GUIDELINES FOR WEB DESIGN

• General guidelines for Web design relate to:
  * Organization and structure
  * Navigation
  * Format, content, and appearance
  * Housekeeping
ORGANIZATION AND STRUCTURE

• Make important information easy to find
  * What are most likely and/or important tasks a user will do at the site?
  * What information are they most likely to want to find most frequently?

• Users tend not to form mental model of sites
  * Sites usually designed toward moving forward, not backing out
  * E.g., people use Back button far less than one would expect!
  * E.g., when users get lost, don't back out to familiar territory; just keep going
  * Users tend to come back to Home page to go somewhere else, even though needed link might be on page where they were
ORGANIZATION AND STRUCTURE

• Organize information logically
  * Reflect organization's structure
  * Linear, hierarchy, network
    - Most organizations are hierarchical; so are most sites
    - Hierarchical maps help
    - But often too complex, tend to confuse users
  * Take user groups into account

• Use "sight bites": Organize information so each "piece" generally fits on a single screen

• Take great care with home page design
  * First impressions are very important!
  * Gets seen more often than any other page
ORGANIZATION AND STRUCTURE

• Use frames with caution
  * Disorienting, restrict amount of presented information, necessitate more scrolling
  * Allow user to adjust frame boundaries
  * Generally use to hold navigation options if main area of site changes frequently
    - Frames as tables of contents (TOC) with links can help user performance
    - Make change in regular frame obvious
    - TOC frame should fit on one screen; no scrolling
  * Putting TOC in single frame shared with content display
    - Can include more detailed information
    - But makes it harder to browse back and forth
  * Separate frame can also be used effectively for glossary, index, help
ORGANIZATION AND STRUCTURE

• Make site as browser-, platform-, and resolution-independent as possible

• Organize site, when possible, for speed of presentation of information

  * Common Web user complaint is slow downloads!

  * Rule of thumb: 15 seconds maximum for download
NAVIGATION

• Two key navigation questions:
  * Where am I?
  * How do I get to X?

• Keep navigation as simple as possible

• Show site map for larger sites
  * Graphical/visual connecting lines between labels and descriptions
  * Make sure user can always determine current location within site
NAVIGATION

• Have good "search" feature in your site
  
  * About one third of users use site search as initial strategy to find information
    
    - Similar use of FAQs
  
  * Problems to watch for:
    
    - Not understanding scope of search
      
      - Whole site or just part
      
      - How to limit search to part
    
    - Not able to interpret search results
      
      - Organization and display of results (e.g., by relevance measure)
    
    - Often result in large lists to scan
    
    - Not enough information in results list items, not descriptive of content
    
    - Redundant copies of same item
NAVIGATION

• Have good "search" feature in your site (continued)

  * Help user check out results
    - Previous and Next buttons allow sideways movement through list without coming back up to list, but limited to sequential viewing

  * Help user choose from among results
    - Specialized query facilities that help user configure search requirements
NAVIGATION

• Use navigation options consistently throughout site

• Navigation bars are effective
  * Links at top and bottom sometimes better than buttons on side

• Put navigation options where they can't disappear
  * User should not have to scroll at all to find navigation options
NAVIGATION

• Same for other kinds of controls
  * Make relation of controls to pages, frames, boxes, etc. clear
  * Segregate control from data from status (feedback) locations on page
  * Button placement is difficult
    - Users tend to go to bottom of page to select buttons
    - If not visible at bottom, users often won't see

• Provide short-cuts for most likely task paths

• Provide redundant navigation

• Never make a user scroll horizontally!

• Minimize need to scroll vertically
NAVIGATION

• Use links liberally but appropriately

  * Text links are vital
    - Single most important mechanism for navigation
    - Downloading delays can mean text links are visible first
    - Most users look at text links before trying image links

  * Link content – perhaps single most important factor in Web sites
    - Link *predictiveness*: Be clear in where link will take user
    - Corollary is *distinguishability*: How distinguishable is each link from others?
    - Differentiation/differentness aids navigation
    - Users can select correct link by eliminating ones they don't want
NAVIGATION

• Use links liberally but appropriately (continued)

* Use meaningful text in links

  - Avoid "click here" or "here" or "go to"

  - Long (many words) links can be better for precision, differentiation

  - Short wording often too vague

  - Even add sentence of explanation if link not clear enough

  - Use precise, unambiguous wording
NAVIGATION

• Link destinations

  * Be consistent with words in link and in destination label/title
    - Help user assess success of action
  
  * Default user model of link takes user to another page in same site
    - Confusion can arise when link takes user to:
      - Another place on same page
      - Another site (especially one with a totally different style)
  
  * Same page destinations confuse because user can browse through item boundaries
    - Can avoid by breaking pages apart and keeping pages short
    - Should do this anyway to reduce scrolling
  
  * Other site destinations can confuse because they work against user model of original site structure
    - User may find no links back into original site
NAVIGATION

• Link layout

  * Affects user performance

  * Links embedded in text don't always work well
    - Better to put explanatory text on separate line

  * Wrapped links cause confusion about what is a link
    - Happens especially in multi-column format or narrow frames
    - Clarify by adding bullets or button outline to set off items

  * Be consistent in style of links

  * Make link color different and consistent
NAVIGATION

• Image links may need special consideration
  * Users will look for them with cursor
  * Do not help performance much
  * Don’t change color to indicate already used
  * Interfere with process of elimination in finding right link
  * Interfere with scanning

• Extensive cross-linking helps user recover from errors without always retracing steps

• Provide obvious options for "Exit", "Home", and other key navigation points

• But how many links on a page?
  * As number goes up, user performance goes down

• Avoid dead end pages
NAVIGATION

• Navigation and content are inseparable

  * **Shell or template strategy**: Develop navigational structure and hierarchy first, then plug in content (sometimes by different people)

    - Shell page has up-front overall organization, using many generic links

    - Causes links to be generic and vague, not connected to content with precision

    - *A check*: Can lots of content be removed without changing up-front links?
FORMAT, CONTENT, AND APPEARANCE

• Don't simply translate existing printed matter into hypermedia or multimedia

• Don't use graphics, animation, and other distractions "just because you can"
  
  * Users will read text while graphics are down-loading
  
  * Images as fancy text are nice, but
    
    - Don’t come up as fast; users may not wait for them to appear
    
    - Interfere with scanning
FORMAT, CONTENT, AND APPEARANCE

• Don't use graphics, animation, and other distractions "just because you can" (continued)

  * Graphic design doesn't automatically make a site "better"

    - Depends on quality of graphics

    - Depends on how well graphics are used to convey information

    - Graphics don't necessarily make sites more interesting to users

    - Often not as important as some think in helping find information on Web

    - Some sites with best user performance have almost no graphics
FORMAT, CONTENT, AND APPEARANCE

- Don't use graphics, animation, and other distractions "just because you can" (continued)

  * Information seeking is different than surfing
    - Cool stuff correlates with user preferences and satisfaction
    - Cool stuff attracts surfers
    - But animation, movement, blinking, flashing, zooming distract users and hurt performance
    - Content and descriptive links drive information seeking
    - Content and links correlate positively with user performance

  * What if goal of site is to grab and then to inform?
FORMAT, CONTENT, AND APPEARANCE

• Minimize reading

• Maximize readability – Fonts, color, contrast, layout, etc.
  * Old standards for books (typography) and GUI screens do not necessarily work on Web
  * Normal readability tests do not work on Web for information-seeking task performance
  * Primary design requirement: *scanning*
    - People skim and scan; people don't read all information
    - *Scan-ability:* Use bullets, less grammatical baggage, remove extra words
    - Less reading to access content (which is then read)
    - Too much white space is not necessarily good (despite what is true for GUIs and books)
      - Web pages have much lower visual bandwidth than books, newspapers
      - White space spreads out information and works against scanning
FORMAT, CONTENT, AND APPEARANCE

• Maximize readability (continued)

* Jury is still out on scrolling; studies show it is not necessarily avoided by users
  - "First-click" study showed just as many first clicks on page occurred after scrolling
  - Horizontal rules tend to stop users from scrolling, especially if occur at "fold"
* User-centered language and wording in messages
FORMAT, CONTENT, AND APPEARANCE

• Fonts

  * Use small number of fonts (generally up to 3) with good legibility and distinctiveness

  * Put no more than 40 - 60 characters per line

  * Space words appropriately

  * Use upper- and lower-case characters

  * Avoid ALL CAPS for blocks of text (e.g., except titles, captions, etc.)

  * Minimize use of italics

  * Don't underline text

  * Make text images large enough to read by someone over 40!
FORMAT, CONTENT, AND APPEARANCE

• Color

  * Probably the single most misunderstood and misused characteristic of good design
  * Design first for monochromatic display
  * Use to emphasize important information: attention-grabber
  * Use to show objects realistically
  * Use semantically to group, categorize, etc.
  * Use no more than 5 or 6 colors semantically
  * Use consistently throughout pages and site
  * Remember a lot of people are color blind!
  * Black on light grey (not pure white), yellow on blue are good combinations
  * Don't use blue for large blocks of text
  * Keep color of links consistent and different than other text
  * Two link colors are typically only real semantic indicators
FORMAT, CONTENT, AND APPEARANCE

• Contrast and brightness

  * Make differences of color, grey scale, size, etc. distinct enough to be recognizable

  * Contrast among "members" of color "families"

  * Don't make colors too bright or saturated
FORMAT, CONTENT, AND APPEARANCE

• Layout
  * Have a "theme" for layout organization
    - Grid works well
    - Create template to guide design
    - Ensures consistency across pages
    - Can place emphasis on key parts of page
  * Put important information at upper left

• For background images, keep simple and non-distracting

• Generally make selectable items look selectable

• Sloppy appearance implies questionable content!
HOUSEKEEPING

• Perform thorough usability evaluation of site before each release

• Before each new release, view site with
  * Numerous browsers
  * Different platforms
  * Images turned off
  * Different connection speeds
  * Different monitor sizes and resolutions
  * And at time of expected peak usage

• Don't have "under construction" for more than a few days

• Don't release a site (or new section) prematurely

• At least monthly, perform cobweb search: Avoid link-rot

• At least monthly, update site

• Have contact information (e.g., to Webmaster) at least on home page