Web Design Guidelines

SWEN-444
Design Principles and Guidelines

User Populations
(Shared human ability and behavior)
(Problem domains)

Computing Paradigms
(Platform guidelines and conventions)

Foundation Design Principles
(Empirical)
Designing for the Web

Current landscape …
• **HTML5 + CSS3** to build a wide array of sophisticated “rich Internet applications”
• Reusable GitHub based open source **UI components**; e.g., Bootstrap, jQuery
• Modern **browsers efficiently** process HTML and JavaScript
• The “web experience” is **more than graphic design** and content information architecture
• Good design principles still apply
How Do We Really Use the Web?

• Do users **carefully read** content, **consider all options**, before making decisions on actions?
• Or, do users **scan** each new page, **click** on the link that seems correct or interesting?

• **Facts of life:**
  • We don’t read pages, we **scan** them
  • We don’t make optimal choices, we **choose** the **first reasonable option**
    • Little downside for wrong guesses
  • We **muddle through** without always understanding how things work
    • Few people read instructions
Site Evolution

• **Informational sites:**
  • Balance display density of useful information with learnability for infrequent users
  • Full screen content with good page navigation

• **Transactional sites**
  • Properties of informational sites plus functional behaviors
  • Efficient structured navigation based on an “information architecture” page content organization

• **Web application sites:**
  • Desktop-like more complex applications
  • “Views” more than “pages” – not a “document” metaphor
  • Asynchronous server communications
Class Activity

Evaluate the RIT website:

• Critique the user experience in terms of the web design guidelines described in this lecture
• What general design principles are represented?
• Design a wireframe(s) that improves the existing design
Some Design Guidelines

- Home page
- Page layout
- Navigation
- Information presentation
- Note: web context interpretations of affordance derived guidelines
The Homepage

• Create a positive first impression
  • Answer what, where, when, who, why + how
• Communicate the site’s value and purpose
  • E.g., Site identity, mission, feature hierarchy, search
• Space compromise – use no more space than necessary
  • Limit to one screen
  • Don’t oversell the site
• Homepage layout may be different than other pages
Page Layout

• Create a visual hierarchy
  • Header – typically logo/site information, primary navigation, search, log-in status
  • Footer – suggest where to go next, seldom used areas of the site or application
• Establish conventions - consistent appearance and location of navigation elements on all pages
• Use frames when certain functions must remain visible on every page
• Avoid clutter – too many items, omit needless text
• Visually align page elements, either vertically or horizontally
Navigation

• Page navigation depends on content organization - information architecture
• Content navigation – relationships are associative
• Primary navigation (site page sections) – top preferred over (left) side unless there are many items
  • Users look top, then left, right
• Secondary navigation and beyond (three levels max)
  • Top plus left for secondary
  • Primary drop down from primary (“fat navigation”)
Navigation (cont.)

• Utilities – links to important site elements not part of the content hierarchy; e.g., “About”, “Help”
• A way to search – simple search box or link to a search page
• Page and link names match
• “You are here” visual highlights of navigation hierarchy (e.g., bold)
• “Breadcrumbs” showing navigation hierarchy from home page to current location
Navigation (cont.)

• Always provide navigation options – no dead end pages
• Use a clickable ‘List of Contents’ on scrollable long pages
  • E.g., ‘anchor links’ at the top of the page
• Keep navigation only pages short
• Provide site maps for sites with many pages
• Measure of usability design effectiveness:
  • Number of clicks but more importantly, how hard to choose a click (understandability)
Make Links Obvious

• Use meaningful link labels
  • Text is preferable to graphics; label graphic links
• Use color changes to indicate when a link has been visited
• Distinguish internal and external links
• Duplicate links to important site content to ensure users can find it
• Provide consistent cues to links, avoid misleading cues to click non-links
  • E.g., underlined blue text, images
Browsing and Searching

• User wants to find something – browse or search?
• Browsing
  • Versus the real world – no sense of scale, direction, or location (e.g., search in real store)
• Searching - users are really not that good at forming effective queries
  • So help the user find the desired page
    ▪ Auto complete
    ▪ Auto suggest to disambiguate
    ▪ Suggest keywords
Search (cont.)

- Scroll after search
  - Create an effective visual rhythm with white space and typographical emphasis
  - Page header and footer are boundaries
  - Some pages scroll infinitely as content is added as scrolling proceeds (e.g., social networking sites)
    - Accessibility issues
  - Touch screens and gestures make scrolling more natural
Graphics, Images, and Multimedia

- Simple background images for page readability
- Distinguish important images from banner advertisements or gratuitous decorations
- Choose images to convey the intended message to users, not just designer aesthetics
- Introduce animation/video content but …
- Have clear and useful reasons for using multimedia to avoid unnecessarily distracting users
  - Consider download performance
UX and Persuasive Design for Websites

• Traditional usability design and testing answers – can the user be successful based on usability principles

• Versus will users use the system?
  • Are they persuaded?
  • Do they become emotionally involved?
  • Do they trust the site?

• Understand how people make decisions
  • To buy or donate
  • To subscribe
  • To re-visit, …
Decision Making Effectiveness

• Enhance traditional usability testing with evaluation of decision making effectiveness
• Conversion - users make the desired decisions
• Based on various psychological behavioral models
  • Herzberg’s theory of job satisfiers (e.g., advancement) and dissatisfiers (e.g., pay)
  • Maslow’s hierarchy of needs pyramid; physiological …self actualization
Evaluate Conversion Effectiveness

- What are the trigger or tipping points that lead to conversion?
- Expand traditional persona models – what motivations, experience, preferences, …
- Evaluate users – what persuades them
  - What information attracts them, what steps lead them to desired decisions
  - What emotions are expressed through body language, eye tracking, facial expression, unsolicited verbalizations?
- Identify step by step improvements to enhance motivation triggers for each persona type
- Note: a trustworthy site (i.e., professional) enhances conversion success
References

• “Research-Based Web Design & Usability Guidelines”, U.S. Department of Health and Human Services; www.usability.gov
• “Don’t Make Me Think”, Steve Krug
• “Designing for Conversion; Evaluating decision making through HFI’s PET DesignTM”, Mona Patel
• “About Face”, Cooper, Reimann

Note: By definition government web sites tend to be very information rich