1.0 Web Design Principles Lecture 1

1.1 Basic principles involved in developing a web site.
1.2 Planning process.
1.3 Five Golden rules of web designing.
1.4 Designing navigation bar.
1.5 Page design.
1.6 Home Page Layout.
1.7 Design Concept.

1.1 Basic principles involved in developing a web site

Web design encompasses many different skills and disciplines in the production and maintenance of websites.

The different areas of web design include web graphic design; interface design; authoring, including standardized code and proprietary software; user experience design; and search engine optimization.

Often many individuals will work in teams covering different aspects of the design process, although some designers will cover them all.

The term "web design" is normally used to describe the design process relating to the front-end (client side) design of a website including writing markup.

Web design partially overlaps web engineering in the broader scope of web development. Web designers are expected to have an awareness of usability and if their role involves creating markup then they are also expected to be up to date with web accessibility guidelines.

- A **Web site** is one or more Web pages linked together in an organized collection
- When designing a Web site keep in mind that the most essential element of any Web site is the content
  - First, consider the goal of the site
    - Who is the audience for the Web site?
    - What product or service does the site make available to this audience?
- Outlining the Site
  - **Storyboarding** is the process of creating a series of sketches indicating the content and links that connect one Web page to another

  - Another way of planning the structure of the site is to use a graphic that shows the hierarchy of pages within the site
    - The **home page** is the main page of a Web site, which is generally the first page visitors will see
    - A **navigation link** is a means of guiding a visitor to a Web site from one page in the site to other pages
- Supplementing the Navigation Links
  - Web sites typically include a **search function** and a **site map**
    - A **search function** lets visitors try to find specific information on a Web site
    - A **site map** is a single Web page that lists and organizes all the Web pages in a site
  - A **hyperlink** is a text or an object that links to another Web page.
- Web content should always be focused and concise
- **Drafting the Text**
  - Remember your audience
  - Provide information as briefly and effectively as possible
  - Keep text concise on the opening pages; place pages with more text deeper in the page structure
  - Make sure that each page focuses on one major topic
- Polishing the Text
  - Edit text so it is well organized and clear
  - Think of what your audience wants to know and whether the text provides that information
  - Think about what **background** on the topic your audience might not have and explain any points that need clarification

Getting Approval

- The client has the final say on:
  - What should be in the Web site.
  - How the Web site should be structured.
  - How visitors will navigate within the Web site.
- At each stage in the design process, get the **client's approval** of the approach you suggest
- Show the storyboard or overall organization before beginning to work with content
- If you are writing the content, show it to the person with the authority to approve the site in draft stage and after it has been polished

Organizing and Naming Web Site Files

- Create a separate file for each Web page

- Conventions for naming Web files
  - Use lowercase letters only
  - Include no spaces but use hyphens or underscores between words
  - Use keywords that describe the content on each page in the file name for that page.
  - Limit URLs to a maximum of 60 characters
- Be sure to create an **index page** (home page)

Web Design Versus Print Design

- Web designer does not control the final appearance of the design as much as a print designer does.
- Web designers need to create designs that accommodate variations.
- Difference in the tools or design elements a designer has to work with.
- Difference is in the attitudes and expectations that the user brings to the product.
- People interact with Web and print products differently.

Planning Steps

1. **Determine the audience & objectives.**
2. **Sketch a storyboard or flowchart of the pages.**
3. **Create a folder hierarchy.**
4. **Collect the page content and create the pages.**
5. **Test the pages.**
6. **Modify the pages.**
7. **Publish the site.**

Determine the Audience

- **Customers?**
- **Employees?**
- **One industry?**
- **Educational background?**
- **Age?**
- **Interest?**
- **Make sure the site appeals to the audience.**

Page Layout

- **General layout for content pages**
  - **Be consistent, location, color, type.**
  - **Link each page to previous and to introductory**
  - **Navigation bar on top and bottom**
  - **No active link to current page**

- Page heading at the top of each
- Contact Information
- Update Information

Design Rules

- **Be concise – simple sentences, bullets.**
- **Easy to read – text size, white space, short lines, indent, tables, serif font, colors, single word links, don't say click here.**
- **Easy to navigate – good descriptions, easy icons, don't underline regular text, divide long pages, toc, site map.**
- **Interesting – color, bold, size – don't overdo.**
- **Load quickly - < 60k, small images, thumbnails, reuse images**
- **Limit frames – users don't like them much.**
- **Limit animation – slow & distracting.**
- **Have an alternative to frames and animation.**
- **Consider browsers and resolution.**
- **Proofread and Test – continuously.**

Content

- **The most essential element of any Web page is the content.**
- **Before you begin a Web page you want to know exactly what content will be on that page.**
- **When creating a Web page, you should constantly use the spell checker option.**
  - **This will only be found when you are using a Web Editor such as FrontPage.**
- **Spelling & grammar is to be considered as important as the information you are delivering**

Consistency

- **Well-designed pages have simplicity as their basic structure.**
- **Consistency of design is one way to make it easy for your audience to find what it is seeking on your page**

Navigation

- **Navigation links are the means of guiding a visitor to a Web site from one page in the site to other pages**

Image Maps

- **An image map is a graphic divided into two or more parts, each part is assigned a different link.**

  - **Example: A pet store Website has different pictures of dogs, and by clicking on each dog allows you to go to another site that details that specific breed.**
- **Image maps don't have to be a picture**
  - **They can be a simple graphic with a variety of words listed.**
- **Screen Size**
  - **Note some users have smaller screens, bottom of index page should contain recommended screen size.**
  - **Length of line of text, no longer than 60 characters**
- **Index page**
  - **Should contain contact email address, date of last modification and author or company's name & contact details**
- **General Tips**
  - **Place text & images within dimensions of screen size so don't have to scroll down.**
  - **Limit scrolling to two average screen sizes.**
  - **Use bold and italics sparingly.**
  - **Avoid underlining words**
  - **Each page with consistent navigation buttons.**
  - **Each web page a button that links to home or index page.**
  - **Images, save in appropriate format, eg. gif, jpeg.**
  - **Reduce image size by compression, jpeg or gif.**
  - **Rule of thumb, all images < 30 kb to ensure quick loading.**
  - **Raster graphics, eg. bmp, larger files Vs vector graphics, mathematically drawn, smaller files.**
  - **Colour;**
    - **choose contrasting colors for background and text.**
    - **Avoid red and green.**
    - **Allow ample white space.**
    - **Limit the variety of colors.**
- **Elements of design**
  - Easy to obtain relevant information.
  - Website that doesn't take too long to load.
  - Navigation needs to be clear and concise.
  - Use of thumbnails as pictures.
  - Use different browsers to check appearance of website.
  - Colour of visited links changes if a visitor has clicked on it before.
  - Clear consistent presentations.
  - Backgrounds need to be plain.

Web site design principles: -

1. Design for the medium.
2. Design the whole site.
3. Design for the user.
4. Design for the screen:

Design for the medium

When designing a Web site, remember:

- Plan for Clear Presentation of Information:
- Information design (ID) means the presentation and organization of your information. ID is the most important factor in determining the success of a Web site.
- Don't use too many fonts & colors as this distracts the user.
- Provide direct links to the areas in the Web site that you think are the most in demand.
- Use contrasting colors so that the text is easy to read.
- On the computer screen, users tend to scan rather than read the whole page.
- the destination is a computer, not the printed page. A Web site is designed for the computer – not paper.
- language is hypertext, not linear text.
- create Web pages specifically for the computer screen.
- must consider the layouts, fonts & colors, and how they will appear.
- Break large paragraphs into smaller paras.
- Provide a suitable heading so that users can find the info quickly.
- Break up long text into columns.
- Link text with hyperlinks.
- Design for Different Screen Resolutions.

1. Craft the look & feel.

- the interface, that user must navigate often called - the look and feel of a web site.
  - they read text, associate with links, view graphics.
    - depends on the freedom of your design
      - create their own path through your information.
- The interface that the user must navigate often is called the look and feel of the Web site.
- Users look & feel when they explore the info design of the site.
- Look and feel implies the personality that the Web site conveys to the user and the way it works.

2. Make your design portable.

- Be portable & accessible across different browsers, OS, & computer platforms.

- don't make mistake of testing in only one environment – assume their pages same to all.
- The Web site must be portable across different browsers, OS and computer platforms (hardware).
- Test the website in different browsers such as Internet Explorer, FireFox, Google Chrome, Opera, etc.
- Certain features of HTML like cascading style sheets cannot be interpreted properly by certain browsers.
- If necessary, design separate websites for different types of browsers; detect the user's browser and direct him to appropriate version of the Web site.
- Check website in different browsers; a website designed for a desktop PC may not be usable on a mobile device.

3. Plan for clear presentation & easy access to your information.

- plan for the actions/path that user may choose → randomly or specific information.
- Provide direct link to the area – that most demand.
- Present info. – easy to read.
- Break text into reasonable segments.
- Plenty headings – user find content quickly.
- Control horizontal length, easy to read column.

Design for Low Bandwidth

- Different types of Internet connections are used – POTS (dial-up), broadband, cable, etc.
- Plan your pages so that they are accessible at different connection speeds.
- Avoid large images, complicated animations, movies as these take time to download.
- Provide alternate text (by using the ALT tag of HTML).
- Design an alternate page that uses less graphics so that it will download quickly for users with a slow connection.

Design the whole site

- When designing the site, plan the unifying themes and structure that will hold the pages together.
- The theme should reflect the personality of your organization.
- Consider more than each individual page.
- If designing a site for children, consider use of visuals, bright colors, and lively animations, big font.

1. Create smooth transitions.

- Plan to create a unified look among the sections & pages of your Web site.
- Identifying elements of the sites & create smooth transitions from one page to another. this is done by repeating colors and fonts for similar page elements.

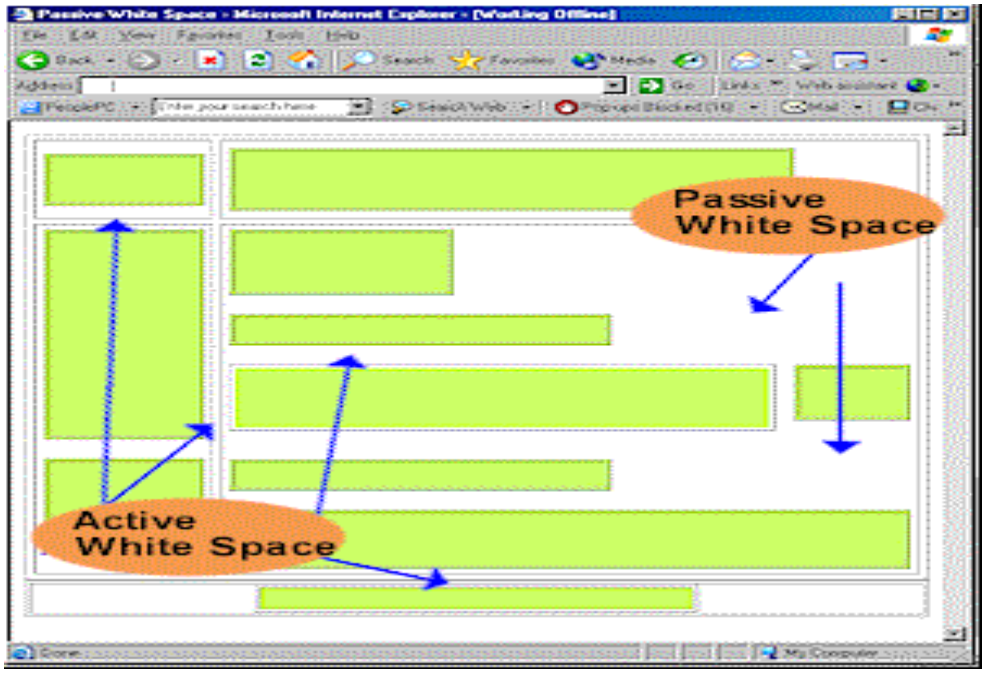
- All body text in a particular color and font style on all pages.
- All pages must have same color scheme, navigation icons, & graphics which create a smooth transition from one page to another.

2. Use a grid to provide visual structure.

- The grid is a conceptual layout device that organizes the page into columns & row.
- A grid is a way of organizing a page into rows and columns.
- A grid can provide a uniform look (consistency) to all the pages of a site.
- Use table elements to build the grid for pages → although table for tabular data – table elements were used as a tool for building the type of columnar grid structure.
- Well-designed sites use tables to provide structure & consistency of pages.
- The TABLE element of HTML can be used to build the grid for pages.
- Another way of creating a grid is by using the concept of frames (FRAMESET tag)

3. Use of active White Space

- White spaces are the blank areas of a pages.
- White space that is used deliberately → called active white space.
- Passive white spaces are blank areas that border the screen/result of mismatched shapes.
- White space is the area between text, images, paragraphs, etc.
- White use that is used deliberately is called active white space.
- Passive white spaces are the blank areas that appear on the border of the screen due to screen resolution problems.



Use of Active White Space

- A lack of white space creates the impression that the page contains too much information.
- It is difficult to find information on a page that does not have sufficient active white space.
- Plenty of active white space reduces clutter.
- Provide navigation elements on the same position in all pages – this provides uniformity and ease of use.

White space is created by:

- Line spacing.
- Margins – space around a para or a picture.
- Headings – used to separate content into small chunks.
- Images – can be used to separate text.

Design the Whole Site

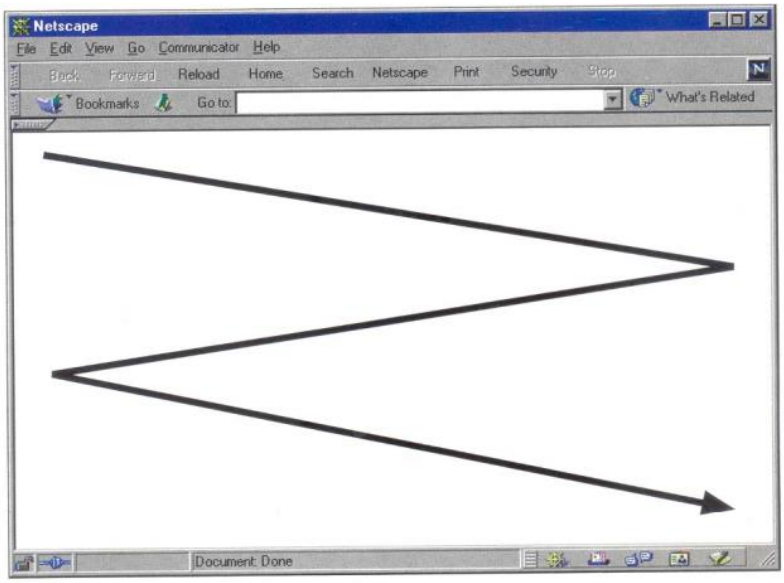
Summary

- **Unifying Themes and Structures**
- **Smooth Transitions**
- **Use A Grid**
- **Use White Space**

Design for the user

- Find out what users expect from your web site.
- Keep in mind the user
- Why has the user come to your Web site?
- What type of information does the user want?
- Is the site for information, entertainment, ...?

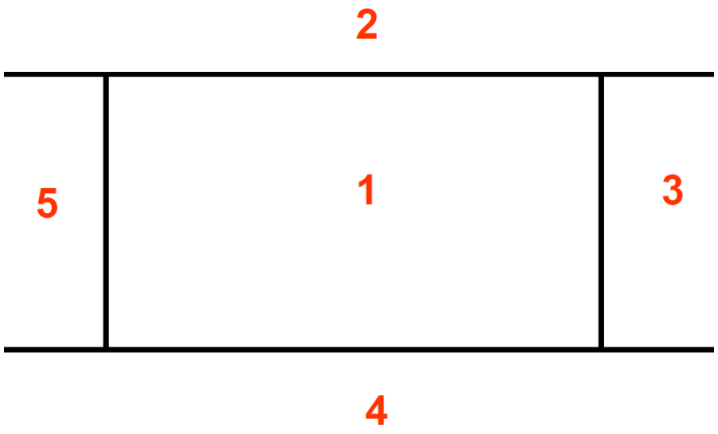
1. **Design for the interaction.**
   - How the user interacts with the information on your Web pages – content type → either your user will read or scan your pages.
   - If the page is a collection of links, interaction will be clicking on the content and scrolling
     - Scanning the content.
     - Scrolling if necessary.
     - Pointing to graphics to see if they are hyperlinked.
     - Clicking linked text.
   - Pointing to graphics and clicking on images to reach another page.
   - Design page into separate groups, e.g., links for pages of physics, maths, comp sc., …



Paper-based reading pattern

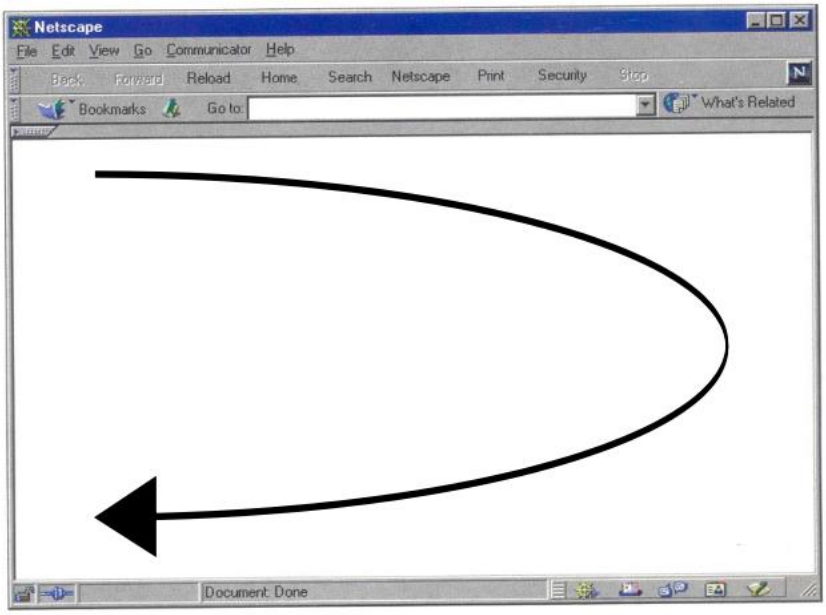
2. **Design for location.**
   - Difficult to predict the user's exact viewing path.
   - Put most important info in the middle, next most important at the top, and so on.

- Generally, figure below depicts the sections of screen real estate ranked in order of importance.



3. Guide the user's eye

- Normal reading habits, user's eye may move from left to right and back again.
- In contrast, when viewing landscape-based display, user scan information following a clockwise pattern.

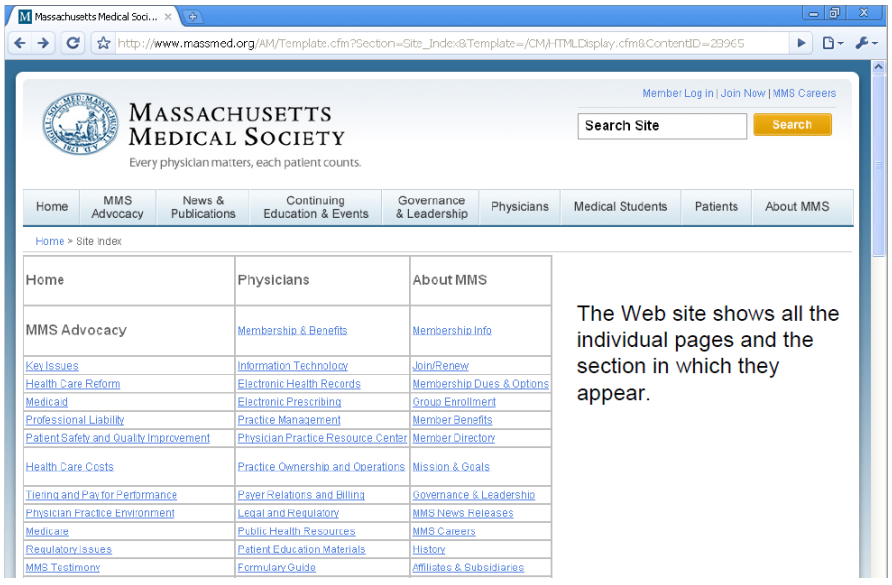


Screen-based viewing pattern

4. Keep a flat hierarchy.

- Do not make users navigate through too many layers of your Web site to find the information they want.
- Provide a simple menu for navigation.
- Use the same navigation menu on all pages for uniformity.
- Structure your web site to include section or topic-level navigation pages so users quickly find their path.
- Provide a site map that shows the user's location in the Web site

- eg/: Standard navigation bar - consistently placed on every page, reassure users not lost & move through the site with flexibility.



Use the Power of Hypertext Linking

- Web pages enable a non-linear reading method (like reading a magazine).
- This can be done by providing hyperlinks through text or images.
- Provide hyperlinks directly into the text.
- Don't use the **"Click Here"** phrase for linking.
- Provide links that allow the user to jump to top of page, bottom of page, go the menu from anywhere in the page, etc.

- Provide a hypertext table of contents.

How much Content is Enough?

- Don’t overload the user with too much information on a single page.
- Compare the websites of Google, Yahoo, Times of India.
- Provide short paragraphs and links to more info for each topic.

Design for the User

- **Summary**
  - Design for Interaction
  - Design for Location
  - Guide the User’s Eye
  - Keep a Flat Hierarchy
  - Use the Power of Hypertext Linking
  - Resist Overload