Navigation: Shedding Some Light



Evaluating Existing Navigation

Questions to Ask

104-107

Evaluating Existing Navigation

Questions to Ask

- Are Home & section welcome pages designed primarily for orientation & access rather than content?
- Are the site ID & tagline visible on every page?
- Does the navigation reveal & provide access to all the organizational schemes for content (topic, task or user group oriented) that have been devised?

Evaluating Existing Navigation

Questions to Ask

- Is the global navbar in section-task-utility order? Is it present both graphically & in text form on all pages of the site? Is it consistently located?
- Is the regional navbar in table-of-contents or other appropriate order? Is it present on all relevant section pages? Is it consistently located?
- Ditto for local navbar.

Evaluating Existing Navigation

Questions to Ask

- Does every page have a descriptive title in a consistent location & style?
- Are alternate text & <H> commands in use?
- Are specific shortcut navigation devices used appropriately? Are they graphically consistent?
- How many *You are here* pointers display at once?

Evaluating Existing Navigation

Questions to Ask

- Have search, form, submission & other specialty pages been developed?
- Does the site have a hypertext map that shows the information hierarchy?
- Is there a site index of page title?
- Have all site menus, directories & lists been organized by category, alphabetized or numbered?
- Is there a rationale for changes to standards?

Part 8: Developing a Navigation Plan



Developing a Navigation Plan

Review the Site Plan & Objectives	110
Develop & Test Preliminary Designs	111
Iterative Process	112

Developing a Navigation Plan

Review the Site Plan & Objectives

- What sections, tasks & utilities are required?
- What standard, specialty & site-wide shortcut navigation will be needed?
- Will there need to be any special pages (search, form, calendars, feedback, etc.)?
- Develop a rationale for any changes to standards.

Developing a Navigation Plan

Develop & Test Preliminary Designs

- Use paper prototyping techniques to develop & test preliminary designs for the:
 - Global (top) navigation bar & bottom of page text directory of it.
 - Regional (side) navigation bars based on the content & its organization.
 - Any differences in Home page design & navigation
 - Local navigation standards.
 - Navigation for all specialty pages.
 - Specific & site-wide navigation shortcuts.

Developing a Navigation Plan

Iterative Process

- Adjust work based on feedback.
- Create a web prototype.
- Test the prototype.
- Adjust work again.
 - Continue until 4 out of 5 new people tested can easily get around the site to accomplish tasks & locate information.

Part 9: Resources

Design

- Norman, Donald. *The Design of Everyday Things*. NY: Basic Books, 1988.



Resources

Design	113
Information Architecture & Usability	115
Library-Specific Web Design	116
Online Library Collection Development	116
Page Layout	117
Technology & Human-Computer Interaction	117

Resources

Information Architecture & Web Usability

- Beyer, Hugh & Karen Holtzblatt. *Contextual Design: Defining Customer-Centered Systems*. San Francisco: Morgan-Kaufmann, 1998.
- Fleming, Jennifer, *Web Navigation: Designing the User Experience*. Sebastopol, CA: O'Reilly, 1998.
- Friedlein, Ashley. *Web Project Management: Delivering Successful Commercial Web Sites*. San Francisco: Morgan-Kaufmann, 2001.
- Holmes, Merlyn. *Web Usability & Navigation: A Beginner's Guide*. Berkeley, CA: McGraw-Hill/Osborne, 2002.
- Krug, Steve. *Don't Make Me Think ! A Common Sense Approach to Usability*. Indianapolis, IN: New Riders, 2000.
- Nielsen, Jakob. *Designing Web Usability*. Indianapolis, IN: New Riders, 2000.
- Rosenfeld, Louis & Peter Morville. *Information Architecture for the World Wide Web*, 2nd ed. Sebastopol, CA: O'Reilly, 2002.
- Snyder, Carolyn. *Paper Prototyping: The Fast and Easy Way to Design and Refine User Interfaces*. San Francisco: Morgan-Kaufmann, 2003.

Resources

Library-Specific Web Design

- Davidsen, Susanna & Everyl Yankee. *Web Site Design with the Patron in Mind: A Step-by-Step Guide for Libraries*. Chicago: ALA, 2004.
- Garlock, Kristen & Sherry Piontek. *Designing Web Interfaces to Library Services and Resources*. Chicago: ALA, 1999.
- Wilson, A. Paula. *Library Web Sites: Creating Online Collections and Services*. Chicago: ALA, 2004.

Online Library Collection Development

- Pitschmann, Louis A. *Building Sustainable Collections of Free Third-Party Web Resources*. Washington, DC: Digital Library Federation, Council on Library and Information Resources, 2001. <<http://www.clir.org/pubs/reports/pub98/pub98.pdf>>
- Tomaiuolo, Nicholas G. *The Web Library: Building a World Class Personal Library with Free Web Resources*. Medford, NJ: CyberAge Books, 2003.

Resources

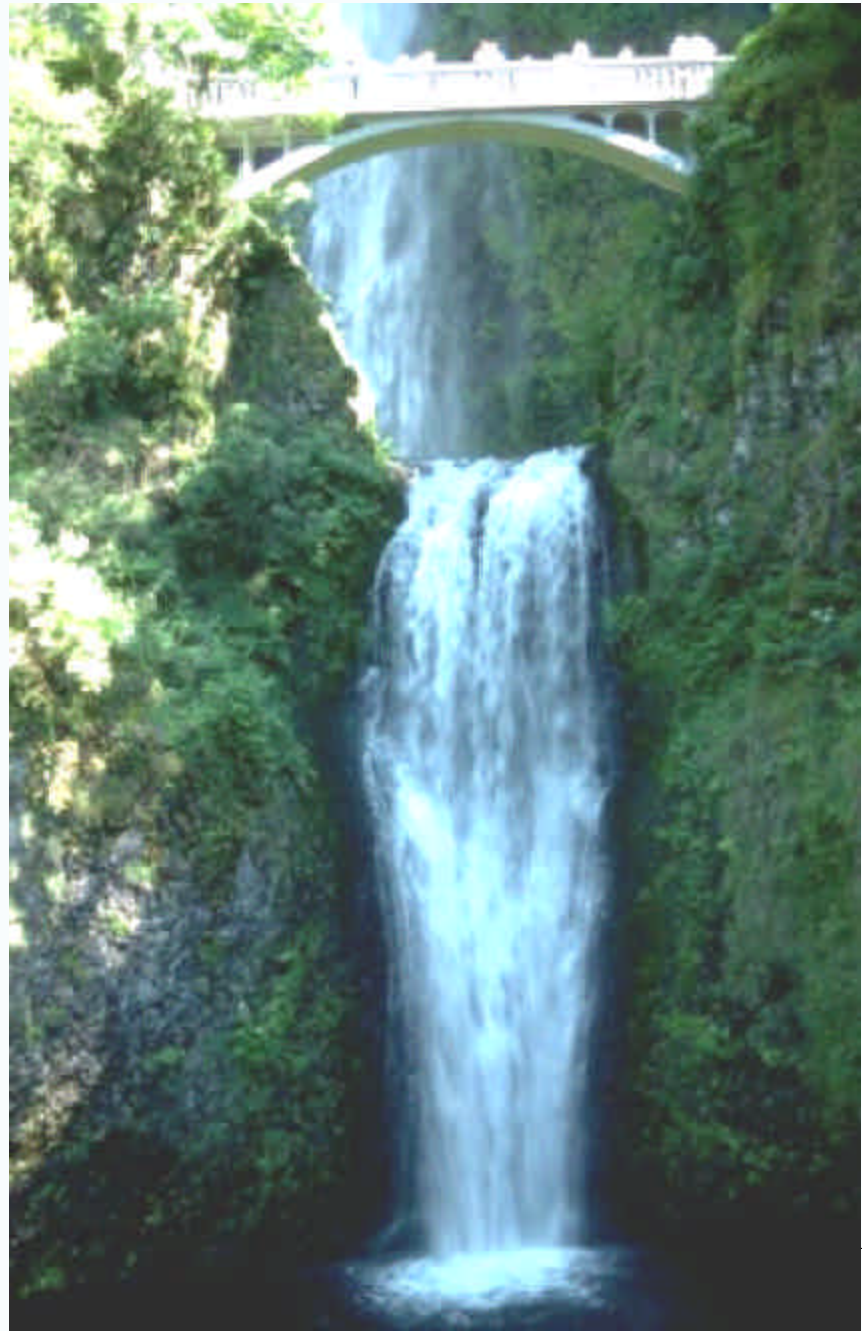
Page Layout

- Garcia, Dr. Mario R. *Contemporary Newspaper Design: A Structural Approach*, 2nd ed. Englewood Cliffs, NJ: Prentice-Hall, 1987.
- Garcia, Dr. Mario R. *Redesigning Print for the Web*. Indianapolis, IN, Hayden Books, 1997.

Technology & Human-Computer Interaction

- Dertouzos, Michael. *The Unfinished Revolution: Human-Centered Computers & What They Can Do for Us*. NY: Harper-Collins, 2001.
- Gelernter, David Hillel. *Machine Beauty: Elegance and the Heart of Technology*. NY: Basic Books, 1998.
- Murray, Janet H. *The Future of Narrative in Cyberspace*. NY: Free Press, 1997.

- Keep bridging the chasm between information & access.



Thanks

Appendices

Quick Site Testing	120
Labeling Guidelines	121
Grouping Guidelines	122
Graphic Standards	123-124
Navigation Cues & Devices	125-131

Appendices

Quick Site Testing (Steve Krug)

- Print out a dozen pages from different sites.
- Color print them.
- Hold & arm's length & squint.
- How quickly can you locate the items from the list on slide 21? The crucial indicators should pop out at you.
- Repeat using your own pages as you work on your site.

Appendices

Labeling Guidelines

- Avoid vagueness.
- Be consistent! Use the same label to refer to the same thing across all site pages.
- Avoid the use of synonyms on labels on the same page (confusing whether links lead to the same or different places)
- Avoid ambiguity in labeling; test to determine if context clarifies. The indexing process may introduce ambiguity.
- Retain consistency of granularity in labeling. Use indentation or font size changes to show differences in granularity.

Appendices

Grouping Guidelines

- Categorizing & grouping reduces cognitive overload. It makes things controllable & simplifies decision making by providing an illusion that there are less choices.
- It also saves the time of the reader by speeding text scanning.
- Organize groups in logical hierarchies based on relationships; use indentations to subgroup.
- When a subject based hierarchy is not possible, organize numerically, by date, or alphabetically, depending on the resource.

Appendices

Graphic Standards

- Use multiple navigation aids—people have different navigation, search & browse styles, and will respond to the cues (color, size, location) that affect them.
- Text links should be colored and underlined to achieve the best perceived affordance of clickability.
- Images require alternate text—so do tables because text readers garble them.

Appendices

Graphic Standards

- Draw organizational information from print publication standards for non-fiction books. Scannability of text, headlines & sizing, images & captions, sidebars, footnotes, footers, tables of content, chapter headings, index & so forth.

Appendices

Navigation Cues & Devices

- Accessibility
 - Alternate Text
 - HTML Heading Codes (H1, etc.)
- Alphabetization
 - Directories
 - Lists of Subject Links
- Anchors
 - Back to Top & Bottom of Page
 - Headings/Subheadings
- Breadcrumbs

Appendices

Navigation Cues & Devices

- Calendars/Event Schedules
- Communications & Feedback
 - Acknowledgment Messages
 - Contact Us
 - Directions (*How to get somewhere*)
 - Instructions (*How to do something*)
 - Labels
 - Notices (*More, New! Updated, etc...*)
 - Page Titles & Subheadings
 - Sound Tones
 - Webmaster ID & Contact

Appendices

Navigation Cues & Devices

- Directories & Menus
 - Bottom of Page Text Version of GNB
 - Drop Down Boxes
 - Navigation Bars
 - Pop-ups
 - Rollovers
 - Tables of Content

Appendices

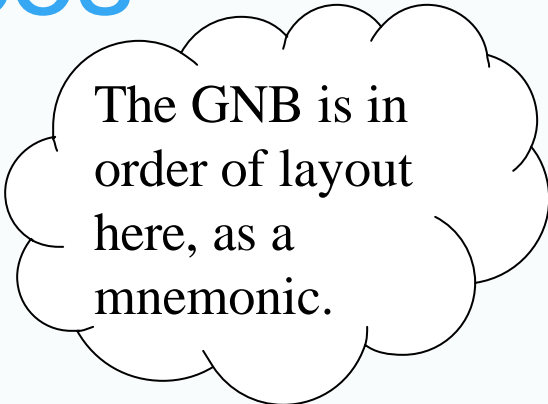
Navigation Cues & Devices

- Graphic Cues
 - Color Coding Sections/Tasks/Utilities in Global Navbar
 - Color, Font & Size Coding of Heads & Subheads
 - Deactivation of Self-Page Links
 - Icon/Button Design
 - Page Titles
 - Pointers (“You are here.”)
 - Placement on Page
 - Visited Link Color Change

Appendices

Navigation Cues & Devices

- Global (Top) Navigation Bar
 - Home Page Link
 - Site Identification & Tagline (Logo)
 - Regional Links (Site Content Divisions)
 - Task Links (Site Functions, including Search)
 - Utility Links (use these or relevant others)
 - Contact Us
 - Help Link
 - Site Index
 - Site Map



The GNB is in order of layout here, as a mnemonic.

Appendices

Navigation Cues & Devices

- Regional (Side) Navigation Bar
 - Section Directory/Table of Contents
 - Subdirectories
- Search Boxes
- Selection Devices
 - Buttons
 - Check Boxes
 - Hypertext
 - Radio Boxes
 - Specialty

Appendices

Navigation Cues & Devices

- Security Procedures (Login Boxes)
- Special Pages
 - Acknowledgement of Form Submittal
 - Pop-Up Pages
 - Results
 - Search
 - Other

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<<http://arthist.cla.umn.edu/aict/html/license.html>>
 - All other photos licensed from Jupitermedia Corporation via a clipart.com subscription.
<http://www.clipart.com/en/index>
- Website examples © their respective organizations.