

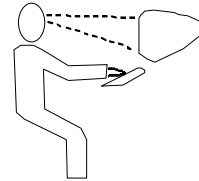
## Interactive Arts Media I - 2001 Information Architecture Planning + Visualization

by - Jonathan Gladden, Graduate Student in Design/ACCAD

### Major Phases of the Web Design Process:

#### ◆ I) Pre-production + Planning

- ◆ Needs Assessment & Focus Groups
- ◆ User Analysis & Use Scenarios
- ◆ Review Constraints & Objectives
- ◆ Perform Competitive Analysis
- ◆ Formulate Conceptual Solutions
- ◆ Semantic Design and Syntactic Rules



#### ◆ II) Production + Design

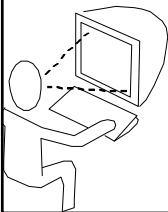
- ◆ Implement Prototype
- ◆ Conduct Usability Heuristic Evaluation
- ◆ Conduct Usability Testing Sessions

#### ◆ III) Site Launch + Maintenance

#### ◆ I) Pre-production + Planning

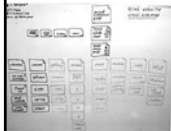
- ◆ Before planing the Information Architecture + Structure of your site perform the following steps:

- ◆ 1) Needs Assessment & Focus Groups - who is the audience of your web site, what are their needs?
- ◆ 2) User Analysis & Use Scenarios - what types of information might users want from your site, how might they go about finding the information they need?
- ◆ 3) Review Constraints & Objectives - what constraints such as time and budget is your web project subject to? What are the goals and objectives of the client for the site?
- ◆ 4) Perform Competitive Analysis - what features and services do people expect from a site like yours based of what similar competitors offer?



## ◆ 5) Formulate Conceptual Solutions

- ◆ Begin planning the Information Architecture + Structure of your site by performing the following steps:



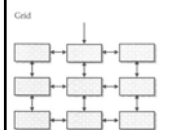
- ◆ A) Perform a Brainstorming Session - based on what you learned from the Needs Assessment, User Analysis, Competitive Analysis, and Review of Constraints & Objectives, meet with your web design team and write down titles of all the topics and categories that might be included in your site on a large sheet of paper or marker board. Use the technique called 'Mind Mapping' where one more specific topics are connected to more general categories.



- ◆ B) Choose a Structural Model through a Card Sort - once the topic titles have been decided, write each major category, area of content, and specific topic on 3" x 5" cards. Spread the cards out on a table and let each member of the group try to organize the topics into major categories of related content. The nature of the content topics may suggest what type of structural model to use. Linear structures are good for web sites that require an ordered sequence disclosure of information, as in linear story telling, or in online exams on educational sites. Hierarchy structures are the most common for web sites, and allow users to access information in a more interactive and nonlinear way.

## ◆ 5) Formulate Conceptual Solutions

- ◆ Beginning to plan the Information Architecture + Structure of your site

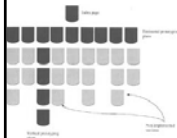


- ◆ The Content Drives the Structure: Types of Structural Models for web sites - The nature of the content topics can suggest what type of structural model to use. **Linear structures** are good for web sites that require an ordered sequence disclosure of information, as in linear story telling, or online exams on educational sites. **Hierarchy structures** are the most common for web sites, and allow users to access information in a more interactive and nonlinear way. Many web site are hybrids sites that use an overall Hierarchy structure, but then use other structural models for different sections of the site. Some sections of the site might use a hierarchy, while other might use a linear structure because it is more appropriate for the content. The hierarchy structure of most web sites is actually a **hierarchy / web hybrid** that allows lateral movement through major topics in a section, that takes advantage of the power of hypertext to quickly jump to related ideas. A rigid hierarchy structure would require constant back-tracking to the section homepage to go to a another topic in the same section. **Pure web structures** where every page is linked to every other page, are hard to organize conceptually. Which page is the homepage? Is it the page you entered the site or another? Groups of related information become hard to see in pure web structures, and too many choices on every page may overwhelm the user. In hierarchies information can be chunked into manageable bites.

## ◆ 5) Formulate Conceptual Solutions

- ◆ Planning the Information Architecture + Structure of your site:  
Creating Site Planning Diagrams

- ◆ C) Refine the Presentation of the Structure with Flowchart Software Applications -



After the structure and organization of the site has been decided through a card sort exercise, you can refine the presentation of the site's structure by using flowcharting software to create a **site planning diagram**. This diagram of the site's hierarchy structure serves as a blueprint for members of the design team building the site. Just as an architect would not allow contractors to construct a building without blueprints and structural drawings, an information architect should not let members of the web design team go without a blueprint for developing a web site. The site planning diagram serves as a vehicle of communication between members of the design team and the client.

- ◆ Types Software Used in Creating Site Planning Diagrams

- ◆ **flowcharting software** - Microsoft Visio - easier to use and faster than illustration software, but has less control over visual presentation.
- ◆ **illustration software** - Macromedia Freehand or Adobe Illustrator - more control over visual presentation, but has no pre made web page icons and connectors to use.

## ◆ 5) Formulate Conceptual Solutions

- ◆ Planning the Information Architecture + Structure of your site:  
Creating Site Planning Diagrams

- ◆ D) Refine the Site Planning Diagrams Presentation for the Client-



Site planning diagrams intended for the web design team may have more detail than what you would want to present to the client. Some planning diagrams will spread across an office wall when printed out and contain working notes that you might not want the client to see. Use illustration software to distill down the level of detail in the diagram to what the client really needs to see. They may not need to see every page in the web site, but perhaps only the major categories and sections. Clients may only need to see a level of detail in a Site Planning Diagram that gives them enough information to make important decisions. Too much detail may get in the way of decision making.

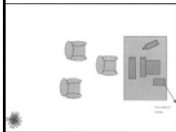
- ◆ Methods of Abstracting the Site Planning Diagram:

- ◆ **Don't show every page**
- ◆ **Show only major sections and categories**

◆ 6) Semantic Design and Syntactic Rules for Consistency

◆ Creating the Layout of Individual Pages in your Site:

◆ A) Sketch and Storyboard the Layout of Individual Pages -



Navigation elements such as Nav Bars can help support the information architecture of your site. Be sure to follow the same categories and structure from the Site Planning Diagram in your navigational elements on each page layout. The structure of a site or a major section can be mapped to a navigation bar for a section. Navigation bar can in effect can be mini site maps showing portions of the web site's structure making navigation through the site more user friendly.

◆ B) Design a Low Fidelity Prototype of your Site -

After sketching the layout of each page on paper, you can refine the layout in software such as PhotoShop or Freehand. Create a Low Fidelity Prototype that shows only major navigational elements and content areas with less emphasis on finished graphics, and more on usability. Print out a paper version of the site and use it to conduct informal usability testing with potential users of the site.

◆ 6) Semantic Design and Syntactic Rules for Consistency

◆ Creating the Layout of Individual Pages in your Site:

◆ C) Refine the Page Layouts of Based on the Results of Usability Testing -

From what you learned about the effectiveness of your navigational elements in usability testing with a Low Fidelity Prototype of your site you now improve the design of navigation bars and interface elements.

◆ D) Create a Navigational Sitemap for Users -



To support the other navigational elements of your web site, you should create a Sitemap that serves as an overview of the site's structure. The Sitemap helps users to form a mental model of how the site is organized, see relationships between pages + sections, and be able to jump to structurally distant areas of the site quickly. As in the revised Site Planning Diagram intended for presentation to the client, the Sitemap should only display the level of detail that users really need. It is not necessary to show every page in the site, as most users just want to see an overview so they can get a good idea of the site's organization. Too much detail in a sitemap can interfere with the map's usability and usefulness.

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◆ 6) Semantic Design and Syntactic Rules for Consistency

◆ Types of Navigational Sitemaps for Users:



◆ Textual Sitemaps -

Text-based Sitemaps that are very similar to Tables of Contents, Indexes, or Indented Outlines showing the structure of a web site to users. Can use one or more columns to show major sections of the site.

◆ Visual Sitemaps -

Graphical-based Sitemaps use various presentation styles to show the structure of a web site to users. Visual Sitemaps are easier to understand than Text-based Sitemaps, but take longer to download. Some presentation styles used in creating visual sitemaps include the hierarchy tree-diagram style (which is two dimensional), the circular hub + spoke style (2d), and the isometric diagram style which is three dimensional.



[Click here to see examples of types of Sitemaps on Jon's Gladden's web site: Learning about Sitemaps.](#)