

Virtual Enterprise: Website Architecture

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Agenda

- What is a website?
- What is the purpose of your website?
- What tools can I use to create my website?
- Usability
- Design
- Layout
- Colors
- Hierarchy
 - website hierarchy
 - webpage hierarchy
- Navigation
 - “You are here”
 - Breadcrumbs/cookie crumbs
- Images
- Shopping Cart

What is a website?

- A **website** is a collection of web pages, typically common to a particular domain name or subdomain on the World Wide Web on the Internet.

Question: When did the first website go online?

Answer: 1991

On April 30, 1993, the European Organization for Nuclear Research (CERN), announced that the World Wide Web would be free to anyone.

What is the purpose of your website?

To succeed, a business website must be a carefully targeted, wisely-designed, pay-its-own-way tool which adds to the bottom line. To achieve this you need to ask: What is the purpose of your website?

Let's examine concepts behind various types of websites.

- Prospect generation
- Direct Sales
- Customer support
- Education

Continued...

- **Prospect generation** – Collect a source of leads and prospects through online forms on your website. Gather information from users such as name, address, phone number, email address, etc..
- **Direct Sales** – Online shopping. Plan on using “shopping cart” software, which allows your customer to purchase items, see totals, tax, and shipping costs when they are ready to “check out.”
- **Customer Support** – A website is a great place to provide all sorts of in-depth product information.
- **Education** - As you supply customers with more information, you get orders for upgrades and new products. You can provide up-to-date industry and product information on your website in the form of an on-line newsletter, which gives people a reason to come back month-by-month.

What tools can I use to create my website?

There are many web authoring tools that you can use to develop and create websites.



Macromedia HomeSite 5.5



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For years, the only way to format HTML in a visually appealing way was to use tables.

As the web evolved and became more sophisticated, designers wanted to do more than just display text, they wanted to emulate printed documents. They wanted to make an artistic statement.

It is okay to use tables for your layout, but if you want to take your web design to a higher level, eliminate tables entirely. To do this, you will need to use Cascading Style Sheets (CSS).

Cascading Style Sheets, or CSS, allow you modify properties of existing HTML tags. All web browsers are based upon a built-in style sheet. This style sheet is part of the program and is not viewable.

<http://physicaleducation.ocde.us/>

<http://www.csszengarden.com/>

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Website Architecture




Usability

When a user looks at a webpage, the content should be self-evident. Obvious. Self-explanatory.

A user should be able to “get it” without expending any effort thinking about it.

NOT THINKING




OK. This looks like the product categories...

Memory, Modems... There it is: Monitors. **Click**

...and these are today's special deals.

The screenshot shows a webpage with various product categories and a 'Special Deals' section. Red arrows point from the text annotations to specific elements on the page.

THINKING



Hmm. Pretty busy. Where should I start?

Is that the navigation? Or is that it over there?


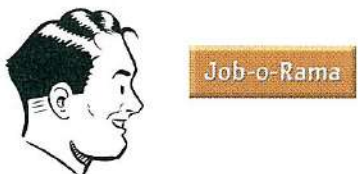
Why did they put that there?

Can I click on that?

Those two links seem like they're the same thing. Are they really?

The screenshot shows a webpage with a complex layout. Red arrows point from the text annotations to various elements, including navigation menus and links, highlighting areas of user confusion.

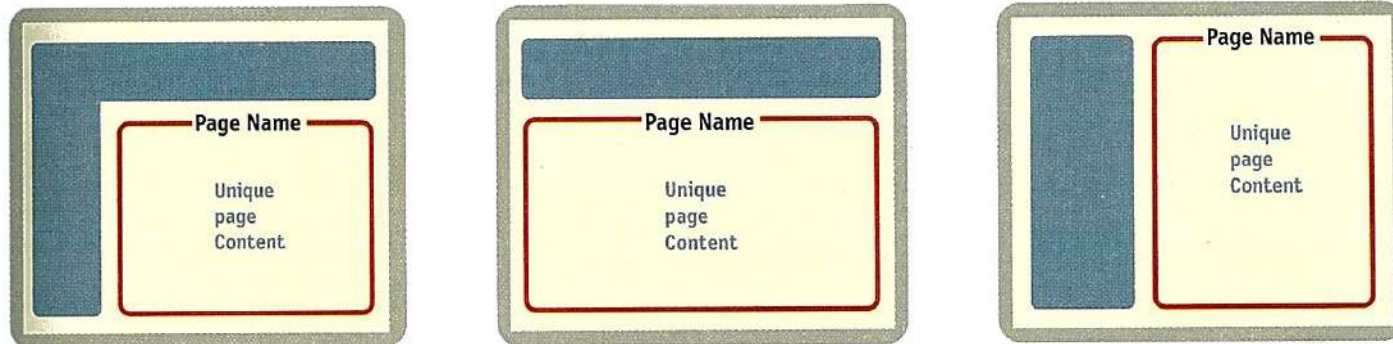
Continued...

< OBVIOUS		REQUIRES THOUGHT >	
<p>Jobs! <i>Click</i></p> 	<p>Hmm. <i>[Milliseconds of thought]</i> Jobs. <i>Click</i></p> 	<p>Hmm. Could be Jobs. But it sounds like more than that. Should I click or keep looking?</p> 	

The point is, when we're using the web, every question mark adds to our cognitive workload, distracting our attention from the task at hand. The distractions may be slight but they add up, and sometimes it doesn't take much to throw us.

Design - Layout

When you design your website, determine the layout of the template that you will use throughout your website.



The layout of your website should be consistent. The only page that should differ from the general template is the homepage.

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Continued...

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Message from the Superintendent

William M. Habermesh
Superintendent of Schools

Welcome to our website. Highlighted within our home page you will find resources for parents, educators, students and the community-at-large. Orange County has incredible opportunities and resources — our schools are the most precious of these. We provide services for the districts in a variety of areas, including Special Education, Alternative and Correctional Education, Teacher Credentialing, Accounting, Business and Information Services, and Outdoor Science Schools. These are just some of the ways in which the Orange County Department of Education is making a difference for Orange County schools.

Our goal is to continue to assure a world class education for every student, while making certain that 87% of our budget goes to direct student services.

We hope you will take time to browse through our web pages. They will lead you through the work of our department, as well as to the local school districts and schools. We are proud of the supportive provide, and I welcome your comments, suggestions and questions.

William M. Habermesh

Superintendent's Multi-Media Presentations

Learning by Doing: How to Build a Professional Learning Community
November 6-7, 2006
Click here to register

Feature Links

- Education Technology
- Emergency Preparedness
Ryan Fu information
- Grants & Funding Sources
- Teacher Support & Credentialing
- Williams Settlement Legislation

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Homepage

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Home > About OCDE

About OCDE

- Superintendent Biography
- Our Mission & Values
- Presentations
- OCDE Fact Book 2005
Handbook of Education Information
The annual Fact Book is a collection of statistics and information on a variety of subjects and issues concerning education in California.
- 2004-2005 Financial Report
Provides comparative financial data and statistics for Orange County school districts.
- Racial & Ethnic Survey Fall 2005
Provides an annual collection of information and statistics on student enrollment, ethnicity, and graduation rates for Orange County school districts.

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About OCDE



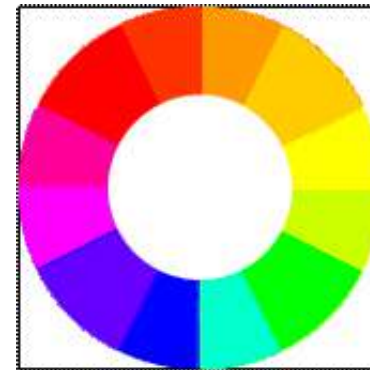
Design - Colors

Once you have decided on the layout, you will need to choose a color scheme of your website.

It is critical that you use color harmoniously on your website. It is very easy to set up a color scheme that clashes and is difficult for users to view.

Using a “color wheel” can help determine which colors look best together. You will need to use color combinations that are analogous, complementary, or color triads.

- Analogous – colors that sit next to each other on the color wheel.
- Complementary – colors that are opposite another on the color wheel.
- Color triads – placing an equilateral triangle on the color wheel, you can create color schemes that have a lot of life to them.



Color wheel

Continued...

There are many tools available online to help you select harmonious color schemes.

Here is an example of a color tool that I found on Wikipedia¹ (http://en.wikipedia.org/wiki/Color_tool).

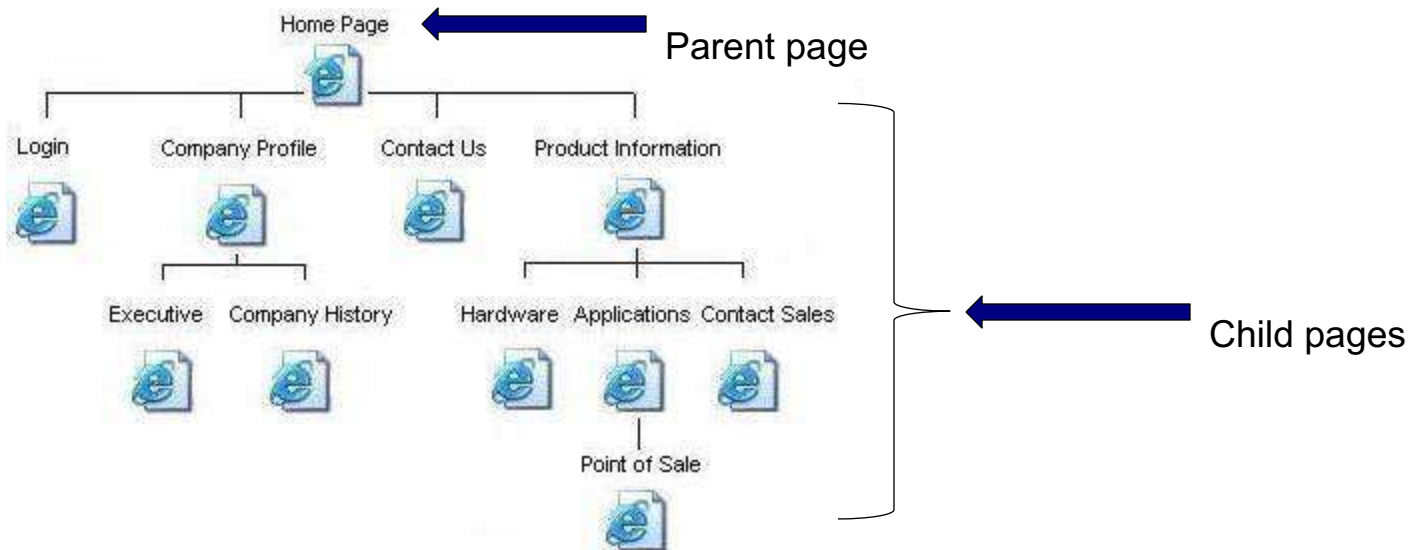
Name	Creator	Availability	Cost (USD)	Features
Color Scheme Generator 2 	Well Styled	Online	Free	Schemes, Comparisons, Variations (HSL, RGB, Contrast), Color Wheel
HTML Color Code Combination Chooser 	SitePro Central	Online	Free	Schemes, Comparisons, Variations, RGB Sliders, HSB Picker
Webmaster's Color Lab 	VisiBone	Online	Free	Color Wheel, Comparisons, CYMK Information
Color Toy 2 	Defence Mechanism	Online	Free	Schemes, Variations, RGB and Hex input
Color Conversion 	Forret	Online	Free	Conversion (RGB, CMYK), Color blending, variations, gradients
Colr.org 	Colr.org	Online	Free	Schemes, color picker, colors and scheme from photos, color tagging
Easy RGB 	EasyRGB	Online	Free	Conversions, formulas, color calculator, harmonies and color matching
Color Palette Creator 	slayeroffice	Online	Free	Blending, Conversion (RGB, Hexidecimal)
Color Blender 	Meyer Web	Online	Free	Sophisticated Blending, RGB and Hex input
ColorMatch Redux 	StylePhreak	Online	Free	RGB sliders, variations, Conversion (RGB, Hex)
Colourlovers 	Colour Lovers	Online	Free	Colors and palette library with comments

¹ Wikipedia.com, <http://www.wikipedia.com>

Design - Hierarchy

When you have selected a color scheme, then you will need to determine the website hierarchy and webpage hierarchy.

The website hierarchy is relationship of all the webpages with your website.



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Continued...

The webpage hierarchy is relationship between the content on the webpage.

The headline spanning these three columns makes it obvious that they're all part of the same story.



The size of this headline makes it clear at a glance that this is the most important story.



Continued...

The more important something is, the more prominent it is.

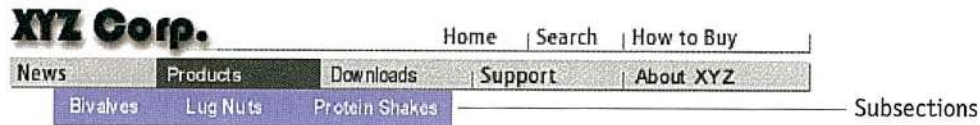
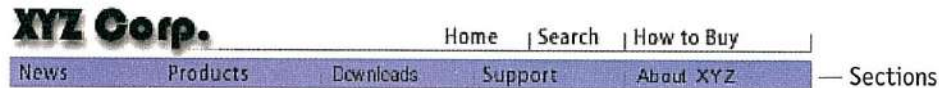
Very important

A little less important

Nowhere near as important

Continued...

Using the information from your website hierarchy, you can develop your website navigation accordingly:

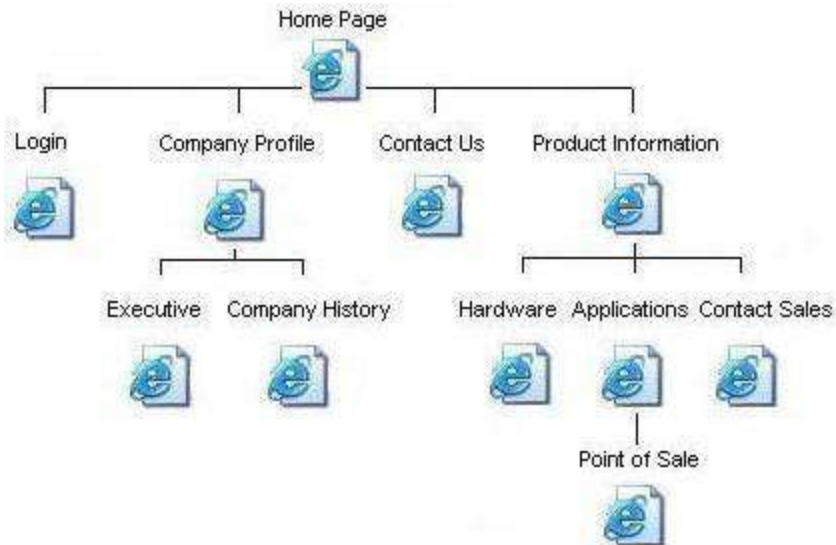


Sections – sometimes called the *primary navigation* - are links to the main section of the site.

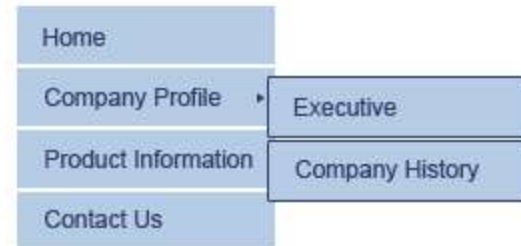
Subsections – sometimes called the *secondary navigation* - are links to the subsections of the site.

Utilities – are the links to important elements of the site that aren't really part of the content hierarchy.

Continued...



Website Hierarchy

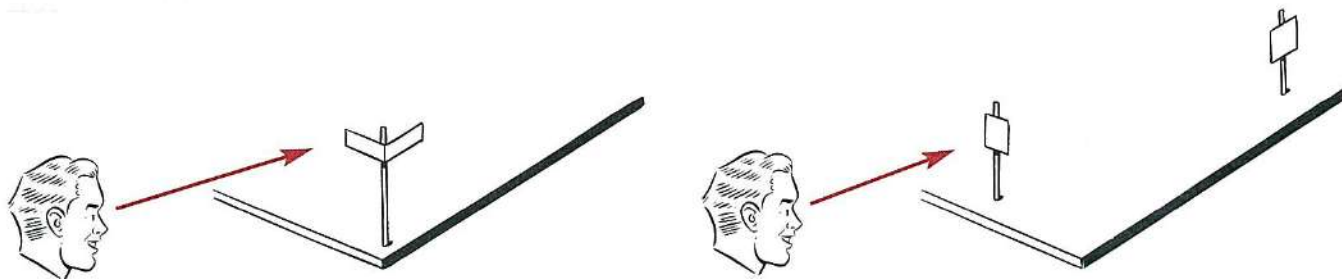


Vertical Navigation

Continued...

The design of your website navigation needs to be clear.

The navigation should be located in a standard place and distinguishable from everything else.



Continued...



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Continued...

Wherever you are within the website, you should clearly know where you are.

Design your template to include a “You are here” section that stands out.

“You are here”

The screenshot shows the Orange County Department of Education website. At the top, there is a navigation bar with links for HOME, HOT TOPICS, BOARD, EVENTS, JOBS, DEPARTMENTS, and SCHOOLS DISTRICTS. Below this is a header with the department's logo and the text 'Orange County Department of Education' and 'Dedicated to World Class Education... Where Every Student Succeeds'. A breadcrumb trail reads 'Home > About OCDE'. The 'About OCDE' section is highlighted with a red circle and a red arrow pointing to the text '“You are here”'. The main content area lists several links: Superintendent Biography, Our Mission & Values, Presentations, OCDE Fact Book 2006, 2004-2005 Financial Report, and Racial & Ethnic Survey Fall 2005. A footer contains contact information: 200 Kalmus Dr, Costa Mesa, CA 92626; PD Box 9050, 200 Kalmus Dr, Costa Mesa, CA 92628; Phone: 714.966.4000; Fax: 714.662.3570. A note at the bottom right states 'Adobe Reader 7.0 is required to open PDF files.'

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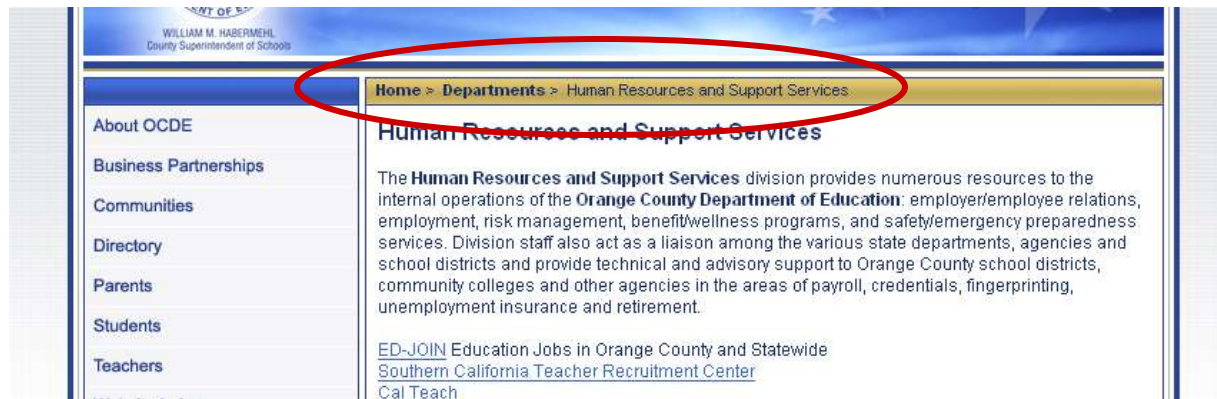
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Continued...

Similar to “You are here” indicators, breadcrumbs or cookie crumbs show you where you are.

Hansel and Gretel dropped a trail of crumbs in the woods so they could find their way back home.



Images

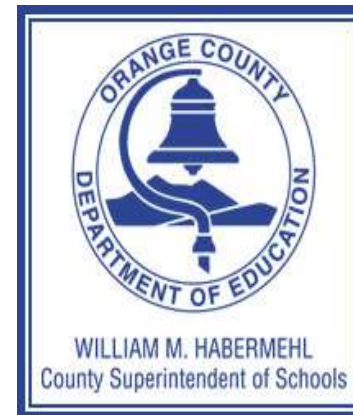
The rule of thumb when using images on websites is, **the higher the image quality, the longer it takes to download.**

If you are using Photoshop to compress your images files, use the “Save for Web” command to optimize images.

When referencing images on your website, be sure use the exact dimensions of the images to avoid image distortion.



vs.



Shopping Cart

Shopping cart software is software used in e-commerce to simulate a shopping cart.

The software allows online shopping customers to "place" items in the cart. Upon "checkout" the software calculates a total for the order including shipping and handling (i.e. postage and packing) and taxes, if applicable.

Here are a few examples of open source shopping cart software that you can use:

- <http://www.comersus.com>
- <http://www.zen-cart.com>
- <http://www.oscommerce.com>
- <http://www.agoracart.com>
- <http://www.phpagency.com>

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Questions?



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