Web Design Guidelines

"Research-Based Web Design & Usability Guidelines", U.S. Department of Health and Human Services; www.usability.gov

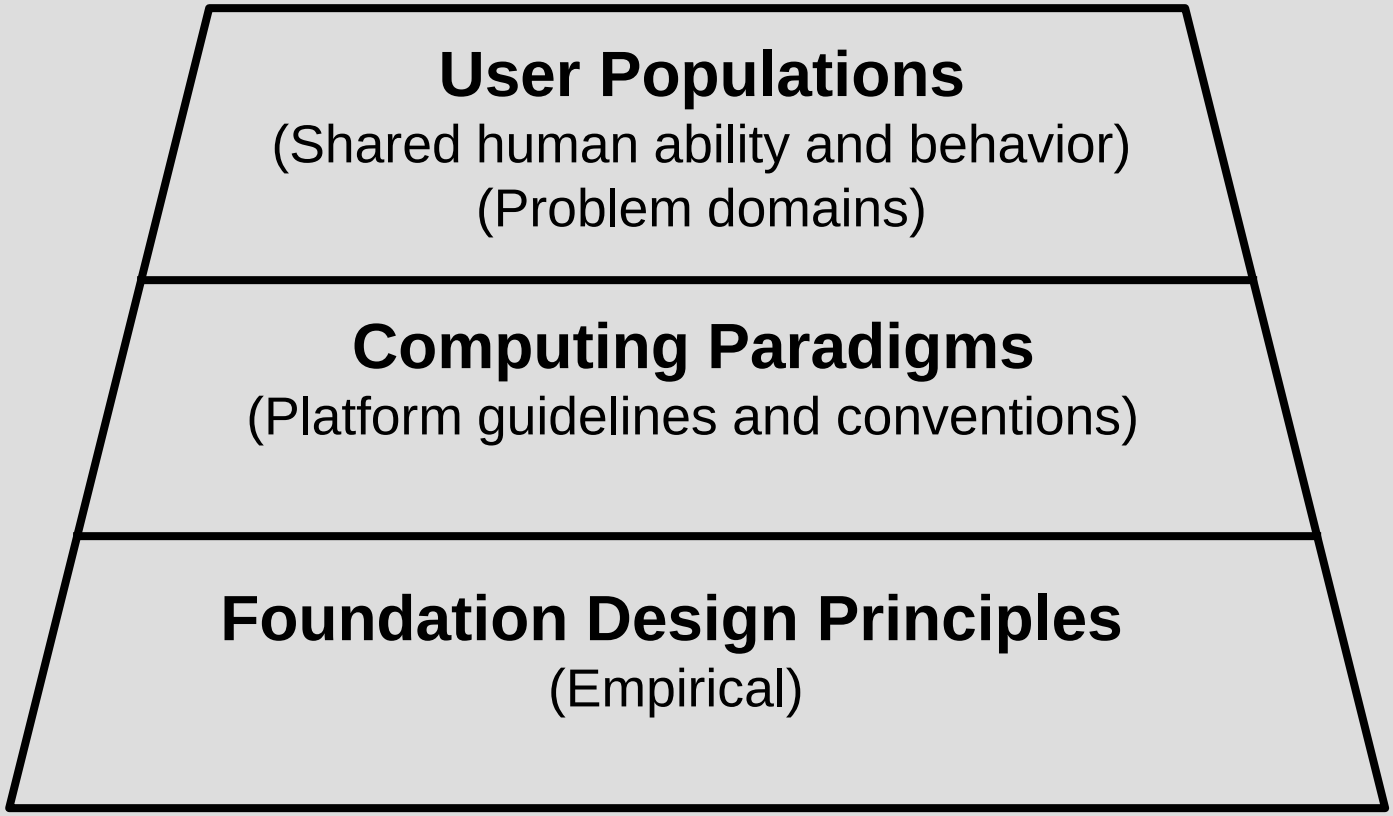
"Don't Make Me Think", Steve Krug

"Designing for Conversion; Evaluating decision making through HFI's PET Design™", Mona Patel

"About Face", Cooper, Reimann

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

Design Principles and Guidelines



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 Library or SIS website:

- **Critique the user experience in terms of the web design guidelines described in this lecture**
  - **Home page**
  - **Page layout**
  - **Navigation**
  - **Browsing and searching**
  - **Graphics, images, multi-media**
- **What general design principles are represented?**
- **Design a wireframe(s) that improves the existing design**
- **Dropbox – "Class Activities>Website Design"**

Some Design Guidelines

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

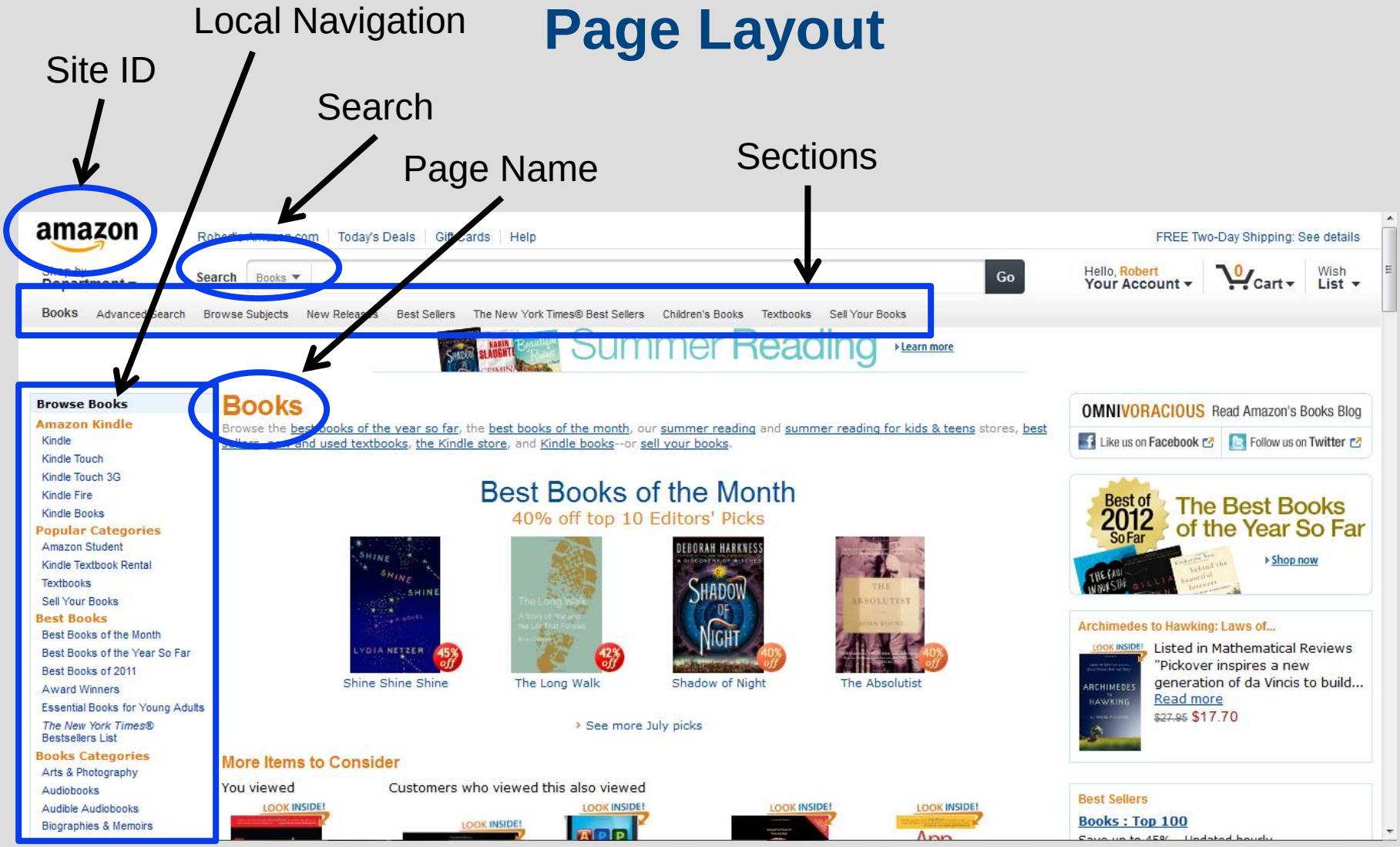
The Homepage

- 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

Page Layout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Gift Cards
Help
FREE Two-Day Shipping: See details
Hello, Robert
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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**