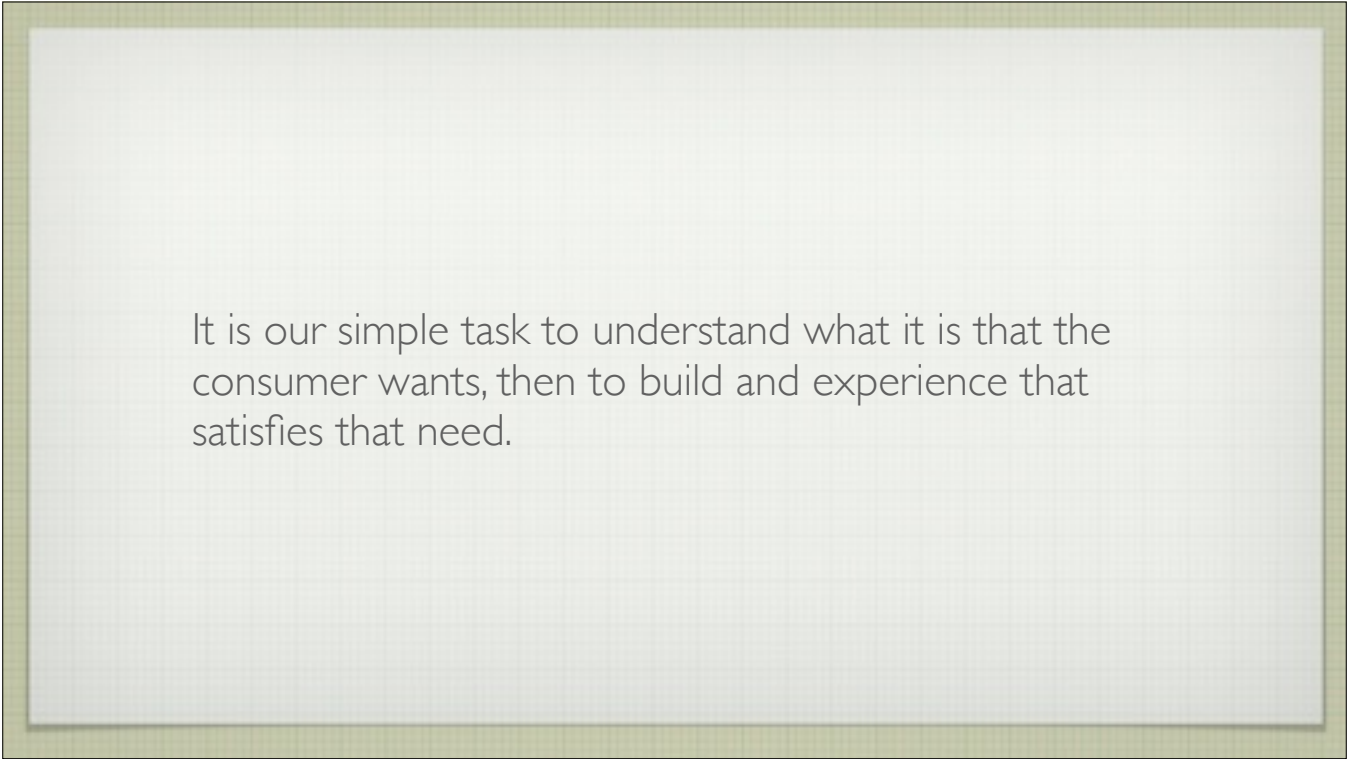


Design & Interactivity: 04

DIGM-505

This Week

- ☐ The Layers of User Experience
- ☐ Evaluating A Website
- ☐ Information Architecture
- ☐ Sorting
- ☐ Outlines & Sitemaps
- ☐ Conventions
- ☐ Navigation Design
- ☐ Wireframes



It is our simple task to understand what it is that the consumer wants, then to build and experience that satisfies that need.

In this class we will be studying IDM, which at it's core is about asking the right questions.

Technology is part of our everyday life. It simplifies and complicates it simultaneously. Because we are interacting with machines it is easy to forget that they were designed by people.

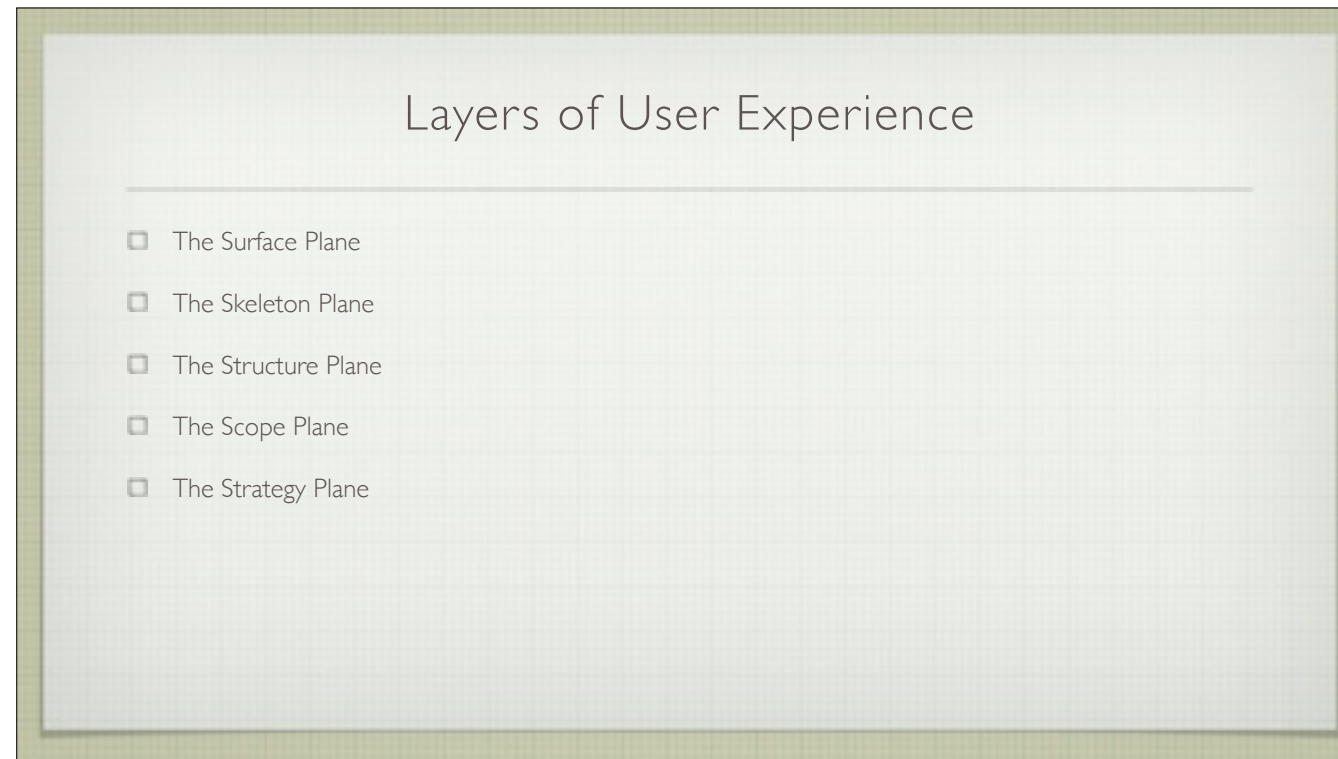
The web is a self service product. There is no instruction manual to help us navigate every single site. We have only our wits and experience to figure out how to navigate the web. When things do not work out properly it is human nature to blame ourselves, thinking we must be doing something wrong. Computers do not make mistakes right? Well, remember it was a human that programmed that site.

In interactive digital media it is our simple task to understand what it is that the consumer wants, then to build satisfy that need. Notice I said CONSUMER and not CLIENT. This strategy has been a low priority for most of the history of the web. In the beginning it was a used as a one way street, for companies to put info out to their consumers. Today we understand that it is the user experience that differentiates a site from the competition and determines wether a user will come back or not.

Web Development is not about the bells and whistles (the pretty graphics and the cool technological tricks). While those do play a role, the bigger issue is to understand how a consumer thinks and how to get the info to them as effortlessly as possible.

By 'effortlessly' I do not mean in as few clicks as possible. I mean in a way that does not make them think too hard. They already know what they want, they do not want a logic problem to figure out how to get it.

Consider buying a book.



Let's figure out how the decisions are made by examining the layers as experienced by the user.

1. The Surface Plane (visual design)

On the surface a website is made up of images and text.

2. The Skeleton Plane (wire frame)

Beneath the surface is the skeleton of the site. The arrangement of the content; navigation, text, images, buttons, etc...

3. The Structure Plane (site-map)

The structure defines the pages, how the pages are linked and lead from one to another

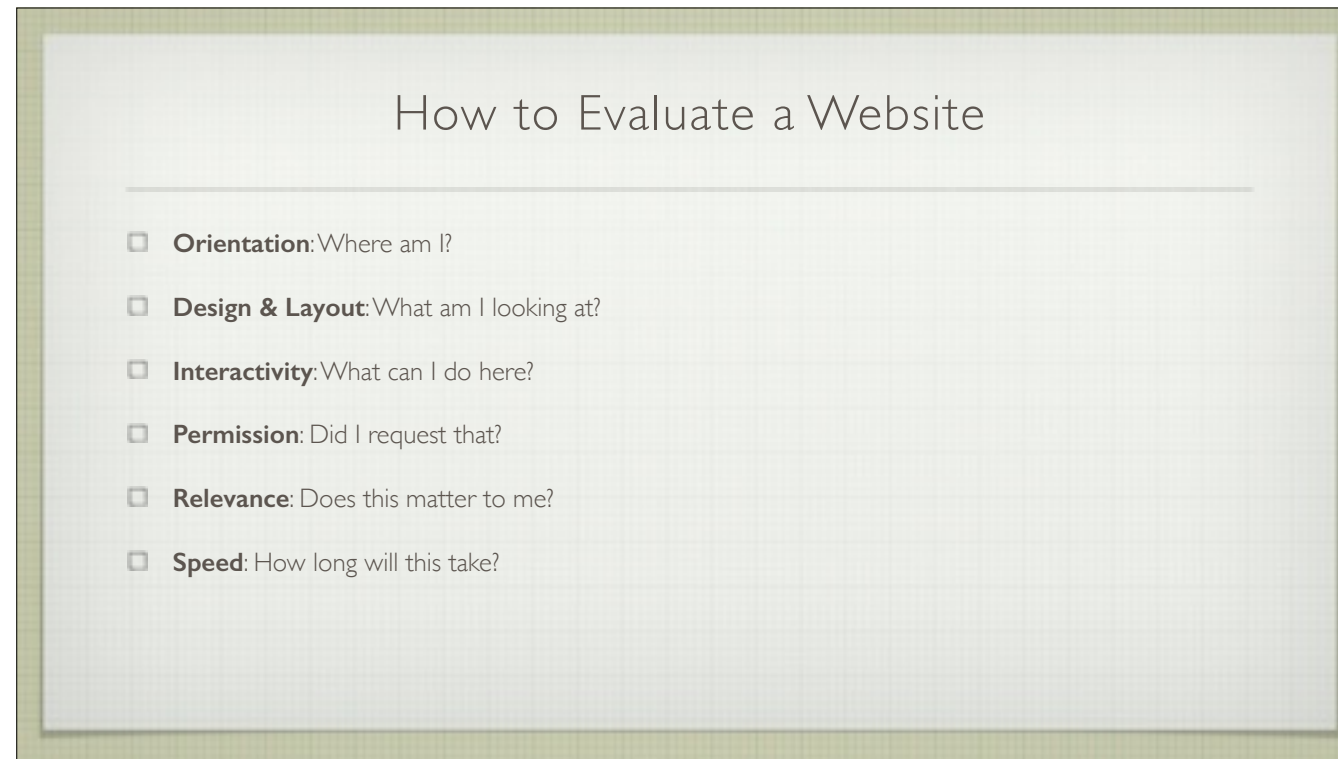
4. The Scope Plane

The features and functions of the site are defined by the Scope of the site. (ability to save address, cc, book wish lists, etc...)

5. The Strategy Plane

The strategy defines what the users of the site and the developers of the site want from the site itself. The user may want to buy books or look for recommendations of new authors, the owner may want to increase book sales or subscriptions to e-newsletter.

These five planes are the tools we use to define how to build the users experience. In this class we will be discussing these planes in reverse order, starting with the strategy and slowly working our way to visual design. Each plane interacts with each other so as we move forward through the process you may find the need to revise strategy, structure, design, etc to make sure that you remain focused on building a site that will enhance the users experience.



When we know what our user and our client want from the site we can figure out how satisfy the objectives.

Let's start by getting inside the mind of a web user.

Here is a list of questions that run through an average users mind when accessing a website.

1. Orientation: Where am I?

When first arriving at a site can you tell what the site is promoting?

Is the content easy to understand? How is it written?

Is the website inviting to browse?

2. Design & Layout: What am I looking at?

Does the look and feel of the site match the subject matter?

Is the color theme appealing and suggestive of the topic?

Is the layout cramped or too empty?

Is your eye drawn to the most important elements?

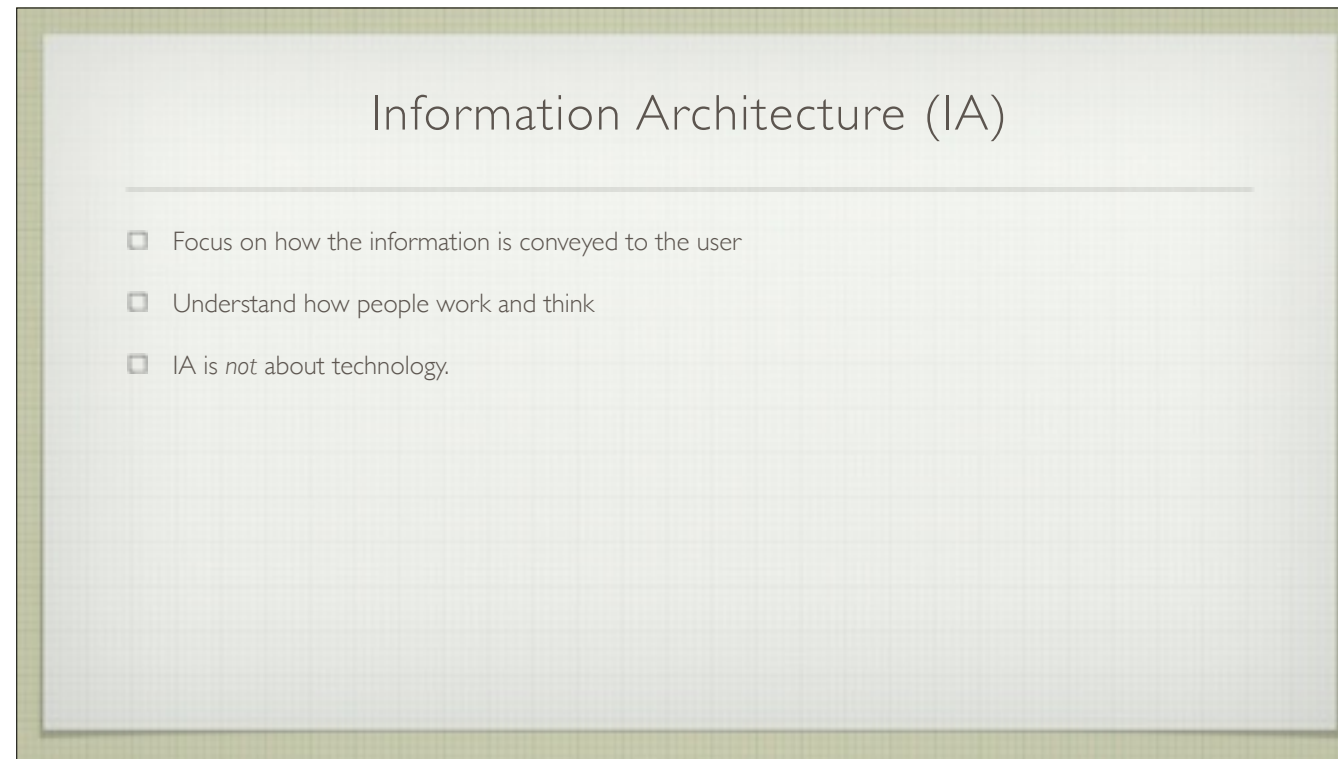
Do the images relate to the content?

3. Interactivity: What can I do here?

Is the navigation intelligent, logical and clearly understandable?

Are there any dead links?

Does the technology work?



Our next step is to develop the **STRUCTURE**. This is the stage where we shift from the abstract to the concrete. Our decisions here start to visually impact our project.

In traditional software development the process of creating a structured experience is called INTERACTION DESIGN (ID). But in content development the structuring of the content for the user experience is called **INFORMATION ARCHITECTURE (IA)**. With IA we are not concerned with the pattern of presentation (as with ID), but the options in how the information itself is conveyed to the user.

It may sound technical but it is not about technology. It is about understanding people. How they work and think.

You know how to gather information, you should probably start by hitting every single page of the current site and copying the information. The Content Manager should put all the photos into organized folders, and all the text into a Word Document.

What we are going to do today is learn how to organize the content once you have it, and to analyze it to see if anything is superfluous or missing. So lets start with sorting....



Sorting Exercise

How did you organize them? By supermarket layout? By category (fruit/veg, meat, dairy), frozen/non-frozen, packaged/non-packaged? How about by price? How many piles did you separate them into (these could be thought of as main categories) Did any team sub divide their piles?

Why did you choose that method of sorting?

We humans *LOVE* to organize (some more than others). We have to. It is how we make sense of the world around us. We organize our planet into countries, our country into states, states into cities, cities into neighborhoods, neighborhoods into streets, streets into houses, houses into rooms, etc...

We know that no matter what city we go to we can pick up a local map and a yellow pages, find a shop/restaurant in the phone book, get the address, and look up streets in alphabetical order in the glossary of the map, then find the location on the map via the coordinates. Once on the street we can find our destination via numerical listing - building numbers. Organizing makes it easy for us to find out way around.

How hard would it be to find your way around Drexel's campus if some areas used numeric addresses, others were color coded, others used icons, and some were labeled only by seating capacity. My first class is in the green building's 18 capacity lab, and my next class is in the magnifying glass building's lecture hall on the purple floor. It could be a bit confusing right?

But we do not remember everything alpha numerically.

I know if I walk down Market street and turn left at the Dragon sculpture I will eventually find the bookstore. We can navigate by visual clues because we choose to remember things we believe will not be changing anytime soon.



Where will this [link](#) take me?

The web does not have clues like this and we know that it changes constantly. So while I know that most text links are a different color than the rest of the body text and usually have an underline as well, how do I know where it will lead me?

What are some of the possibilities of where a text link can take me? What will happen if I click on this link?

- further down the same page
- to a different page in the same site
- to a different site's home page
- deep into another site
- will it open a new window ?
- will it start downloading a file ?

- will it crash my system?

With proper organization we can reduce this confusion.

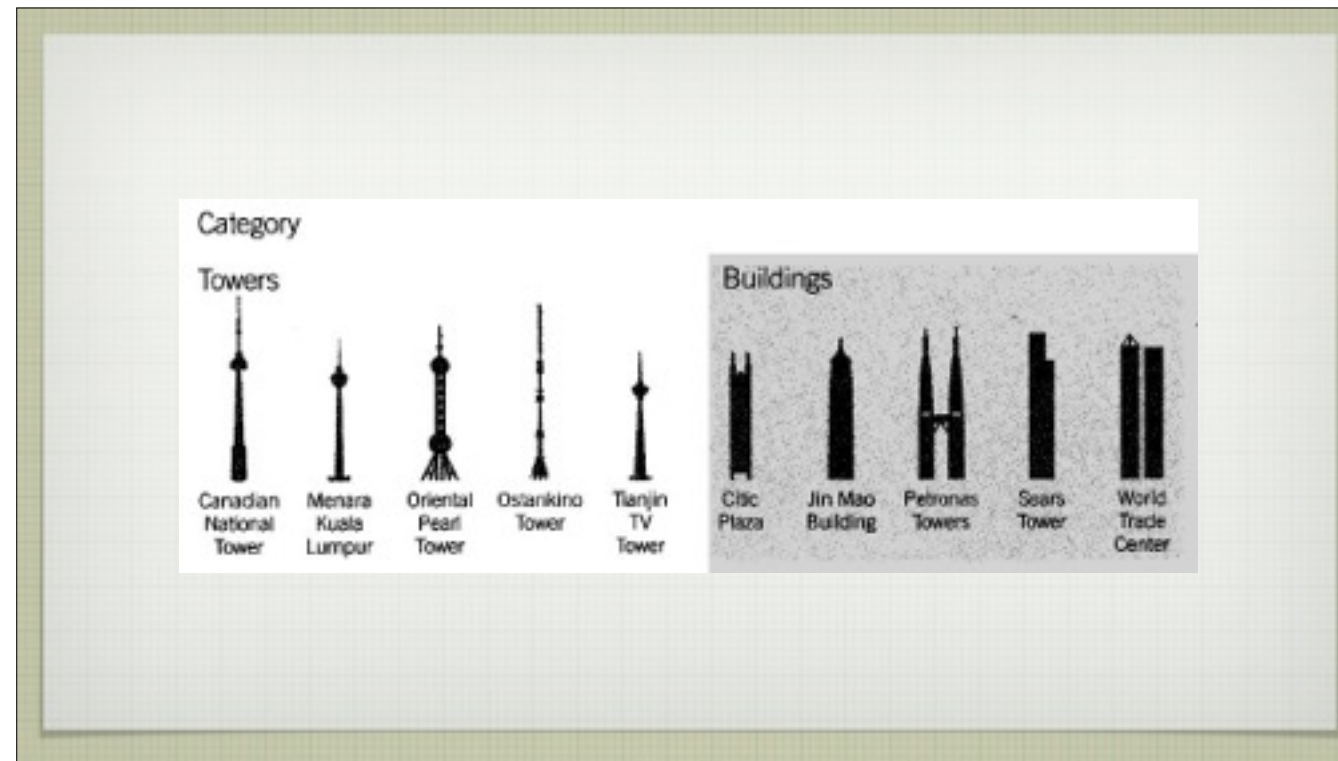
Have you ever tried to find a specific book at a used bookstore where all the books are just piled all over the place in no apparent order? vs. Barnes & Noble? B&N is organized by category; sci-fi, programming, art technique, design annuals, graphic novels.

They make it even easier for us to find books. They have kiosks where you can type in the author or book title and it will not only tell you if it is in stock but show you a floor plan and where it should be. When you get to the row that where your book should be, how are the shelves organized? They print it right there on the shelf, "Alphabetical order by Author"... Aldous Huxley, Ben Bova, Carl Sagan, Douglas Adams... Right? (from years of experience)

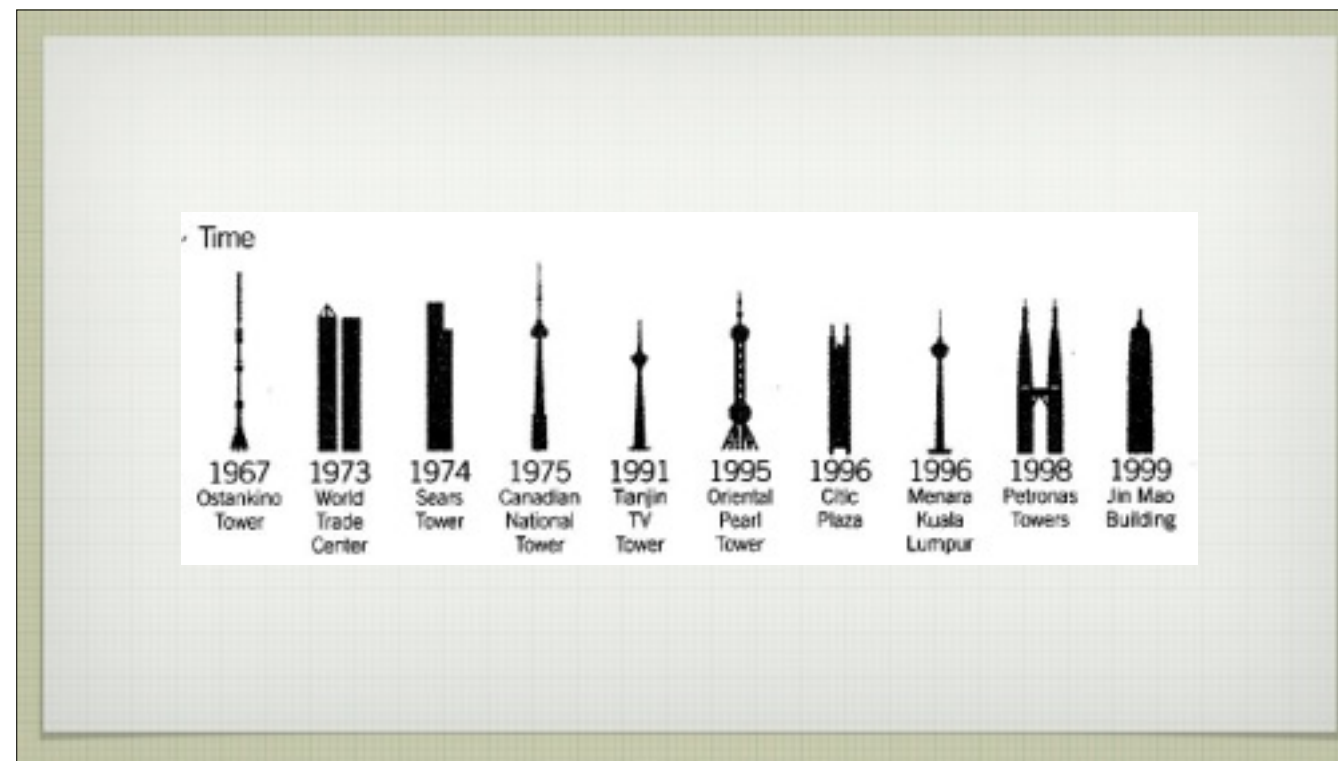
The 5 Hat Racks

- ☐ Category
- ☐ Time
- ☐ Location
- ☐ Alphabet
- ☐ Continuum

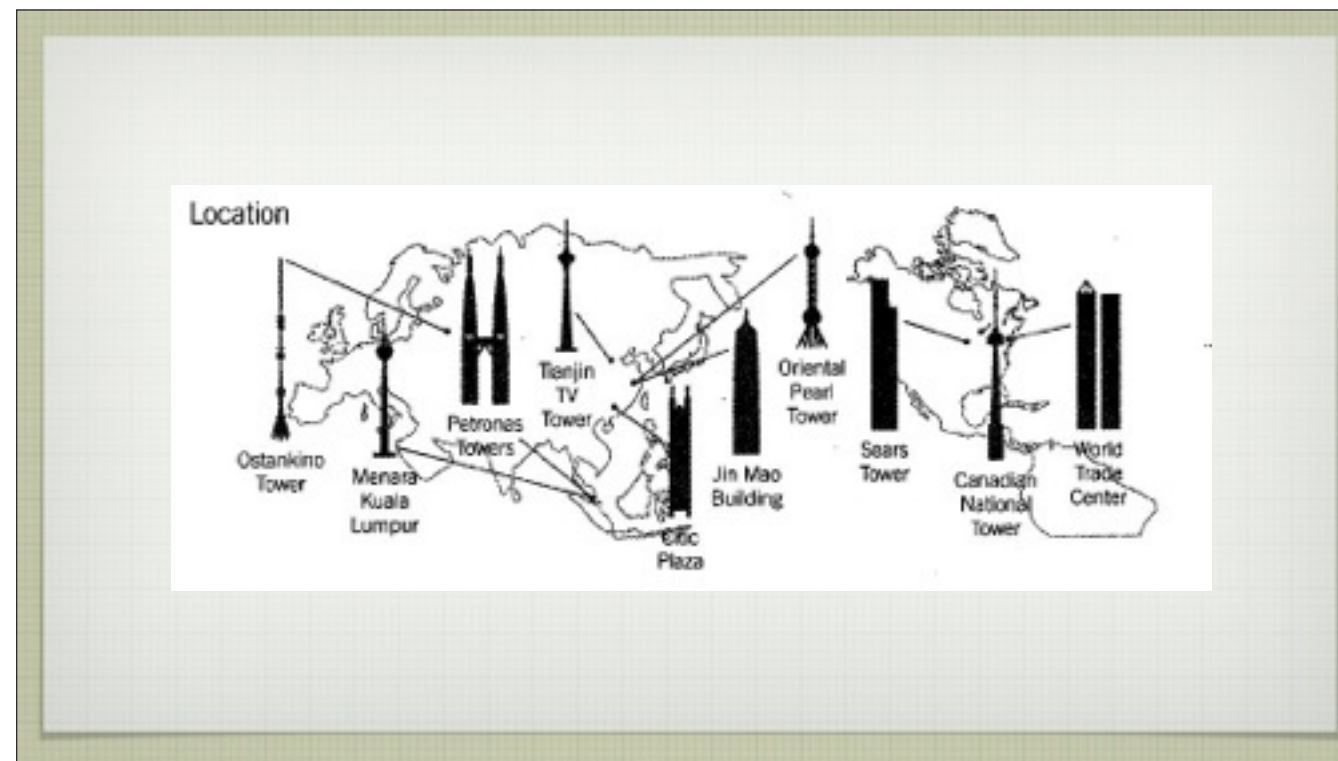
The organization of information is one of the most powerful factors influencing the way people think about and interact with a design.



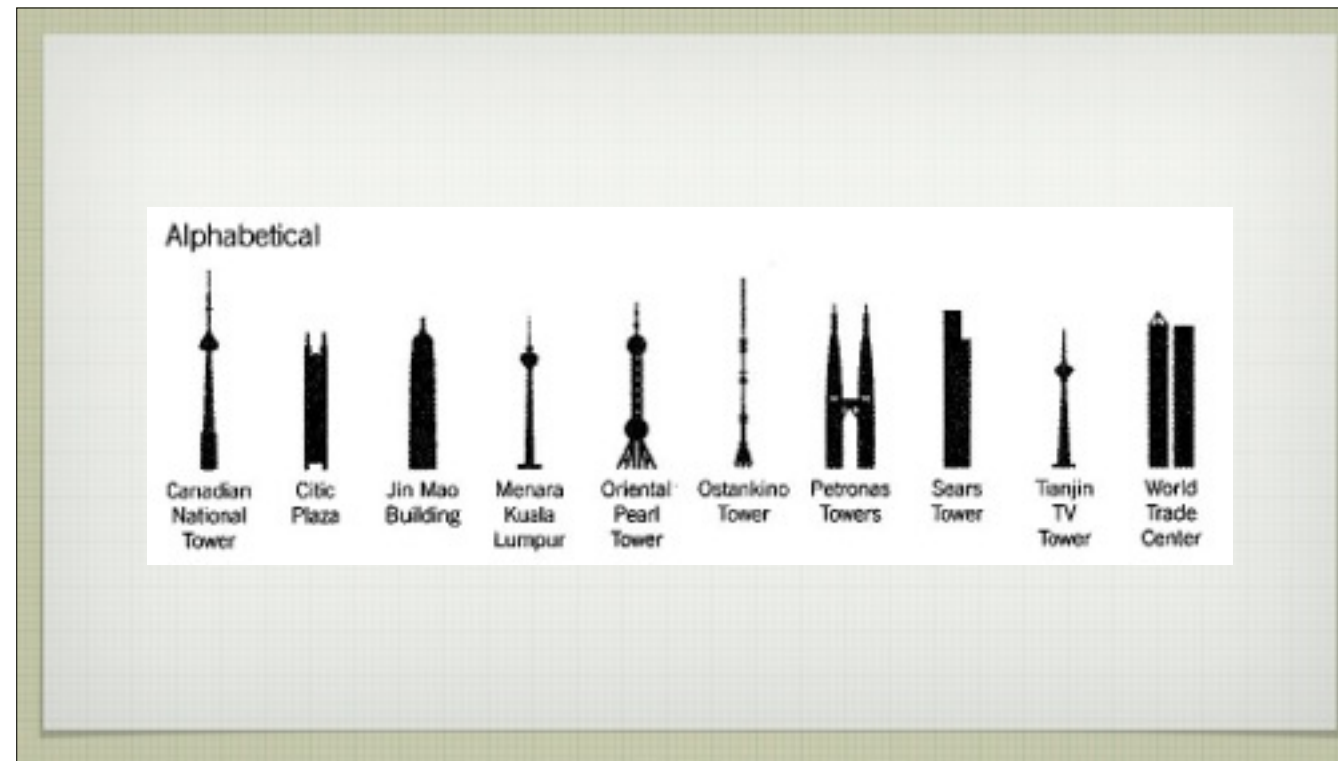
Category - by similarity or relatedness. Examples: areas of study in a college catalog, types of products for sale on a website.



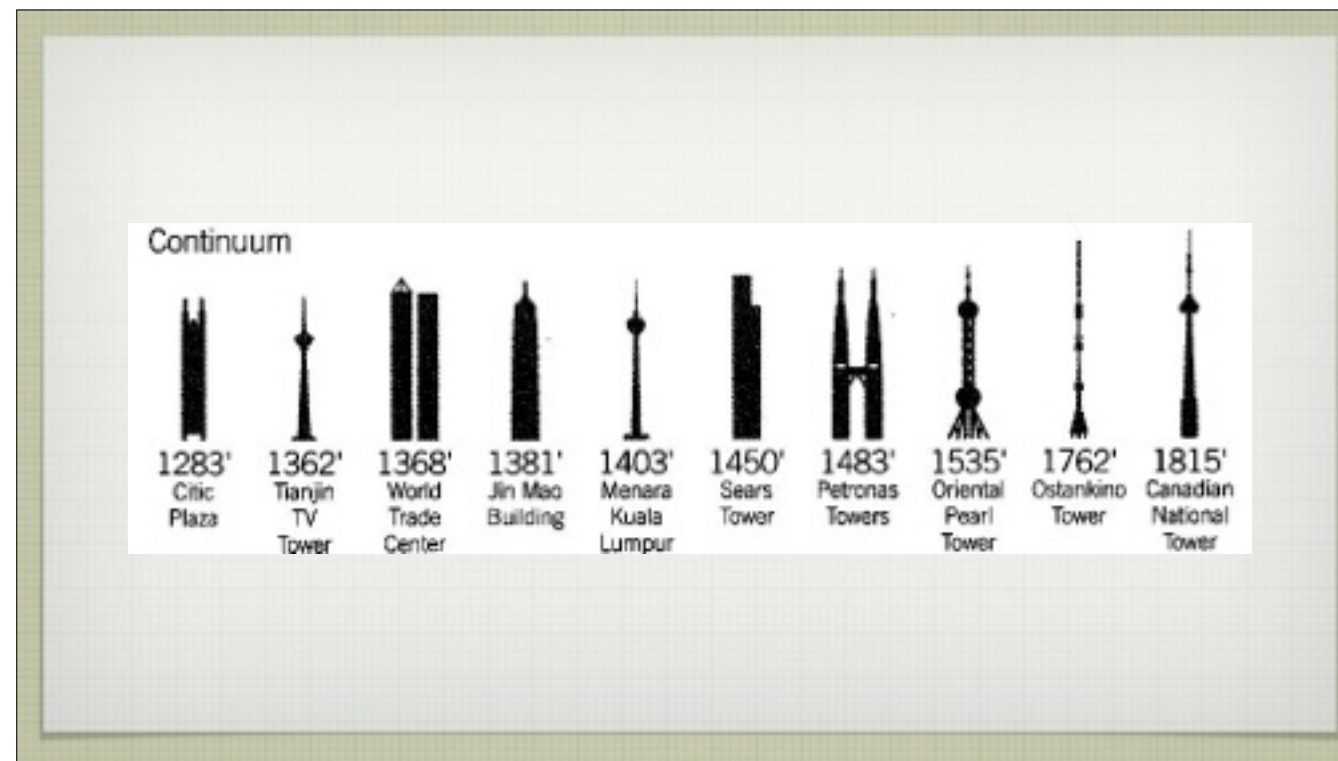
Time - by chronological sequence. Examples: television show schedules, historical timelines.



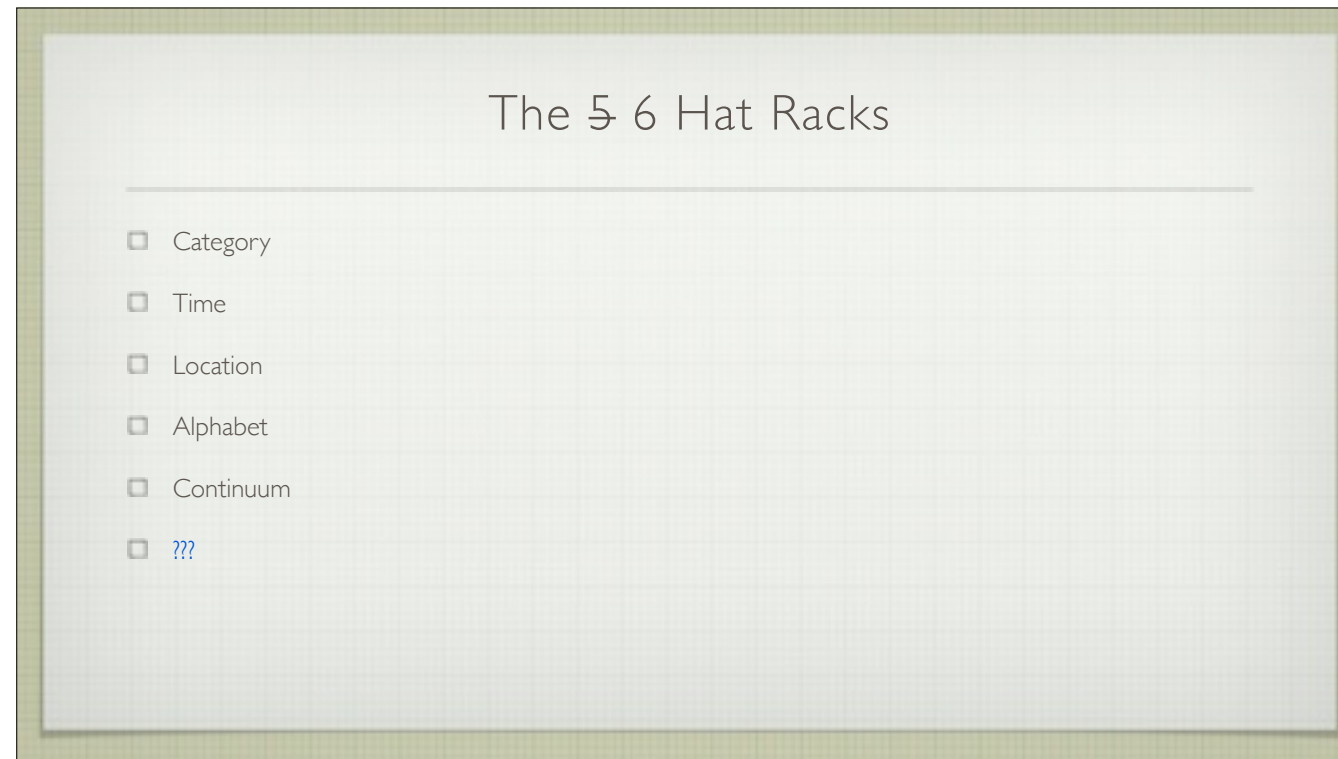
Location - by geographical or spatial reference. Examples: emergency exit maps, travel guides.



Alphabet - by alphabetical sequence. Examples: dictionaries, encyclopedias.



Continuum - by magnitude (lowest to highest, worst to best, lightest to heaviest). Examples: baseball batting averages, internet search engine results.



If your content from our sorting exercise was listed alphabetically how would I find breakfast foods? As we know searches are probably the most common form of navigation these days, and it is not only for searching the item name, but price, description, color, etc.. then once served we use javascript to sort the results even further (price low to high, most common, by location, ...)

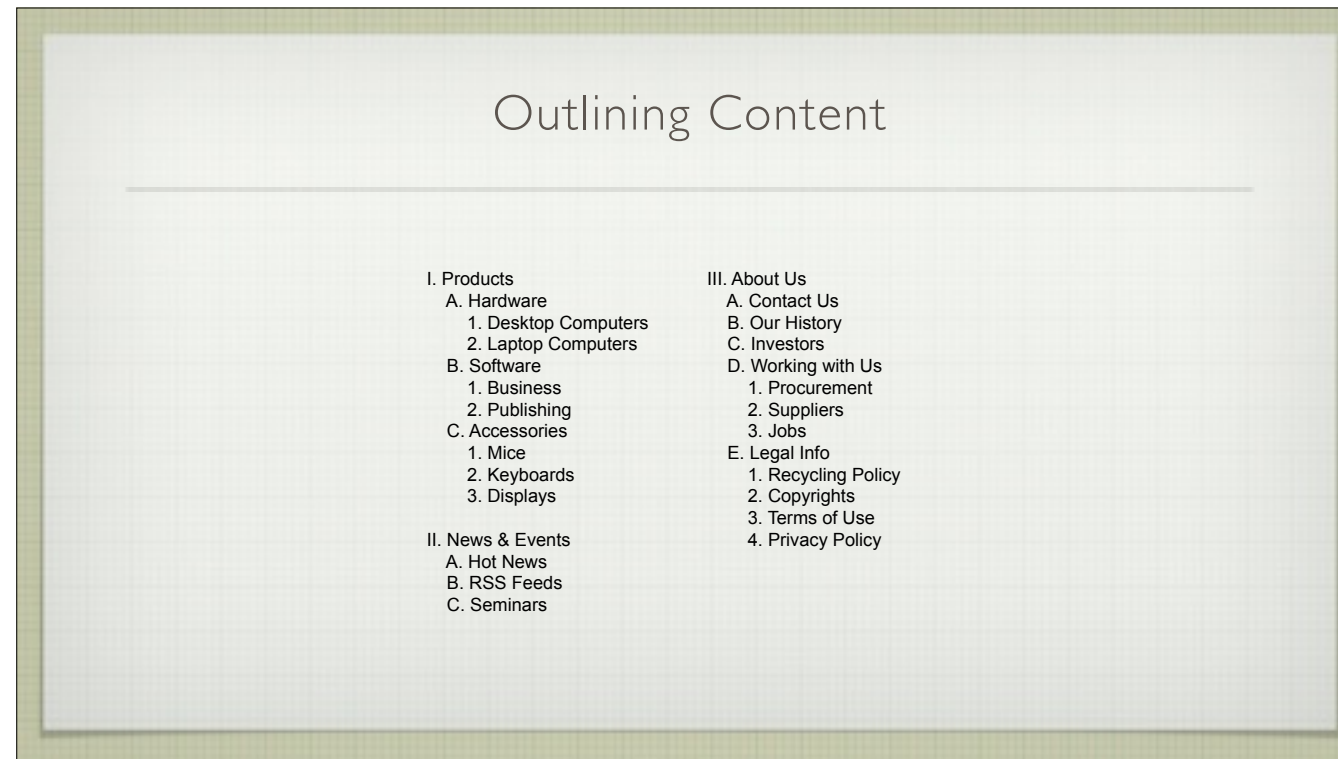
If you are forced to deliver content in a static format you will most likely use one of the 5 ways listed above or maybe multiple variations (org by category, but have an alphabetical index within each category). The great thing about the web is we have search functionality.

According to J. J. Garrett (author of *Designing User Experience*) our book U.P.D. missed one other method. Anyone know which one is missing? We already discussed it, remember the used bookstore?

The 5 6 Hat Racks

- ☐ Category
- ☐ Time
- ☐ Location
- ☐ Alphabet
- ☐ Continuum
- ☐ Random

A: Random.



Luckily, the content doesn't have to be completely written at this point.

But it does need to get outlined before actual structuring can begin in earnest.

You can't move much further forward without a content outline.

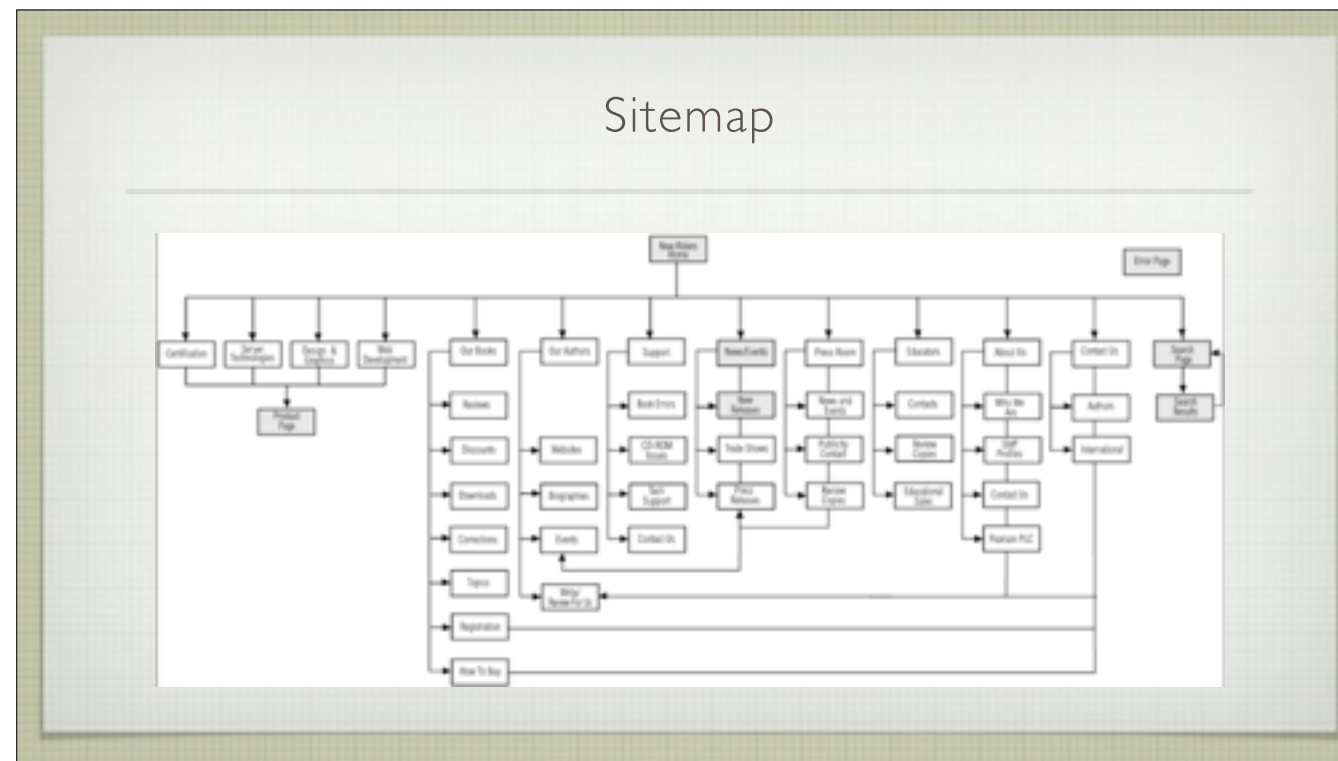
Often the client has no outline to give you, or the outline is of very little use, so plan on building one yourself.

Begin your outline using the familiar and simple Roman Numeral outline format (from your high school years), dividing your content into logical groupings and subgroupings.

Make this list in order of importance.

Depending on the expertise and workflow preferences of the information designer and content manager, the content outlining step might be the perfect time to dig deeper into the content itself, planning the nature of the features and the naming and labeling that the user sees.

It is wildly helpful at this point to have *internal* discussions to identify which items are pages, what is just going to consist of links, what section headings are going to be on the page, and other such details. Knowing this ahead of sitemapping and wireframing will enhance efficiency. However, some information designers like to wait until later in the structuring phase to determine the nature of the content. Regardless, make sure it has been developed and approved before visual development.



There are people who understand content better when given written documents and others who better comprehend visual representations. This is one reason why we create sitemaps (aka flowcharts).

Another reason is to see how complicated or easy the site actually is.

Look at the structure of the shown sitemap diagram. Do you see any diagonal lines? If a line goes through a box it indicates a path the links to that box.

This is a technical drawing. This is not about style. It should be Black and White. You do not want to create any bias towards any specific color at this time.

A sitemap is the backbone on which the project stands

A sitemap is a visual representation of the site's structure, organization, flow, and grouping of content and information.

It communicates, it defines, and it structures. It is a representation of the entire project, from a broad vantage point to many of the most minute of details. It is a chance to view the site structure and organization as a whole. And while a content outline can be (should be) very detailed, it does not provide a sense of flow from a user standpoint.

Once built, the sitemap should clearly show all HTML pages within each section of the site; every page gets a box, and most major links are represented.

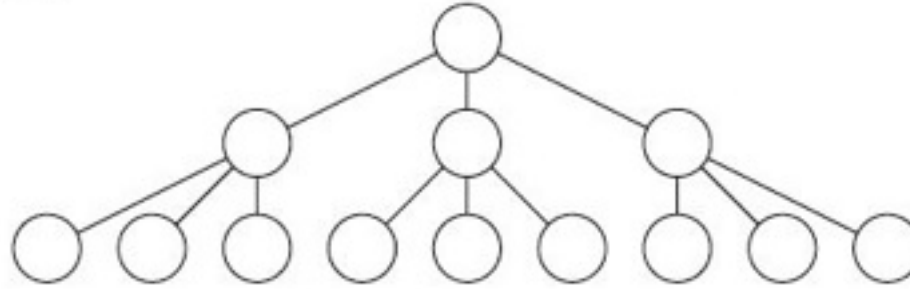
Please note, however, that the sitemap to which we are referring is not a technical schematic, nor is it a fully functional view of the site. It does not

Architectural Approaches

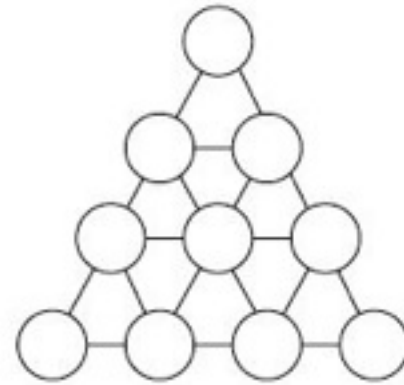
- ☐ Hierarchical
- ☐ Matrix
- ☐ Organic
- ☐ Sequential

The technical term for each unit of information is **NODE**. When working on the site map we need to decide how we will arrange the nodes. Here are the different ways we can present them:

HEIRARCHICAL



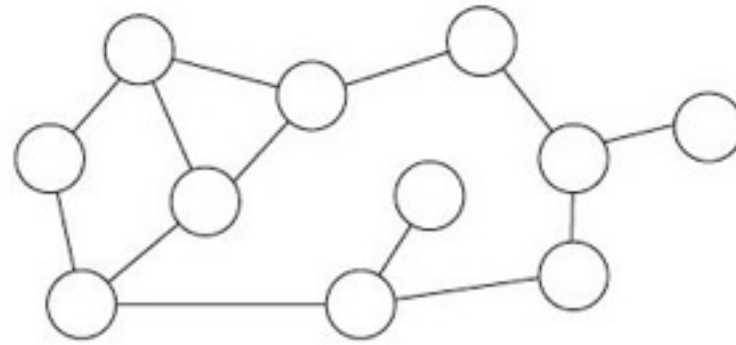
MATRIX

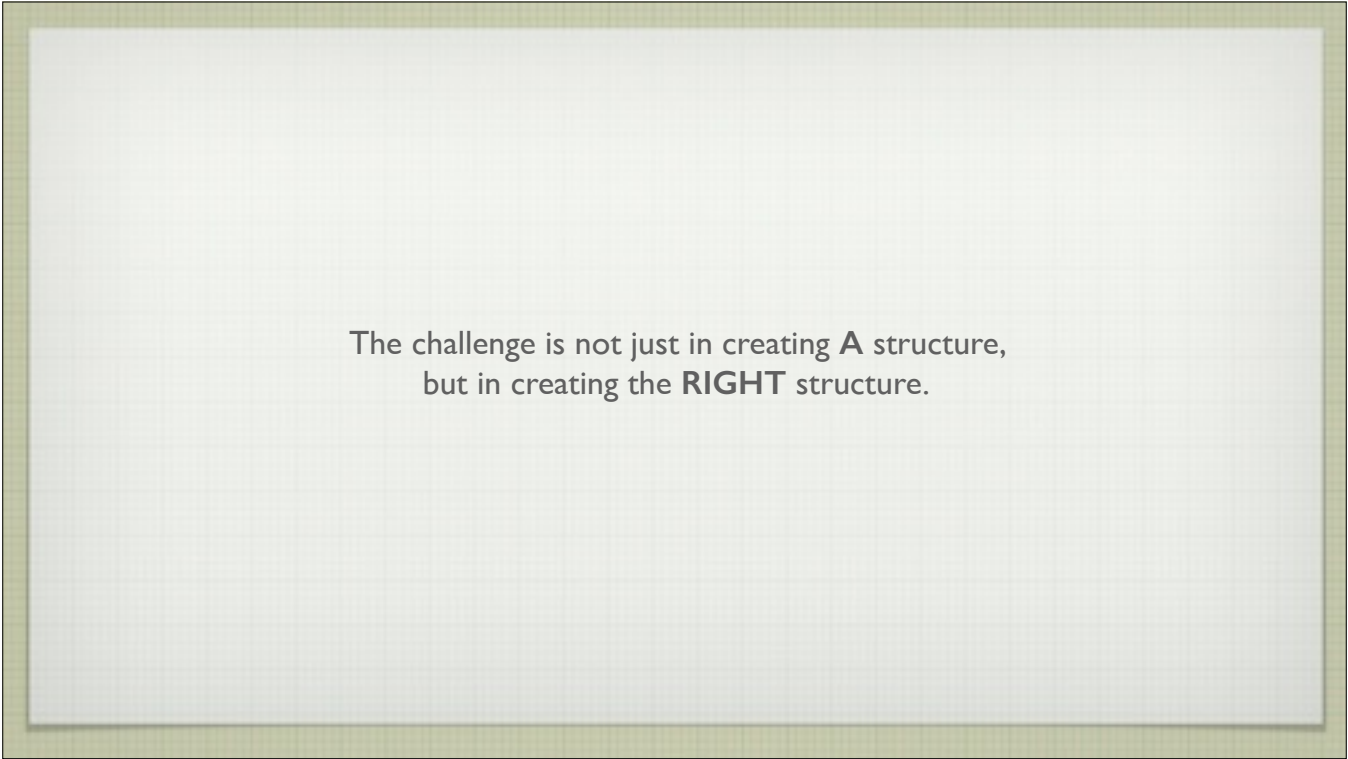


SEQUENTIAL



ORGANIC





The challenge is not just in creating **A** structure,
but in creating the **RIGHT** structure.

The principles you use at the top level are closely tied to the site objective and the users needs.

The lower levels tend to be based on content and function.

Example:

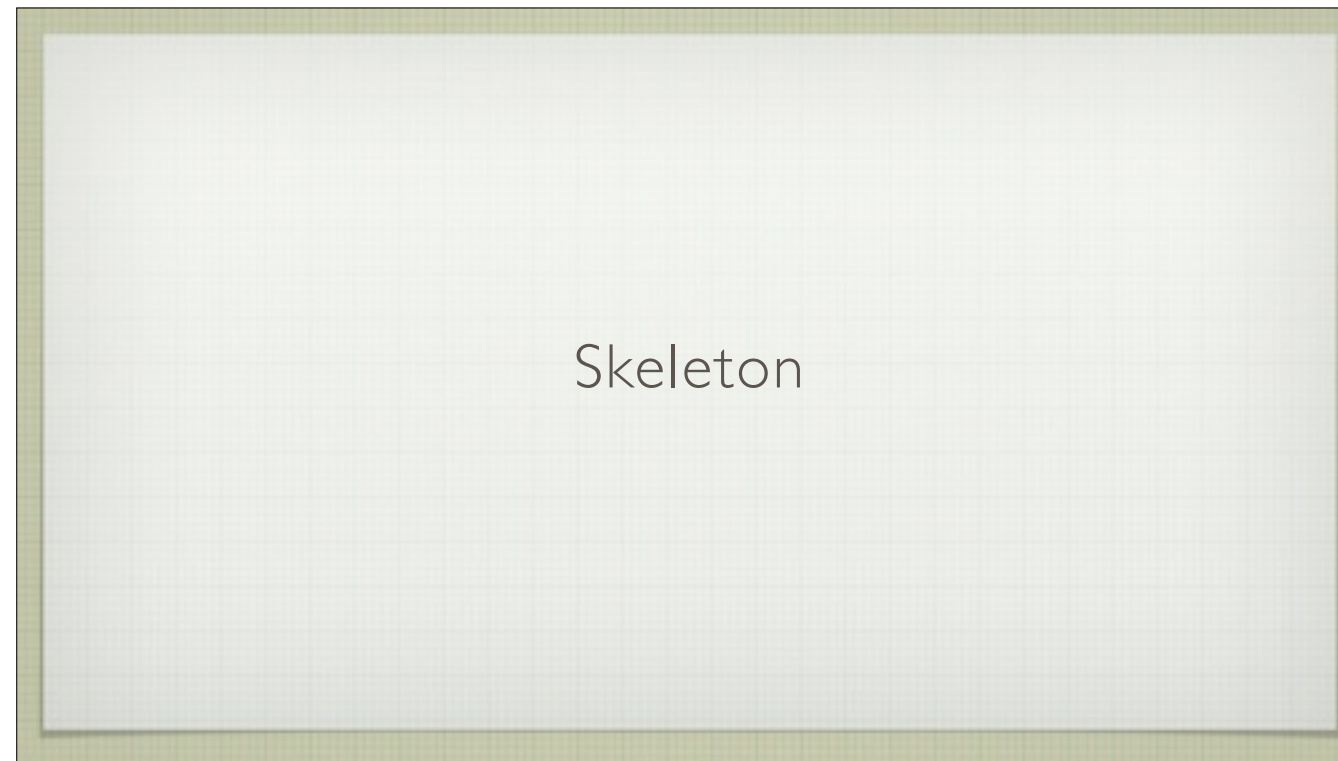
A news site

- on the top level the content will usually be organized by timeliness

- the secondary level will be by category

- and sub levels are sub groups of each category

The challenge is not just in creating **A** structure, but in creating the **RIGHT** structure.



Once you have the structure figured out it is time to create the skeleton.

before we can talk about the visual dressing, we need to plan how to organize the components on each page.

Conventions

We do things by habit and reflex. Imagine how hard it would be to drive a car if it was always as hard and as scary as it was the very first time you sat behind the wheel.

How would driving be if every car manufacturer changed where the driver sat, left side, right side, middle, back seat? What if some had you steering with your feet and others turned the way you turned your head? What if some roads you were supposed to drive on the left, and others on the right. What if they didn't put up signs to let you know which side you were supposed to drive on, they just assumed you knew? How hard would driving be then?

How about using the computer. Do you remember learning how to control a mouse? (Probably not, you are all digital natives) How about using new software and looking for items in the pulldown menus? What if you could NOT remember where the Copy function was, or the quick key, and had to hunt for these basic functions every single time?

Convention allows us to apply our developed reflexes in different circumstances. Sometimes when I rent a car the first thing I do is wash the windshield, not because the windshield is dirty, but because I think I am turning on the headlights. Because, the controls in the car I am used to driving are different from the one I rented.

Telephones



Telephones are another great example. They use a three by four number pad with numbers going left to right and top to bottom. Imagine trying to dial on a 6x2 keypad. They didn't always use this format did they. Does anyone remember what telephones looked like before the numberpad?

Telephones



Rotary. Some manufacturers have tried circular arrangements, a throw back to rotary phones, but people have long since lost this reflex and become frustrated with the circular pattern.

Conventions?



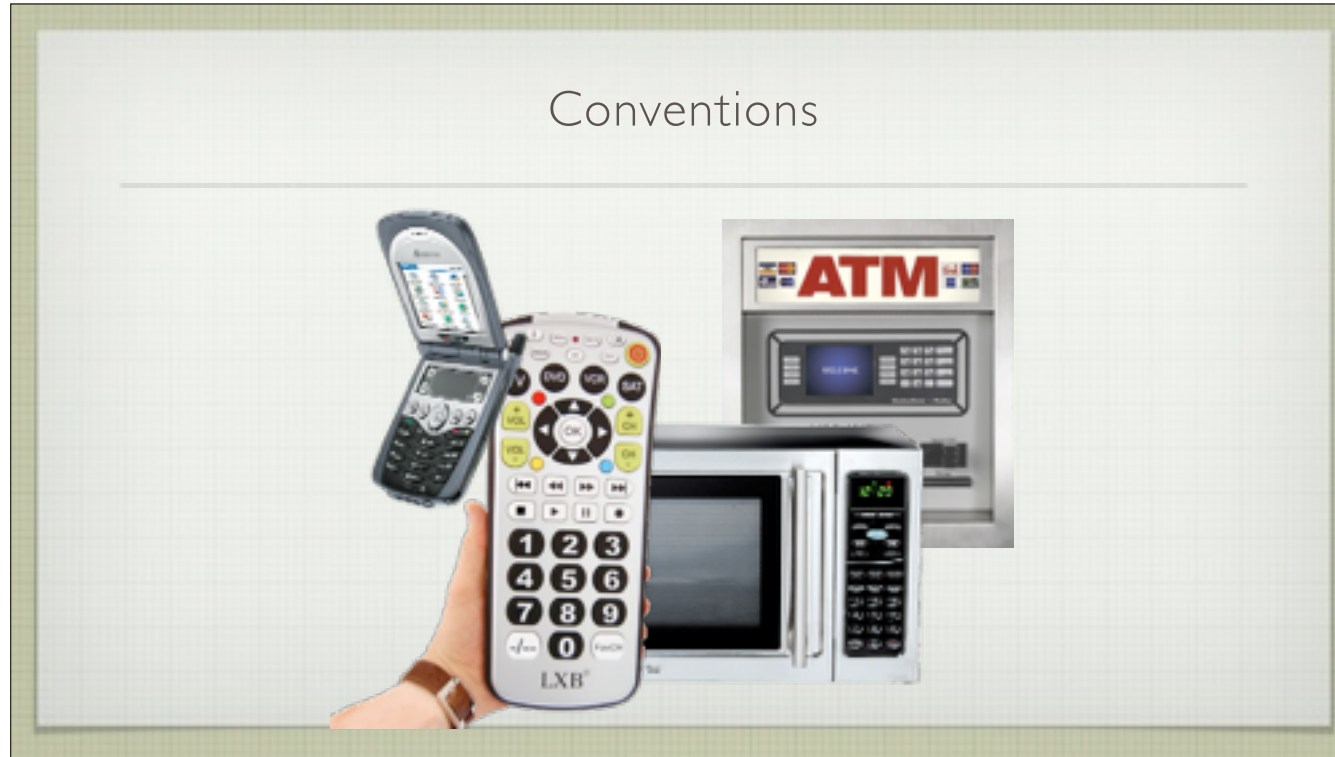
Conventions?



Toshiba tried launching a phone a few years back with a unique interface. What do you think the learning curve would be for text messaging on this?

It seems that layout issues like this should not be that big of a problem. Right? It might take 3 seconds longer for me to dial a number on a unique keypad. So what's the big deal? It is not about the loss of time. It is about the **FRUSTRATION**. That is what we remember. Tasks become agonizing because the rug of convention has been pulled out from under our feet. And we are forced to concentrate in order to complete a task that was usually done with very minimal effort.

Conventions



In fact, the telephones 3x4 keypad is so well ingrained that it has become standard for many other devices; microwaves, remote controls, atm machines... the list goes on. I am not saying abandon all unique solutions and become a slave to convention. Simply be cautious when deviating and only do so when the approach offers clear benefits to the user.

When do we break conventions?



How many of you are used to working with DVD players, VCRs, Cassette Recorders? The Stop, Play, Pause buttons are a convention right? Now, look at the iPod's interface.

Creating a successful user experience requires having explicitly defined reasons for every choice that you make.

More important than making your interface consistent with conventions, is making it consistent with itself.

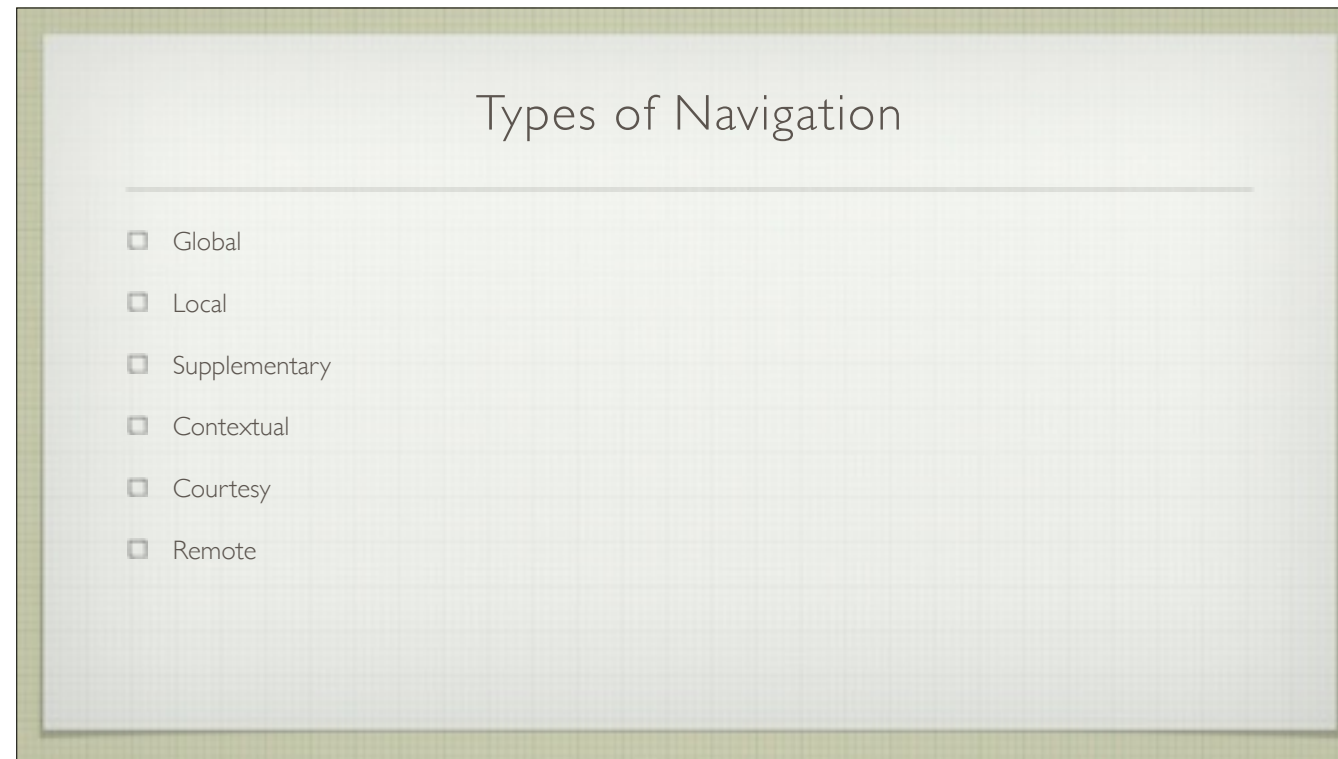


Navigation Design

So let's keep this idea of convention in mind as we start talking about the organization of the content on our page.

Just like how we took the pages and chunked them into categories to map the site, we now need to take the info for each page and chunk it into clearly organized section and decide where to put them on the page before we start deciding what size color and font the links should be.

In web development this field is called NAVIGATION DESIGN, it is a specialized form of interface design tailored to presenting information spaces. In fact, most sites provide multiple navigation systems



Types of navigation

Global Navigation - provides broad access to the main categories of the entire site. (*not to be confused with "Persistent Navigation" - which refers to the links that are always available on every page*).

Local Navigation - provides users access to what is near by (sub categories).

Supplementary Navigation - provides shortcuts to related content that would not be readily accessible via the global or local navigation

Contextual Navigation - sometimes called inline navigation, usually within the content of the page, ex: hyperlink in the text.

Courtesy Navigation - provides access to items a user does not use on a regular basis, but are provided as a convenience: contact info, policy statements, feed back forms, etc...

Remote Navigation:

Sitemap - a one page snapshot of the overall structure of the site, usually presented in outline format providing links to top level and secondary categories, rarely does it go beyond the second level.

Navigational Goals

- ☐ Provide the user with a way of getting from one point to another on the site.
- ☐ Communicate the relationship between the links.
- ☐ Communicate the relationship between the link and the contents on the page

Once we have organized our content and have figured out how to present it on the site, we need to figure out where to put it on each page.

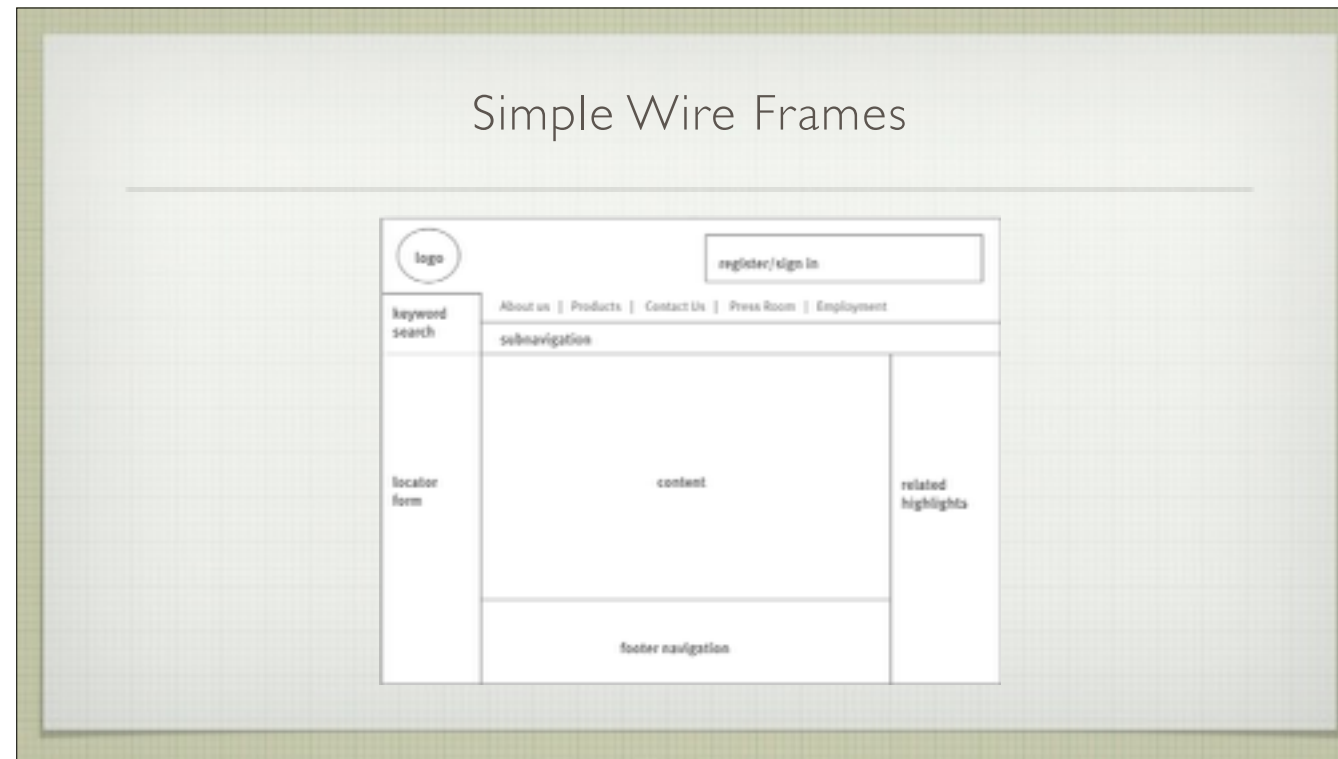
Successful interfaces are those where the user immediately notices the important stuff. The unimportant stuff does not get noticed - sometimes because it isn't even there.

This does not mean make the most important buttons the biggest ones.

Page Layout Considerations

- ☐ incorporate various navigational systems
- ☐ convey the view of the architecture
- ☐ include interface functionality requirements
- ☐ match up with the overall strategic requirement

This is a lot to balance all at once. This is why before jumping into colors and fonts we have one more step. We develop a page schematic called a **WIREFRAME**.



This is a wire frame, not a thumbnail.

What is the difference between a wire frame and a thumbnail.

Wireframes are storyboards for the site. Also referred to as **content layouts** or **page schematics**. They are the bare-bones depiction of the components of the page and how they all fit together.

These are **non-design-oriented sketches** of unique pages showing rough navigation, copy layout, graphic allocation, key headers, and any other elements that need to appear on a page.

Thumbnails are about the style or visual look of the page. These are not thumbnails.

Again, do not worry about colors or button shapes at this stage; this is all about **placement** of information.

Wireframes show a certain hierarchy of information but do not dictate exactly how something should be represented.

They should be completed for all unique main, secondary, and templated pages. They enable your design and production phases to run smoothly.

A wireframe can be simple, showing only the content layout and navigational organization of a few key pages within a site.

Complex Wire Frame

The wireframe illustrates a website layout with the following components:

- Header:** A large placeholder box for a logo or image on the left. On the right, a "Please Sign In" section with fields for "Email:" and "Password:", and a "Sign In" button. Below this is a "Keyword Search" field with a "Go" button.
- Navigation:** A horizontal menu with links: "About Us", "Products", "Contact Us", "Press Room", and "Employment". Below this is a secondary menu with links: "Introduction", "Core Team", "Management", and "Mission Statement".
- Left Column:**
 - Order Here:** A section with three steps: "1. enter your address" (with fields for "Street Address", "City", "State", "Zip", and "Phone"), "2. Delivery Method" (with a "Please select a method" dropdown), and "3. Select Distance" (with a "How far can you travel?" dropdown and a "Submit" button).
- Center Column:**
 - New and Notable:** A section with a "Featured Product" description, a large placeholder box for an image, and a "Today's Highlights" section with three items, each with a placeholder box and a description.
- Footer:** A small section with copyright information: "© 2001 Network Company" and links for "Home", "About Us", "Contact Us", "Products", and "Services".

Complex wireframes show copy, light functionality, links, navigation, and graphic content in a more detailed format.

They can also address production specifications and basic functionality (DHTML, JavaScript, Flash, etc.).

Wireframes should include a representation of all major page elements all content, navigation, media, functional elements, and messaging that are slated to appear on the page. Of course, having a rough idea of content (that is, knowing text length, imagery, and placement) by this point is a big plus. It is the job of the information designer to break it down into detail.