

# CS3724 Human-computer Interaction

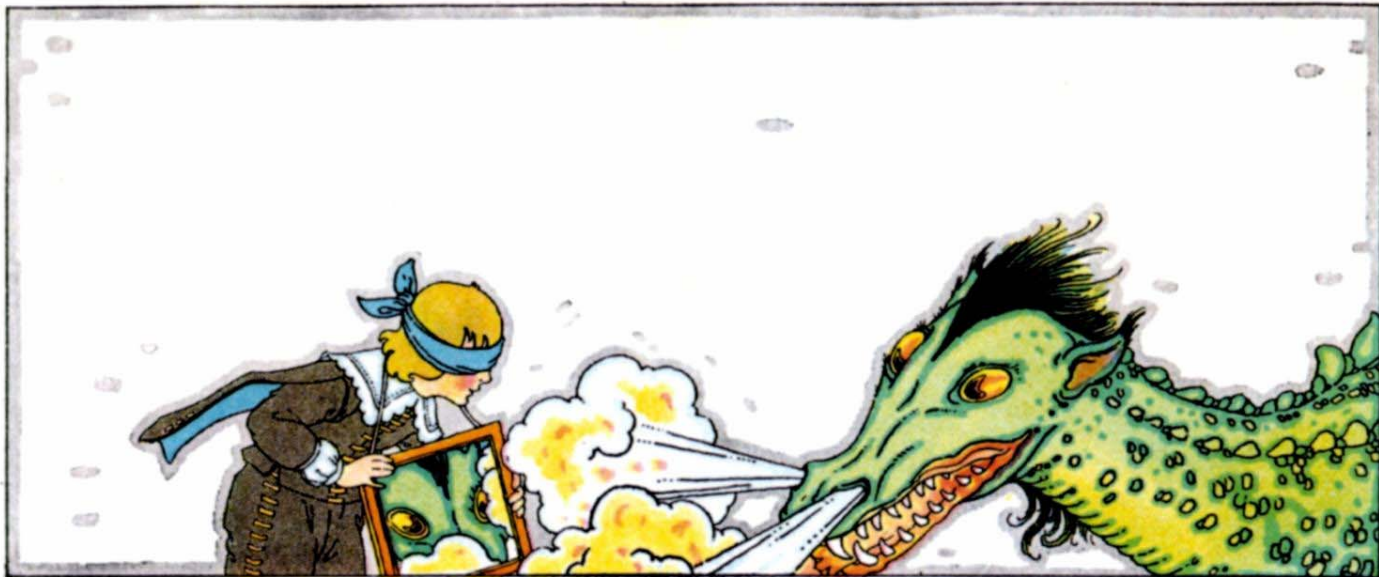
## Web Usability Design Guidelines

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# Web Usability

Web usability: Users/customers won't tell you if you don't have it!



# Guidelines for Web Design

- General guidelines for Web design relate to:
  - Organization and structure
  - Navigation
    - Decide on these two aspects only very generally first, then start to look at:
  - Format, content, and appearance
    - But content and navigation have to be done together
  - Housekeeping
    - Both of site and of individual pages

# 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?

# Organization and Structure

- 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, they don't back out to familiar territory; just keep going
    - Don't think much about where they have been
  - Users tend to come back to Home page to go somewhere else, even though needed link might be

# Organization and Structure

- Use “site bites”: Organize information so each piece fits on a single screen
- Organize site, when possible, for speed of presentation of information
  - Common Web user complaint is slow downloads!

# Organization and Structure

- Make site as browser-, platform-, and resolution-independent as possible
- Take great care with home page design
  - First impression very important
  - Gets seen more often than any other page
- Use frames with caution
  - Disorienting, restrict amount of presented information, necessitate more scrolling

# Organization and Structure

- 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 use performance
    - User clicks on link in TOC frame and regular frame changes content
- Separate frame can also be used effectively for glossary, index, help

# Navigation

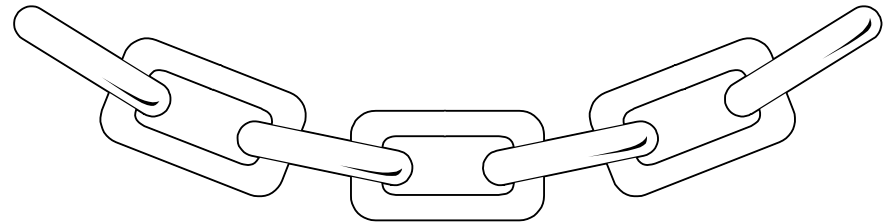
- Two key questions:
  - Where am I?
  - How do I get to X?
    - This is as far as most users go towards a mental model of a site
- Keep navigation as simple as possible
  - E.g., by following hierarchical organization
- Show site map for larger sites
  - Make sure user can always determine current location within site

# Navigation

- Provide short-cuts for most likely task paths
- Never make a use scroll horizontally (from left to right)
- Minimize the need to scroll vertically (from top to bottom)

# Navigation

- Use links liberally but appropriately



- Text links are vital
  - Downloading delays can mean text links are visible first
  - Users may look at text links before trying image links
- Use meaningful link content-perhaps single most important factor in Web site
  - Use precise, unambiguous wording

# Navigation

- Avoid “click here” or “here” or “go to”
- Long (several words) links can be better for precision and differentiation; short wording often too vague
- Link *predictiveness*: Be clear where link will take user
  - May be single most important guideline of entire course! You might improve the average site’s usability by 50% by following this one guideline.
- Roll-overs (fly-overs) may help explain link

# Navigation

- Corollary is *distinguishability*: How distinguishable is each link from the others?
- Users may select correct link by eliminating ones they do not want
- Text link layout
  - Affects user performance
  - Links embedded in text don't always work well especially for scanning
    - Studies found strong negative effect
    - Goes against intuition

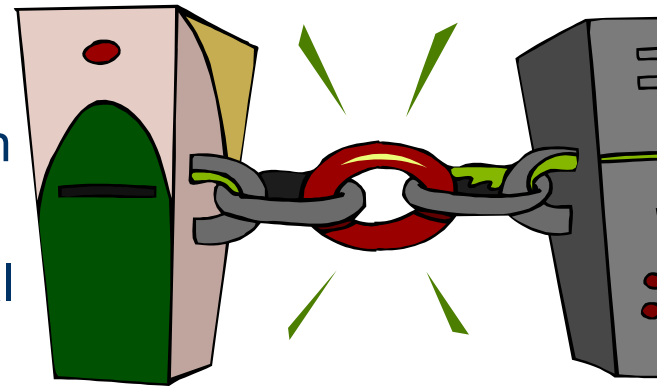
# Navigation

- Image (graphical) links
  - Often do not help performance much (over text links)
  - Often do not look selectable

# Navigation

- Link destination

- Be consistent between words in links
- Default user model of links takes user to another page in same site
  - Confusion can arise when link takes user to another site (especially one with totally different style)
  - User may find no links back into original site
    - Open new window with these links



# Format, Content, & Appearance

- Don't simply translate existing printed matter into hypermedia
- Don't overly use graphics, animation, and other distractions “just because you can”
  - “Gratuitous graphics” - costly in terms of downloading time, but distracting
    - E.g., blinking something clickable

# Format, Content, & Appearance

- Graphic design doesn't automatically make a site "better"
  - Depends on how well graphics convey information
  - Graphics don't necessarily make sites more interesting ("sticky") to users
    - Study: Did not spend more time
  - 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, & Appearance

- Maximize readability-fonts, color, contrast, layout, etc.
  - Old standards for books (typography) and GUI screens do not necessarily work on web
  - Primary design requirement: scanning
  - People skim and scan; people don't read all information

# Format, Content, & Appearance

- Fonts

- Use small number of fonts (generally up to three) with good legibility and distinctiveness
- Put no more than 40-60 characters per line
- Space words appropriately
- Use upper- and lower-case characters

# Format, Content, & Appearance

- Avoid ALL CAPS for blocks of text (e.g., except titles, captions, etc.)
- Generally use san serif fonts
- Minimize use of italics
- Don't underline text
  - Why? Confusing with links
- Make text large enough to read by someone over 40!
  - Regular text size can be controlled by user in browser

# Format, Content, & Appearance

- Color
  - Probably the most misused and misunderstood characteristic of good design
  - Design first for monochromatic display
  - Use to emphasize important information: attention-grabber
  - Use to show object realistically
  - Use semantically to group, categorize, etc.

# Format, Content, & Appearance

- Use no more than 5 or 6 colors semantically
- Use consistently throughout pages and site
- Remember many people are color blind!
- Black on light gray (not pure white), yellow on blue are good color combinations
- Don't use blue for large blocks of text

# Format, Content, & Appearance

- Layout
  - Have a “theme” for layout organization
    - Grid works well
    - Use template to guide design and ensure consistency
    - Can place emphasis on key parts of page
  - Generally put important information in upper left
    - English is read left to right and top to bottom

# Housekeeping

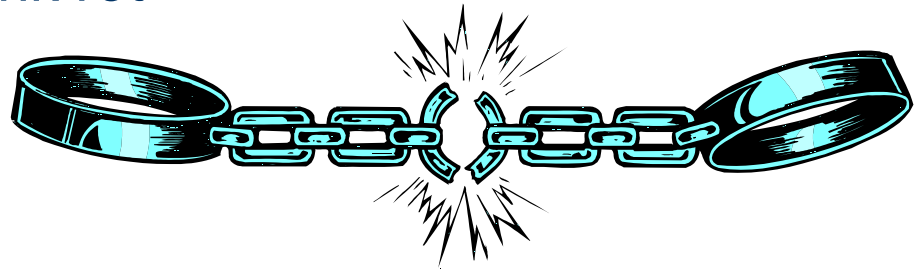
- Perform thorough usability evaluation of site before each release
  - Technical quality
  - Structure
  - Navigation
  - Readability

# Housekeeping

- 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

# Housekeeping

- At least monthly, perform cobweb search: avoid link rot
  - Broken, stale links



- At least monthly, update site
  - Outdated, incorrect information
- Have contact information (e.g., to Webmaster) at least on home page