

CSCI324/IACT403/IACT931

Designing for Web Usability



Definition of Usability

- Usability...
 - a quality attribute that assesses how easy user interfaces are to use
 - refers to methods for improving ease-of-use during the design process



Definition of Usability

- Web Usability can be defined by five key quality components:
 - Learnability:
 - How easy is it for users to accomplish basic tasks the first time they encounter the design?
 - Efficiency:
 - Once users have learned the design, how quickly can they perform tasks?
 - Memorability:
 - When users return to the design after a period of not using it, how easily can they re-establish proficiency?
 - Errors:
 - How many errors do users make, how severe are these errors, and how easily can they recover from the errors?
 - Satisfaction:
 - How pleasant is it to use the design?



Utility vs Usability

- Utility
 - Does it do what users need?
- Usability and utility are equally important
 - No good making something easy if it's not what you want
 - No good if the system can do what you want if nobody can figure out how to make it do it



Importance of usability on the Web

- Usability is a necessary condition for survival on the Web
- The following factors can all cause users to leave a web page
 - If a website is difficult to use
 - If the homepage fails to clearly state what a company offers and what users can do on the site
 - If users get lost on a website
 - If a website's information is hard to read or doesn't answer users' key questions



Importance of usability on the Web

- Users don't spend time
 - reading a website manual (or most other program manuals)
 - Trying to figure out an interface



Importance of usability on the Web

- Users spend most of their time on other websites
 - Their expectations are influenced by what they see most often
 - There are always plenty of other websites out there
 - Studies show that users will leave a website after 1 minute and 49 seconds on average, if the website doesn't fulfil their needs



Importance of usability on the Web

- There are plenty of other websites available;
 - leaving is the first line of defence when users encounter a difficulty
 - if users cannot find the product, they cannot buy it either



Importance of usability on the Web

- For Intranets
 - Captive audience?
 - Lost time is lost productivity
 - =lost money because you are paying them to NOT work



Original Top Ten Mistakes in Web Design (1996)

- Using Frames
- Gratuitous Use of Bleeding-Edge Technology
- Scrolling Text, Marquees, and Constantly Running Animations
- Complex URLs
- Orphan Pages



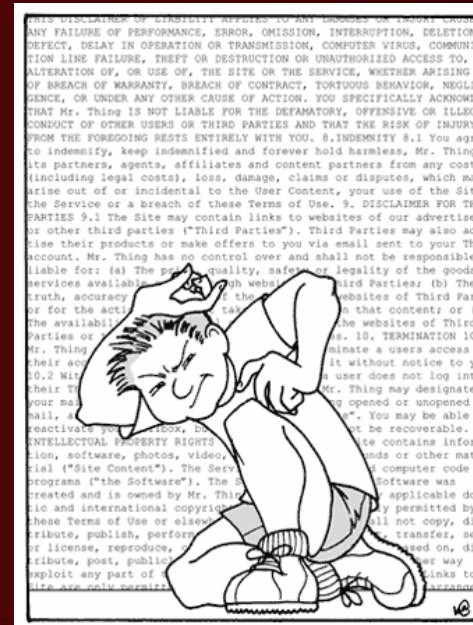
Original Top Ten Mistakes in Web Design (1996)

- Long Scrolling Pages
- Lack of Navigation Support
- Non-Standard Link Colours
- Outdated Information
- Overly Long Download Times



Revisited 2004

- Bad Search
- PDF Files for Online Reading
- Not Changing the Colour of Visited Links
- Non-Scannable Text
- Fixed Font Size



Revisited 2004

- Page Titles With Low Search Engine Visibility
- Anything That Looks Like an Advertisement
- Violating Design Conventions
- Opening New Browser Windows
- Not Answering Users' Questions



Usability Guidelines

- 944 usability guidelines were identified for user interface design by the US Air Force between 1984 and 1986
 - 60 of these guidelines were examined by Nielsen
 - http://www.useit.com/alertbox/20050117_guidelines.html
 - 90% of these guidelines are still valid
- Jakob Nielsen has identified over 1,277 guidelines for Web and intranet usability



Usability Guidelines

- Web Usability
 - "About Us" sections of corporate sites: 50 design guidelines
 - PR sections of corporate sites: optimizing usability for journalists, 75 design guidelines
 - Investor relations usability: 65 guidelines for serving individual and institutional investors, financial analysts, and business journalists on corporate websites
 - Site map usability: 28 design guidelines
 - Locator usability: 21 design guidelines to help website users find a company's stores, offices, or other physical locations
 - Web-based applications in Flash: 117 design guidelines and 53 minutes video highlights from user testing



Usability Guidelines

- Homepages: 113 design guidelines
- E-commerce user experience: 207 design guidelines
- Intranet Usability
 - Guidelines from user testing of 14 intranets: 111 design guidelines
- Email Usability
 - Email newsletters: 127 design guidelines
 - Confirmation email and transactional messages: 73 design guidelines



Usability Guidelines

- Special Audience Segments
 - Children: 70 design guidelines for sites that target users aged 6-12 and the kids' corners of mainstream sites
 - Teenagers: 60 design guidelines for users aged 13-17
 - Senior citizens: 46 design guidelines to support users aged 65 and older
 - Users with disabilities: 75 guidelines for improving usability beyond simple accessibility
 - Flash accessibility: 21 guidelines for making Flash easier to use for users with disabilities



Usability Guidelines

- Usability guidelines endure because they depend on human behaviour, which changes very slowly
- Usability guidelines mainly become obsolete when they're tightly bound to specific technologies



PDF Usability Crimes

- **Linear exposition**
 - PDF files are typically converted from documents that were intended for print,
- **Jarring user experience**
 - PDF lives in its own environment with different commands and menus
- **Crashes and software problems**
 - While not as bad as in the past, you're still more likely to crash users' browsers or computers if you serve them a PDF file rather than an HTML page.



PDF Usability Crimes

- **Breaks flow**
 - You have to wait for the special reader to start before you can see the content
 - PDF files often take longer time to download
- **Orphaned location**
 - Because the PDF file is not a Web page, it doesn't show your standard navigation bars.
 - Users can't even find a simple way to return to your site's homepage.
- **Content blob**
 - Most PDF files are immense content chunks with no internal navigation
 - lack a decent search
- **Text fits the printed page, not a computer screen.**
 - PDF layouts are often optimized for a sheet of paper



Guidelines for Visualizing Links

- Textual links should be coloured and underlined to achieve the best perceived affordance of clickability
- To maximize the perceived affordance of clickability
 - Colour and underline the link text
 - Users shouldn't have to guess or scrub the page to find out where they can click



Guidelines for Visualizing Links

- Assuming the link text is coloured, it's not always absolutely necessary to underline it
 - There are two main cases in which you can safely eliminate underlines
 - navigation menus and other lists of links if the page design clearly indicates the area's function
 - your design might not be as obvious to outside users as it is to your own team members
 - Users typically understand a left-hand navigation rail with a list of links on a coloured background
 - Exceptions:
 - underlining is essential if you use link colours such as reds or greens, which cause problems for users with common forms of color-blindness.
 - underlined links are important for low-vision users' accessibility, so retain underlines if accessibility is a priority for your site or you have many users with low vision.



Guidelines for Visualizing Links

- Don't underline any text that's not a link
 - Even if your links aren't underlined
 - Reserve underlining for links
- Use different colours for visited and unvisited links.
 - The colour for unvisited links should be more vivid, bright, and saturated than the colour for visited links, which should look "used" (dull and washed out).
 - The two colours should be variants or shades of the same colour
 - Shades of blue provide the strongest signal for links, but other colours work almost as well
 - Provide redundant cues for colour-blind users.
 - Making unvisited links brighter and more luminous than visited links will usually accomplish this goal.



Guidelines for Visualizing Links

- Never show text in your chosen link colours unless it's a link
 - generally avoid colour for text unless it's a link
 - Don't use blue for non-link text, even if you don't use blue as your link colour
 - Blue is still the colour with the strongest perceived affordance of clickability
- There is no need to use special colours or other visualizations when the cursor hovers over a link.
 - Exception:
 - if you've opted to present links with less than the maximum perceived affordance for clickability, you can recover some of the lost usability by signalling clickability when the user hovers over the link
 - One useful hovering effect is to use link titles to help users predict where a link will lead before they click it



Guidelines for Visualizing Links

- Don't use tiny text for links
- Don't place links so close together that users with reduced motor skills will have difficulty selecting them
 - Exception: It's okay to use small font for links that few users will need (such as copyright info), as long as you place those links in a secondary location (such a footer) so users don't feel obligated to read them.
- If you target seniors or otherwise have many older users
 - Links should be in a large font (12 points or higher)
 - links should include enough text to make them easy to click on



Top Ten Guidelines for Homepage Usability

- This is the starting point for most user visits to a website
- Make the Site's Purpose Clear: Explain Who You Are and What You Do
 - 1. Include a One-Sentence Tagline
 - 2. Write a Window Title with Good Visibility in Search Engines and Bookmark Lists
 - 3. Group all Corporate Information in One Distinct Area
 - 4. Emphasize the Site's Top High-Priority Tasks
 - 5. Include a Search Input Box



Top Ten Guidelines for Homepage Usability

- Reveal Site Content
 - 6. Show Examples of Real Site Content
 - 7. Begin Link Names with the Most Important Keyword
 - 8. Offer Easy Access to Recent Homepage Features



Top Ten Guidelines for Homepage Usability

- Use Visual Design to Enhance, not Define, Interaction Design
 - 9. Don't Over-Format Critical Content, Such as Navigation Areas
 - 10. Use Meaningful Graphics

