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~~Design Guide~~

Design Guide

Best Practices in Website Planning and Design

by Michael Duff

Duffweb Design Guide

What most people don't know about planning, designing and building a great website.

By Michael Duff

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Introduction

Welcome to the Wide World of Web! No, this isn't an introduction to how on use the Internet. In fact, I am making the assumption that you already have a decent grasp of what the Internet is, and basically how it works. You're interested in building a website, so I assume you must have surfed to some, or many, and that's what you'll need to get started here. As far as designing a website goes, the questions you may be asking yourself can make the whole thing seem tangled and confusing. There are so many technical aspects to consider - so many applications (like *Homesite®, Dreamweaver®, FrontPage®, GoLive!®, Flash®* and others) and so many languages (like *HTML, Javascript, ASP, CF,* even *Style Sheets*), not to mention the graphics - that many people forget the "Why" of building the site, and it's usually because they're overwhelmed by the "How."

I will give you as much information as you need, as clearly and in as short a time possible, about what to do before you start the build, and how you can better plan for it, so you can get on with the task at hand of actually building your site, all the while feeling confident in the steps you are taking.

We will cover all of the "secrets" that will help you create a great-looking, useful, easy-to-navigate-and-buy-from website. No, this is not a book solely for *E-commerce* sites. However, if you are only looking to put up a couple of pictures and some text, this book is probably not for you; although even with only that as your goal I think you'll still learn a bunch of things that you can apply.

This is not a very technical book. There are enough of "those" out there, and some are very good, while others are less good at getting their points across of how to do some smaller aspect of the whole site. This is, however, a semi-technical book, in that there will be terms you'll need to know and ideas you'll have to understand before you just dive into creating a site correctly. What you'll learn here will undercut, while at the same time help you use, all of "those" technical books and tools more powerfully and purposefully.

There is plenty of information scattered online right now that could help you in one way or another and of course, by virtue of its nature, the Web will always be changing, and so will the information it contains. Indeed, some of what you learn here may not apply in some ways to a site you build in five years, but I believe most of the information contained herein will go on and on, as they are basics that are fundamental to making any site useable and successful.

The information you find here will not take the place of a team. If you happen to have the luxury of a team (company, design firm, etc.) that you are working with, this information will still help. People on Design and Development teams are generally trained and specialized in one specific part of the whole project - and let's face it, the more you focus on and do something, the better it usually is. This will help you however, when working with a team in that you will understand more of the pieces that make up the whole process, be better prepared for, and be able to step in and help when you feel you need to. After all, even if you have a team, it's still your site!

This book was written in a way so that you should be able to read it in a few days, or over the course of a week or so of nights. There are screenshots and diagrams to help you get a better idea of the concepts we're covering. If you're not new, bear with the beginner stuff or just jump ahead to Chapter 2 - although you might miss something interesting. Those of you who are new (or relatively new) can continue on to Chapter 1 and from there learn to either revamp what you've already done, or start anew with real-world expectations, and fewer headaches! My goal is to give you enough useful information so you can make your new site, and any you build from here on out, a big success - but not having taken up too much of your time doing so.

In my working with 100s of websites, either from a design, development, managerial or consulting aspect, there have always been a handful of key fundamentals that remain constant and that most people, experienced or not, simply forget about when they're building a site.

So relax a bit. When you're done reading this book you'll be able to give some tips to the web "Pros" that they either forgot, or just never bothered to learn. And you'll be able to recognize at a glance of surfing the first page or two, who knows what, and how much of an edge your site has over theirs. I have a checklist at the end of the book that you can copy and use for any future sites you may build. It has all of the main points and items you'll want to watch for.

Just as a warning, there will be things you will read here that may make you think, "everyone knows that," and you may be right, many of the concepts are pretty common sense, but I'll say it again that in my over 7 years of building websites, I have seen only a small percent that implement the fundamentals in this book either fully or correctly - many don't at all. Many of those "no kidding" ideas get lost in the nuts and bolts of the build, never to re-surface for the benefit of the site's visitors.

One thing I will ask you up front is to please not go by anything that you don't fully understand. Be it a word, symbol, graphic - whatever it is, if you feel you don't understand it, and can't find a good definition for it, please email me at info@duffweb.com and I'll help you out. It has been proven that not only will you not get the information if you go by a misunderstood item, but you will more than likely give up on the whole book altogether, maybe even give up on the site. I have made a point to define the terms that you will need to know, that you may not easily find in a standard dictionary - you'll find them italicized the first time they appear - and the definition will be in the glossary at the back of this book.

I hope this is the start (or continuation, if you've done this before) of a wonderful and prosperous relationship with the cyber world and your cyber visitors.

Here we go!

Chapter 1. Where do we start?

Where Do We Start?

I'm sure we all have different reasons for building a site. Maybe you're going into business for yourself and need a web presence; maybe you just had an idea of a brand-new, astounding thing-a-ma-bob and think tons of people will buy it, but need a site to sell it; maybe you want another outlet to bolster your eBay® sales; maybe you want to create a central web location for the purpose of promoting the best local dance clubs; maybe you don't actually want to do it at all, but by virtue of your job, find that you have to. I'm sure we can think of dozens more good reasons (and some maybe not-so-good) to have a website. That's why you bought this book, right?

What I want to give you in this book is the "WHY" you should do the things that you should do when creating your site. I'll leave most of the "How" to Adobe™ or Microsoft™, or someone else with bigger offices than mine. The important things we'll be covering are: How useful is the site? How fast does it load? How quickly can the users get to what they need or want? How does it compare with sites that are out there already? These are some of the questions you should be asking yourself each step of the way and you'll see as we progress how easy it is – as long as you're paying attention to some fundamentals I've mapped out in the following chapters.

Thinking Big

At last check (around the time of writing this book), Google®, the largest *search engine* existing to date is currently searching 4,285,199,774 web pages. In case you missed a comma, that's over 4 billion web pages. Makes finding a needle in a haystack look easier than someone finding your website. The big advantage we have over the haystack is, of course, companies like Google® and other search engines that will help people sift through the tangled Web and help them find your site. We will cover search engines briefly later on, but how they're treated once they find your site is what we'll be concentrating on. The odds above are the reason why it is so important to set up your site correctly. Once you get visitors to your site, you don't want to lose them because of some silly mistake in planning or execution.

As a bit of a side note, there are many companies out there who specialize on search engine placement, and there are search engines or *listings* who charge for top placements. It's up to your level of energy and commitment as to how you want your site found (I do have some common-sense tips for you in Chapter 9).

Having possibly depressed you with the seemingly overwhelming numbers above, I do want to impress that there is still no better way to get your goods out there quickly and inexpensively than the World Wide Web. The rate of on-line purchases is still growing at an impressive rate

(approx. 6% each year for the next 4 years according to the *l6th Annual Veronis Suhler Stevenson Communications Industry Forecast*), so there are plenty of clicks to go around.

As some background, it has been shown in studies that the average on-line user goes through an approximate 4 year "gestation period" as far as when they started on-line to when they're really purchasing. It breaks down like this: for the first year or two they will use it mainly for email and information gathering – checking stock quotes, etc. Usually by the third they are buying smaller items online – say, CDs, books, buying stocks and ordering flowers. In the forth year, those that will make the move will have started buying all sorts of larger things, like mortgages, cars, etc. At this point they have used the Internet for a while, they're comfortable with its security and will have also gotten their research for these purchases done online and are usually looking for the best price. Government agencies and other businesses alike use the Web heavily for purchasing because it reduces costs. So the move to create a site is still a good one – provided you build it correctly.

The information in this book will help you level the playing field and take the small fish in a big pond aspect out of your game plan. Besides, that was one of the great things about the Web, for some it was the whole idea to have a site – a one-man company can have the same type of web presence as MegaCompany, Inc., who own the office building down his street. So, Think BIG! You can on the Web.

Know Your Target

One of the first things you'll need to consider, if you haven't already, is who are you going to build this site for? Who do you want to come and visit? 'Everyone' is not an answer to this one, sorry. This is where my Marketing background comes into play: Let's say you had a brand new type of bicycle that you wanted to sell, and you were going to build a website for it – it's a brand-new innovation.

What is your target market? Who do you want to buy from you?

If you said "everyone" again, I'd have to send you to the principal's office. If you said "everyone who rides bicycles," you'd be closer, but you can still get it more focused. How about: "people who are really into bicycling"? Make sense? These would be the people who like innovation and will be more likely to try something new. I know this is not a Marketing textbook, but you absolutely need to know who you are building the site for. It is crucial because when you have that question answered it will help you determine how to build your site.

So know your target market. Who are you building this site for? I can't stress this enough, so I'll keep saying it: Know Your Target. Know Your Target. Know Your Target. Ok, I think you've got it.

Types of Sites

All of the "before you do anything" ground we'll be covering is really very necessary for you to smoothly create a site that is useful. It's like a carpenter friend of mine always says: "Measure twice, cut once." This book is mostly about planning: how to plan and what to plan for. It also has quite a few Professional "secrets" throughout to help the process along. Planning ahead will save you a lot of time and headaches. Know what you're going to do before you do it.

Now that you know who your target audience is, finding out which type of site is most appropriate for that group is your next step. This is one of the easier points, but it's a really important one because quite often the person designing the site will do so from what they consider a good type of site, and only because it's the type that they like. Our personal preference should not come into play here. If your favorite colors are red and yellow and every site in the genre your building is blue and grey, making it your favorite colors will not help you at all.

These are the questions you should ask yourself before you start building anything:
What kind of site am I building?
What do other sites in the same category have in common?
What features do people who use those sites expect to be there when they arrive at mine?

There are obviously millions of websites on-line as you read this, but they all fall into only a few different categories. Below are some examples of the most common types of sites.

The Business Site

A business site is one of the most commonly attempted, as it is one where you are promoting your business and hopefully giving your visitors something to do (usually translating to - they can buy something there). It may be a corporate-type presence or a less corporate, small-business presence, but it is still a business feel. This is very different from an on-line brochure, because people are on the web to DO things. You have their attention when they're at your site, use it to your advantage. I'll go over this more in Chapter 2 "Everybody Sells."

There are two main types of business sites: The Standard Business site and The Portal Business site.

Standard Business Site

We've all seen the Standard Business type site. I have a screen shot of a typical one above. This is www.bofa.com – Bank of America's website. You'll notice a few things immediately about it:
It has the logo prominently displayed.
It has a very corporate and business sensibility to its design that is very important to the overall image and "*branding*" of the company.
The colors are not extreme, nor are any of the graphics.
Overall it is rather conservative - as you would expect a bank site to be.

Portal Business Site

The Business Portal site is different only because it has, aside from the similar branding characteristics (the company name and logo placement) of the Standard site, there are news and other information that gets updated by a company other than the company you are visiting.

For example, most internet service providers (ISPs) supply you with, as an option when you open an email account, a “Welcome” page that you can configure with information that is customizable to your needs. This information includes items such as stock prices, weather, local news, etc. This is an example of how a Portal site and its information work. There are a number of data providers who *feed* these different types of information, all by reputable sources, right to the site for the end-user to see.

The whole idea behind this type of site (and it’s a valid point in theory) is that the longer a visitor spends at your site, the more likely that they will purchase from you. This theory has been proven statistically. It is assumed that if they provide other things for their visitors to do while you’re at the site, those visitors will have less reason to leave. The trouble is, that unless they use the fundamentals of this book of how to create a good site in place, all of the stock quotes on earth won’t make their site a success.

Everything comes at a price and the down-side of this type of site for a small business is the fees for such information can be prohibitively expensive.

The E-Commerce Site

The E-Commerce site is one where you go to buy things. Some of the more popular ones are eBay™, Amazon.com™,BestBuy.com™ and of course, there are many, many others. As you can see by the screen shot above, there seems to be almost too much information shown at once for you to really wade through, but people who frequent these sites typically already know what they want and are just looking for the best price so the clutter doesn't hamper the activity that much. Again: know your target audience.

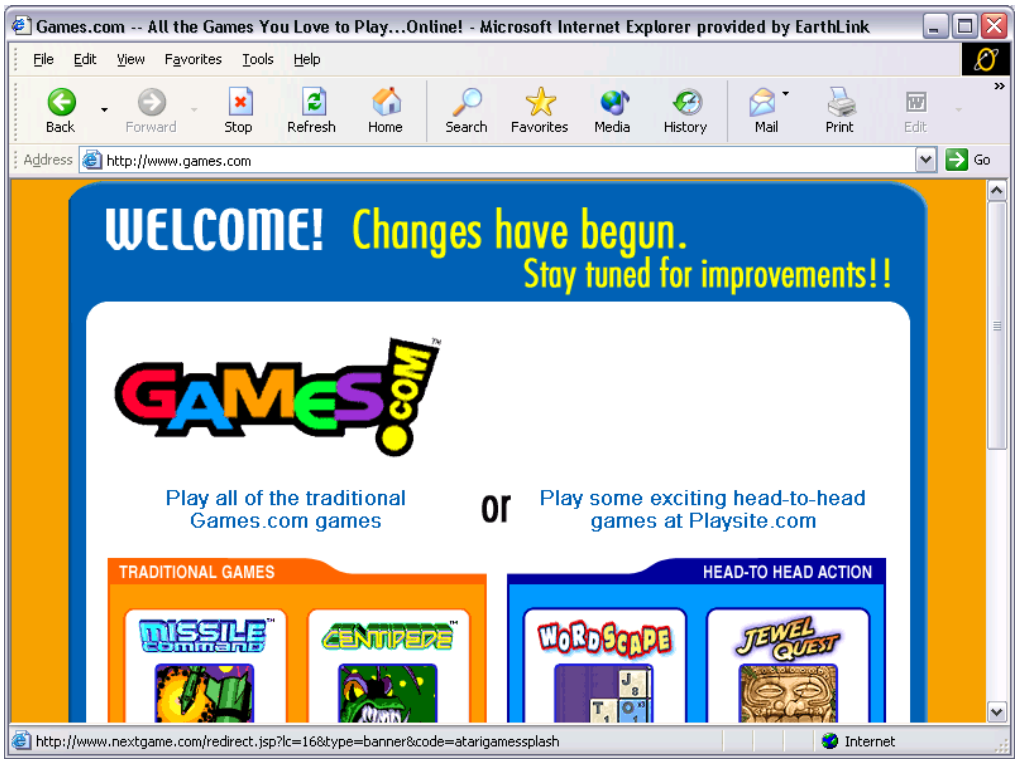
There is a great deal of difference in building a site that sells hundreds of items and building one that sells just a few. Without going into too much technical detail, there are sites that employ *databases* that store all of their merchandise information, pricing, etc., and when a visitor clicks on an item, the web *server* literally builds that page "on the fly" displaying all of the related information pulled from the database for that item.

There is an awful lot of programming involved in these sites that happens "behind the curtain" (if you've seen your browser's address bar filled with long numbers and "?" and "=" and "&" and such, this is a database application). This heavy-duty programming is what makes it all seem so seamless.

If you're building your own site (and just beginning) you probably aren't going to go this route. If by chance you are a more advanced web builder and are building a database site, you may be using a program such as ColdFusion® by Macromedia™, or Visual InterDev® by Microsoft™, or something of that nature. These are really heavy-duty programs that require a fair amount of study and if you already know one of them, then you are probably already on your way to a career in programming! But for the rest of us, don't worry, if you just have a few items that you

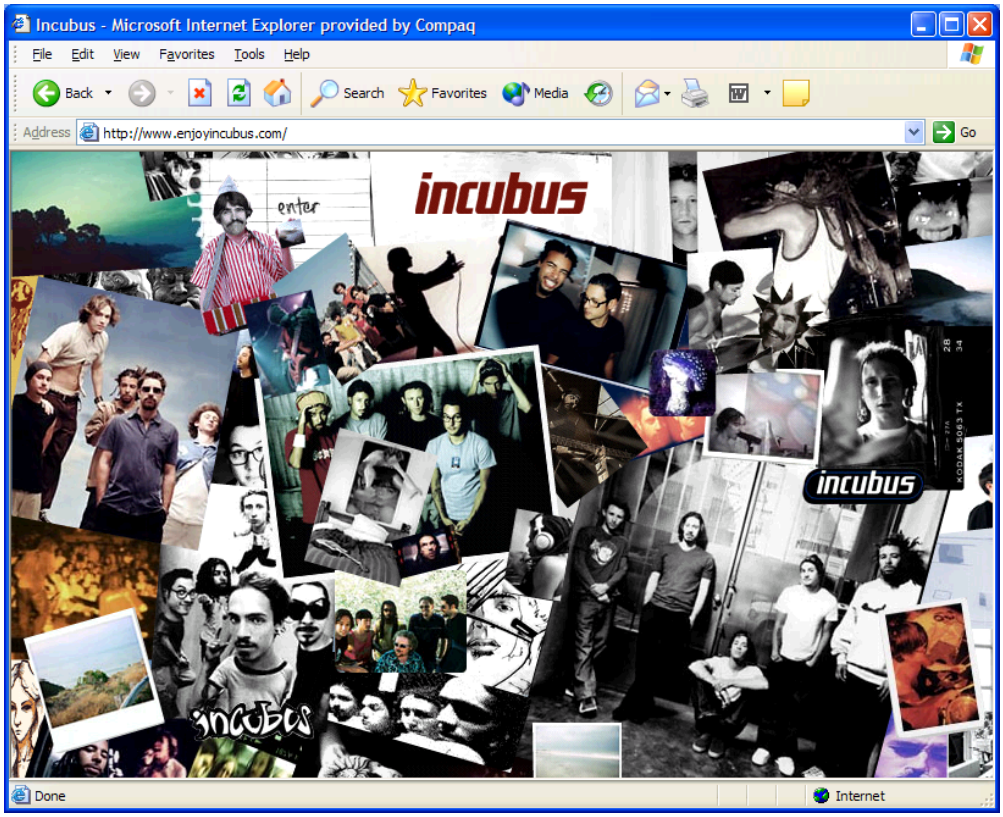
want to sell on-line, there are ways you can do it on your own. There are other sites you can turn to that will help you with the really difficult things like a shopping cart (the way your visitor's pay you for what you're offering on the site) - and you don't have to spend years in a technical manual trying to figure out how to build a *back-end* on your own.

Game Site



Game sites are where it seems you have the most latitude, just by virtue of the "fun" nature. But don't let your guard down just because it's all fun and games. The rules you'll learn here will still apply. In fact, the more sophisticated gaming sites actually look and feel more like business sites, but with cooler graphics. These sites tend to have very loyal followings and require a fair amount of work to keep the steady visitors interested. But, if your work is play, then that kind of work doesn't sound too bad!

Arts & Entertainment Sites



Arts & Entertainment sites cover a wide range of sites that are supposed to be beyond the realm of commerce and are put up to show a statement of one kind or another. These are similar to Game sites in that they are for entertainment purposes, but don't get tricked into thinking that the fundamentals don't apply to them either, because they do. They just don't want to think they do because it's cooler to be different. All joking aside, these sites are often times more fun to create, but are also more challenging because of the free-for-all nature of the genre.

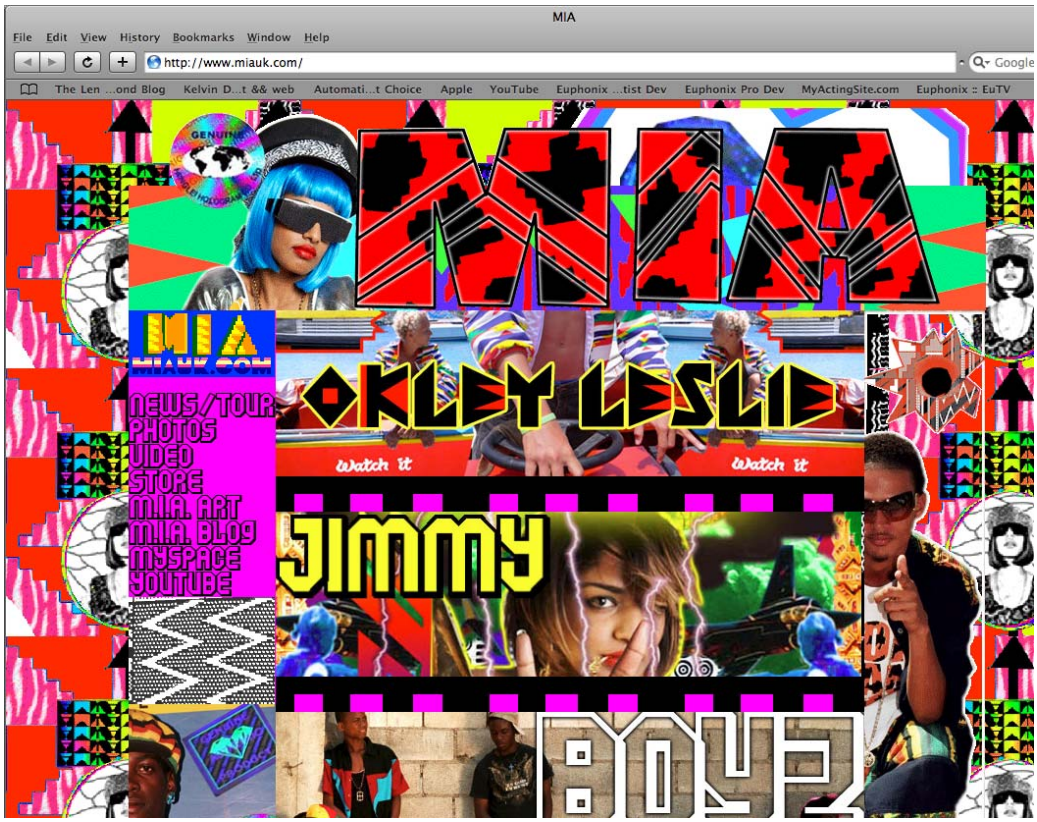
As an example, one of the most successful and popular music artist sites is the Dave Matthews Band website (www.davematthewband.com), and going to it seems like your going to a really well-done business website. They know the importance of selling (see Chapter 2) and yet they still manage to cater to the likes and desires of their fans. Other good Art & Entertainment sites are www.lacmalab.org, www.enjoyincubus.com (shown above) and www.u2.com. There are of course many, many others.

Not Recommended Types

Here we venture into the "Not Recommended" zone. I put these in their own category as the least effective of the types of sites. Although these are not actually types of sites in their own right, they do have distinct characteristics differing from the above types and so deserve to be handled separately. I also imagine they didn't set out to become one of these "Not

Recommended" types. Many of the sites described below begin with good intentions and go awry somewhere along the line and wind up ineffective and unsuccessful.

The "Vegas Strip" Site



Yes, this is an actual site. This is the type of site that people with a lesser sense of design (and they haven't read this book) tend to create. They go on the assumption of "more is better" and in some aspects of a site that is correct. More speed, more usability, more substance, are definitely things to strive for, but what happens in this type of site is called 'Ad blindness." Ad blindness is when there are so many things hitting you all at once, you don't know what to look at, so you don't see any of it.

The "On-line Brochure" site

This is how sites were built 6-8 years ago when people were "feeling out" the web. This was also how they were built before we knew any better! I've done them, we've all seen them – tools improve, we learn from our mistakes, etc. You see these types of sites designed and built now by people who mainly do print advertising (I'll go into the differences between how print and web design are done in Chapter 6). These sites don't really do anything but explain a thing or two about the company and show some pictures. Once upon a time that was OK, but as quickly as the Internet grew was about how quickly as these got outdated. Most people don't surf

anymore because they have nothing else to do, they know what they need and they want to ACT on it so they can get on with the rest of their lives. Having something for them to do or something to sell them is what it's all about now on the web.

Although we do see a lot of similarities with these types and "Art sites," if you look closely you will see the differences. The Art site, even though it seems chaotic (like the band Incubus' site screen above), there still is only one main message – it's the band. And they know their audience and their visitors expect a different site. Again: know your target. But even with that in mind you need to be careful not to confuse your visitors. Don't give them too many different things to look at, or you risk losing their attention altogether. Knowing your target and what they expect will help you avoid this type of mistake. More is not always better, in fact it rarely is.

Summary:

Think BIG!
Know your target
Know the type of site you want to build based on the target audience and deliver what is expected.

Chapter 2. Everybody Sells

Everybody Sells

A philosopher once said that if it weren't for Salesman, the world wouldn't turn. In my opinion, he couldn't have been more right. It doesn't matter if you don't like Salesmen, or you never wanted to consider yourself one or whatever, you still engage in the practice of selling every day. Don't worry, I'm not writing this to turn you into a Salesman, but I do want you to look at a couple of things. How did you get the job you have? How did you get the loan for the car you have? How did you get the girl or guy? You sold yourself and your finer attributes in some way.

Everybody sells.

I also don't mean to imply that every site has to be an e-commerce site. Many do have some sort of a shopping cart, but even those who don't sell tangible goods from their site *are* trying to sell something – even if they don't realize they are. If you were forced – against your good sense and all the knowledge you will have gained from this book – to build an Online Brochure type site, you're still trying to sell the company.

Everybody sells.

I have a number of years of experience working on sites for Credit Unions and other non-profit organizations, and it was very hard to get them to see this concept. They didn't want to seem pushy to their clients - but even if you only want to beak even, you still have to make enough to cover your costs. Even if your business plan is totally based on donations and you're not selling anything specifically, you still have to ask for the donations, right?

Everybody sells.

One of greatest steps forward you will make in preparing and planning your site is to have the idea of selling as one of your goals. Now, I said earlier that this isn't a Marketing book, but there will be a lot of that discipline in here because honestly, Marketing is mainly a lot of common sense and from there, it's an art. From the moment someone clicks on a link or types your URL into a browser and lands on your site, you're selling them. You want them to stay to use your service, tool or gizmo, play your game or listen to your music – whatever it is you are trying to convince them that what you have is desirable. It's not a bad thing. It's just a bit of sales.

You may be scratching your head after reading this and saying, "Well, of course, that's why I need a site, to sell my product." That's good. Just don't lose that idea when you're building the site. Make it easy for your visitors to buy from you.

They're Called End-Users

That's right, they're called end-USERS. They're not called end-lookers or end-hanger-outers - or even end-surfers. The term end-user implies someone using something – doing something. Yes, they're using their computer, but they're also trying to use your site. You want to give your visitors something to do.

From a technical aspect giving them something to do is pretty easy - a form to fill out, a button that activates the shopping cart, etc. - but before you get to that, you need to look at those things about your company that people will find desirable (here I go, dipping into that Marketing thing again). What is it that will make people want to go to your company, instead of the one down the street? Whatever it is, you need to present THAT to those visitors in a way that is quick, understandable and with something that they can act on – right now. Remember that on the web it's a lot easier to just click away and go elsewhere than to try and figure out what to do and where to go in a site (we'll go into that more in the next chapter).

Let's use our earlier bicycle parts site example again. If you're selling the new innovation in bicycle parts – do that! Make it easy for your visitors to get to the part – meaning you don't make them wade through a difficult navigation scheme or make them read a history of your company before they can find what they want. Give it to them and then have a Buy Now button. Don't make them wait. There will be a lot of tie-ins as we go and this will be a point to remember.

How many sites have you been on where you knew what you wanted, knew it was there somewhere but had a hard time finding it? This is one of the big rules of correct site making – don't make them wait! This idea correlates with the next chapter a lot, but the point I want you to get here is that the days of surfing for hours going "ooh, and ahh" about what websites can do are long gone. OK, so maybe not for the hard-core web programmer, as they're into pushing the boundaries or "bleeding edge" of technology - but unless you are selling something that is bleeding edge web technology, visited by hard-core web programmers, that is not your target audience. It's now all about the convenience the Web has to offer. Making someone wonder how to get at what you are offering is not convenient.

You'll notice as we go that I refer to people arriving at your site as visitors. Think of them as visitors – treat them well. Treat them like someone that you like and is welcome coming to visit you at your house for a short time.

Know your target market and use that knowledge to sell them something.

Summary:

Sell Something
Give your visitors something to do
Treat your visitors well

Chapter 3. Speed

Speed, Speed, Speed

12 years ago - when I was client - and first got involved in the process of building a website (it took me a couple years to get into this as a profession), things were quite a bit different. Technology was what seems like light-years behind what we're used to today. I'm sure this is not news to most of you. I kept hearing the question, "sure it's cool, but will it work on a 14.4Khz modem?" (which was fast at the time). It's funny how far we've come speed-wise, but it's also just as interesting to see how little the basic idea of speed has changed. Even though things are so much faster, we still want it to load fast - and for good reason!

Page download speed is one of the biggest problems with websites, but download speed is only one of the issues I'm talking about here. Speed is affected in many ways, and anything that makes your visitors wait is a problem. Some other things that effect speed are layout of a page, content presentation and overall usability of the site (shopping cart, etc.).

Speed has to be considered every step of the way. Studies by experts like Jakob Nielsen have shown that an average user will wait no longer than 10 seconds for a page to load before clicking onto another site. That's not a lot of time. My tolerance is actually a loss less, but you get the idea.

Have you ever gone into a store and asked a clerk for something you were trying to find, and they told you to go over to the guard, and when you asked him he paused, and then finally said you had to go see the man behind the counter at the back of the store, and then when you got there he told you to go to the clerk next to the very one that you started at? I certainly hope not. I'm sure that store would be out of business very quickly, and yet many sites are built in just this fashion. And what do you do when you can't find what you want quickly? You go somewhere else.

We are living in a society of instant gratification with hundreds of cable channels at our fingertips, movie mega-plexes that have 20 or more movies playing at once, stores that deliver 24 hours a day - all so we don't have to wait, or move from our comfy chairs.

These above are generalizations, of course, and you may or may not want to move from your comfy chair, but I think it's pretty safe to say that we really like speed. We don't want to wait. We want it now! And if you're thinking that the information on your website is important enough for someone to wait while your really cool *splash page* loads, you're just kidding yourself.

Here are some different ideas here that can affect speed.

Things to Consider

The Splash Page

While the subject is so fresh in our minds, let's talk about the "Splash Page." The once omnipresent, still tragically notorious splash page does really only one thing: it makes someone wait. Sometimes people do it with the logo of the company and you have to click it to enter the site. It had originally been thought that if you impressed a person enough with your splash page wizardry that they would be an instant convert to your site and never go anywhere else. OK, I may be exaggerating a bit, but these little time-wasters overstayed their welcome and saw their time come to an end once site owners realized that people didn't want to wait. They saw that their visitors clicked the "skip intro" link on that splash page as fast as they could. So it became, "Why give them another click? We'll just dump the Splash page." Wise decision.

If you have an Art or Entertainment site, you may have a justification for a cool splash page – and some are really cool - after all, that's part of the experience of those types of sites, the art of it. But for any other site type no amount of exciting graphics in the world justifies wasting someone's time of sitting through a splash page. You want them to get to the information you have - and quickly!

Next, and usually the easiest barrier to speed to handle are the graphics.

Graphics

Graphics are most often the culprit when it comes to a slowly downloading page. Often, there are just too many of them, as in the "on-line brochure." That is an easier thing to notice. Other times it's harder to discover because the page doesn't look like there are a lot of graphics, but it's still taking forever to download. We'll touch on this and other graphic issues and how to handle them in much greater depth in the Chapter 6, Design. For now, let's look at the most common graphic mistakes:

Image file size – or file "weight" - I'll get into some fine detail about this concept in Chapter 6, but you need to make sure that your graphics are sized correctly and not re-sized by the application. If you have a graphic that is the whole size of your page and then using Dreamweaver, or whatever, you just make the dimension of the image smaller – you are in effect not changing the weight of the image and that will slow your page down. Basically, if you have a graphic which you need to change the size before you can put it into your page, you need to go to an actual graphic program and change it there first. There is also the issue of image resolution which is a very common mistake made by most beginning designers.
To many images - this goes into more than just download time, it also becomes how fast can a visitor wade through all of the images (like the Vegas Strip type site). Too much is just too much.
Graphic navigation – navigation items which are graphic images that could be simple text (HTML). We all like the mouseover effect (this is when you move your mouse over a link

which is not HTML text and it changes color or adds a drop shadow, etc., it actually changes to a different image, usually the same image of text, but just a different color or whatever else added to it to make it look different) but if you have a lot of graphic on your site already, you may want to consider HTML links. This gives many graphic designers a cold shiver up their spine, but sometimes you need to do that in order to preserve download speed.
Animated Graphics – I believe this is a product of the mindset, where, the idea of doing something overtakes the sensibility of not doing it (I go over this in Chapter 8). Of what I am sure, however, is that it is something that can kill the speed of a site. These animated graphics files are usually very large because they're really just a whole group of images laid on top of each other to display in turn. Just because it's only showing one at a time, it still has to load the whole thing (all of the images) to the page.
Background images – Here's something that has been too overused. It even gets used in emails! Even by "tiling" a small image as a background, you slow down the whole page by waiting for it to load - aside from the fact it usually makes the page look busier than it should and it becomes more difficult to read. Stay away from background images as much as possible.

To Flash™ or not to Flash

Flash is a web animation program developed by Macromedia® (www.macromedia.com) but taken over by Adobe® (www.adobe.com) who has done some great things with it. I won't go into the technical reasons why it is so widely used, you can get that from the website listed above, but suffice it to say that you can do some really cool things with it and keep the file sizes relatively small because of the way it works. If you've ever played a game on a website, more than likely it was created using Flash. Flash files are called "movies."

This spills over into the graphics area as it is a graphics animation program, but since it's so prevalent today I thought it deserved its own header! This can be a touchy subject, and one that usually generates a lot of talk between designers and coders. Flash can be used quite well, but it can very easily be overdone. Once again, a look to what your target market expects and how it will affect the overall site speed is crucial in making a decision to use Flash or not.

It can be used effectively for banner type graphics, or for other graphic "touches," but beware of using it as your entire site or even your main navigation. Flash has had many different versions thus far, and if your public doesn't have the correct *plug-in* in their browser for the Flash movie you create, they won't be able to navigate your site without downloading the new plug-in. Many people are still paranoid about viruses and getting them to download a new plug-n is right up there with a root canal. Again: know your target.

If you really want a Flash site, you can proceed as most advanced sites that use a lot of Flash, and have 2 different versions: one Flash and one regular old HTML. That way you will be sure that plug-in or no plug-in, people will get to what they need. You'll generally need a Splash page for them to check which version of your site they can access (Flash or HTML). Another option is to include some code in the main page of your site that will detect if the correct Flash plug-in is available on the visitor's computer. With this code the visitor's browser automatically goes to the correct version. If you're not feeling comfortable being coding, or the program your

building with doesn't have the Flash-detection code available, use a Splash page, it will be easier. Note: This is probably the only time I would consider using a Splash page.

Layout

The next point on speed I want to bring up is the layout of the site. It has a few different aspects to it and we'll cover them here.

One general note about design and layout is that recently (the last few years) the design trend has been going to more white-space (white-space is basically a part of the page where there is nothing, even though it may not actually be white). These designs are page layouts with a less crowded, open feel. The beginning designer will tend to cram the page with as much information as possible. There is a very comfortable and inviting feeling to an open-looking page with a good use of white-space, the eye can relax a bit and take in the rest of the page without frantically trying to take it all in at once or pick through the assault of visual items. Of course if your target market is used to an assault of information, you may be throwing them off with a really clean, open design and layout, so make sure you have all of these earlier points in mind as well.

The "Pop-Up" Window

I am distinguishing a link that opens up to a separate browser window from windows that automatically pop open when you enter a new page. Also called an Interstitial window, the notorious pop-ups appears mainly as advertisements, and have caused a number of programs to be written with the sole purpose to stop these popping up on the end-user side. They have been overused and, as many good things which were overdone, has acquire the scorn of most computer users.

These can be used sensibly and effectively, but to overdo it (as our friends at Netscape, AOL and many others have) leads to a type of Ad blindness where we get so used to the intrusion that the only action we generally take is to close the window as fast as we can, without ever noticing much more than the color of the pop-up window we just closed.

For special notices or surveys or events, these can work well, but keep in mind the short temper and patience of your visitors and treat them well. Keep the idea in mind of someone visiting your house for dinner. Imagine, that as soon as they walked in the door you jump up and yell something at them. Maybe the first time they'll think its novel, but after more than a couple of times it gets annoying and they stop coming over.

I have this idea listed in the Speed section because when you add something like a Pop-up window to your site, you are using your visitors' time to do something (in this case usually closing an unwanted window) so make it worth their while.

I realize there is revenue-generating appeal to these Interstitial windows and that's understandable, if you must have these for advertisers, make sure your main window remains on top. A simple script command can affect that for you (check your Site building program for details on exactly how to do that).

Navigation

Speed of your visitors being able to find the information they are looking for is one of the single most important aspects of your site. I know I've stressed a few other things already, and here I go again: Navigation is king!

There are a few things that you need to think about while planning your navigation. One is: what are the main things that people will want to find? Let's take the bicycle parts site as an example again.

Take this simple, and common, navigation example:

History
Why Ride?
Local Trails
Sales
FAQ
Contact Us

This might do if these are the main points you want to cover, but you should look deeper into how you can better serve your visitors in getting what they are coming for. Maybe something just as simple, but more effective, like:

Bicycles
Parts
Accessories
Local Trails
FAQ
History
Contact Us

There are many ways to lay out a navigation scheme, but one thing is certain: it must be consistent! Having your navigation change from page to page will confuse your visitors, and people want to feel comfortable, not confused. Changing the navigation from page to page will only make them anxious, and if they have that feeling while they're at your site (for any reason) they will most likely just leave because no one wants to feel that way, and you can bet it'll be tough to get them back to your site in the future.

There is no law against making the navigation on the home page slightly different in look to the consecutive pages of the site – it makes sense that the home page will have a slightly different

look than the rest of your site. Just beware that the more you change the navigation, the more your visitors have to think and the less comfortable they will be. You want them to be able to spend their time acting on something, not figuring out how to get around.

Another note along these lines is that you don't want to make your visitors have to figure out your navigation scheme. Although it may seem cool to you to use symbols as the navigation (yes, I will admit to also having done this when I first started), it just takes your visitors longer to get to where they need to go. Text navigation (even if in graphic form) in the language of your target market is always best.

For example, I worked on a site where the target audience was mostly Chinese-speaking immigrants, who spoke English, but it wasn't what they were most comfortable in. Since it was a business site, it was in the client's best interest to have a double site – one English and one Chinese (Mandarin). On the Mandarin site we put all of the navigation in Chinese – however, since most computers sold in the U.S. do not have a Mandarin character set, we worked around this problem by creating all of the text in graphic form. This way it was consistent, functional and the target audience could get what they needed quickly and easily because it was in the language they were most comfortable with.

If you have a lot of information on your site, and some very popular destinations within your site, another navigation tip is to possibly have a few special, popular links appear somewhere accessible, on every page, and always in the same place. These links can act as a sort of sub-navigation, or quick links, to your most popular points of information (Games of the Month, Tire Specials, whatever!). I'm sure you've seen examples of these. Most big e-commerce sites have links along the top that go to things like "My Account" or other places you could find through their standard navigation scheme, but they understand the value of speed. Remember, you're trying to make it easier for your visitors to get what they want. I'm not talking here about text links at the bottom of the page, although you'll want those as well – especially for any visually impaired or overseas visitors who have a really slow connection, or folks with non-graphic browsers (yes, there are still a few) – I'm talking about links that are always in plain view, easy to click. Your visitors will appreciate it.

Search Engines

Intra-site Searches are a great way to help someone find information on your site. If your site is only a few pages, you probably don't need it. If your site has more than 50 pages of information you may want to investigate a search engine for your site. Most of the big E-commerce sites would be useless without them.

FAQs

Frequently Asked Questions sections are quite useful if you find you have an overworked customer service area or if what you have is unusual. These should answer questions about your products that people frequently ask, or questions that you think they will frequently ask. For

newer technologies (software sites almost always have them, because people always have questions) they are more useful. This is an item that can be helpful, but again you need to ask yourself what your target market is used to and will expect and will it make their visit more efficient and effective.

Summary

No one likes to wait.
Think twice before creating a splash page
Graphics done incorrectly can kill your site response
Beware of using a Flash navigation
Navigation needs to be self explanatory and be consistent on each page (with slight variation available on the home page).
Search Engines and FAQs can help depending on the products of your site.

Chapter 4. Usability

Usability

The subject of usability is, to me, one of the more interesting considerations in the process of building a website – and the most vital! It has also always seemed interesting to me that not until years after websites became a standard item on a business strategic plan did those same companies start implementing usability studies and surveys. Better late than never, I guess. Much to their credit, some of the bigger web firms had a good grasp on this idea early on, and it's probably why they're still around today and not gone "the way of the do-do" like so many others.

Usability is so interdependent with every other facet of the site (design, content, navigation etc., etc.) that it's nearly difficult to separate it. That may be why it was overlooked to be its own area for so long.

The questions you need to be asking yourself every step of the way are:

How usable is this thing I'm about to do, or add?
How much effort does this thing take to use?
How can I make this process easier for someone?
How will my next decision affect my visitors "experience."

There is a lot of talk these days about "the user experience" and I think it's about time the majority of the web caught up to the rest of the business world. It really is important that your visitors have a good experience when they are at your site. They will, more than likely, return again if they do.

So how important is usability? Here are a few questions for you. How important is it to you that you can reach the controls of the radio when you are driving? How much do you like your VCR that is impossible to program? Do you put your silverware and other most-used items in your kitchen on the top shelves, way in the back?

Usability is very, very important.

With every turn you need to have these above questions in mind (and any others like them you can think of). With all of the previous points we've covered, you can and should) think along the lines of usability.

Is your target market used to this? Can they use it?
Is slow download time usable?
Will your navigation be useful?
Etc., etc.

You see the point? Usability will need to be in your mind the entire time you plan and build your site (as will many of the fundamentals in this book).

Surveys

You don't need to hire a company to do a usability study if you can't afford it. If you can afford it, it certainly won't hurt. Actually, some friends or a small group of potential clients can give you worlds of data regarding your initial build. After you've gone through all of the groundwork in this book and have your initial build, show it to some of these folks. Check how they were able to get around on the site. Were some things difficult for them? What did they like about it?

Don't be afraid of any negative comments they may make, don't get mad at them or upset if no one liked your favorite part. All of those personal items just don't matter unless you're the only one who will use the site. If you're doing an Art site, and then it may only revolve around what you want – but in that instance you may be lessening your potential audience. Don't worry though, if you pay attention to the fundamentals in this book you shouldn't have to build more than once!

Remember what my carpenter friends say: Measure twice, cut once.

Format

Another usability issue to look at is what I would call format. I'll bring up the Flash example again here. If you have Flash navigation and a certain number of visitors to your site don't have the correct plug-in, they will not be able to use the site. Sure they can download it, but will they? Many users have been made quite afraid of downloading anything for fear of viruses or privacy invasions, etc. The Flash plug-in is in this category.

Other ideas that fall into this category are database type architectures. If you're planning an e-commerce site, how stable is the environment? How stable is your Shopping cart? If a visitor is trying to buy that new bicycle part and the shopping cart is down all night, by the time it's back up in the morning, that visitor has probably already found another part at a different site.

Scripts

Of all the cool inventions of the web, Javascript has to be near the top. It was developed by the folks at Netscape many years ago. J-script is Microsoft's version, but it's not as popular as Javascript. The use of Javascript in an HTML page is also called DHTML, which stands for Dynamic HTML. This is the code you never see that makes a navigation menu item change colors when you move your mouse over it, or when you try to submit a form and you're not able to unless you fill in all of the fields. This is scripting. Most sites implement some type of scripting now and although I haven't covered it much so far, it is a definite consideration as far as usability is concerned.

Knowing what your target wants will let you know what you can get away with as far as scripting is concerned. It can, as many "cool" things can, be overdone. I have been on very popular sites where I was trying to click on an item in the navigation and a banner appeared from nowhere covering the item I was trying to get to, in order to promote something I was not interested in. I was on another site where in the middle of what I was reading a tank seemed to rip through the page and announce a new episode of the History Channel. I equated it to sitting at a friend's for dinner and as I went to eat, his wife stuck her fork into my mouth with something I didn't really want to eat. This isn't treating your visitor very well.

Many WYSIWIG programs (pronounced wiz' ee wig, - it stands for "What You See Is What You Get" and is the term used for graphic-based site creation software) have some type of scripting capabilities. I will leave this more to the nuts and bolts of your program, but I will stress that you need to use all of the data in this book to decide how you want to use scripting.

Here are some common scripting uses:

DHTML – Dynamic HTML covers a wide variety of Javascript uses, but color-changing navigation menu items (called mouseovers) are the most common. They are pretty-much a standard on most websites. It does help your visitor feel like they're actually doing something when they mouse over a menu item. In fact, we're so used to it now that it seems almost like something's wrong when we don't see that occur.
Form-field validation is a very common use of scripting. This (as I stated above) is how you make sure that certain fields are filled in before a form is sent to you. This is really useful if you want to be able to reach someone and if you have the phone field validated, they won't be able to submit the form without the phone number.
Cookies. Cookies are little tiny bits of information that get written from your website page onto the computer of your visitor. This is one of those potentially taboo items only because of the invading nature of it – you're writing to their computer, after all - but if you have a complicated site you may find them very useful. A cookie can remember bits of information about the end-user. They can be simple or really complex. A script can check to see if a visitor has visited your site before by the presence of a specific cookie (they're all stored in the same directory, usually in the temporary internet files directory). It can make your visitor's feel more like they're a part of your site, but it also can turn off some as invasive, so you need to check the current landscape and your target audience and see what's considered acceptable. Many bigger sites don't even seem to work without cookies and most e-commerce sites require cookies turned on before you can place an on-line order.

Speed

Usability equals speed. Something will be slow to the degree it's difficult to use. If something is easy to use and understand, it's much faster. Simple isn't it?

Summary

Think of usability with every decision you make
Survey your ideas with potential visitor-types
Usability = Speed

Chapter 5. Content

Content

The content part of the site is always the most difficult to get done. This is all of the information you are going to place on your site for your visitors. Anyone who has built a site for someone else will tell you the only thing that holds up a *launch date* is the content. For some reason it always seems like it'll be easy to do until the actual gathering of it gets under way. My best advice on this is START EARLY! The content you have at the start of the build will be one of the major driving forces that determine how the site will look once all is said and done. I'll say it again – start gathering your content early.

Yes, you can do the actual design of the site if you know the main elements and are confident they will not change. Once the design is complete the content will be populated into the pages by a developer. This is quite often how a team will work, the design team will work with a production team and the client in order to get the main look and feel and also what the main navigation categories are to be. If you're on your own, I suggest you gather all the content ahead of time, that way you'll save yourself time in design changes - adding and deleting navigation items, etc. - when you change your mind on the content.

Now, some specific things you should know about content:

People visiting websites read about 25% slower than they read print. This means that you need to write less (about 25% less in fact) than you would for a print advertisement of the same type product. See, writing the content is already less work than you thought!

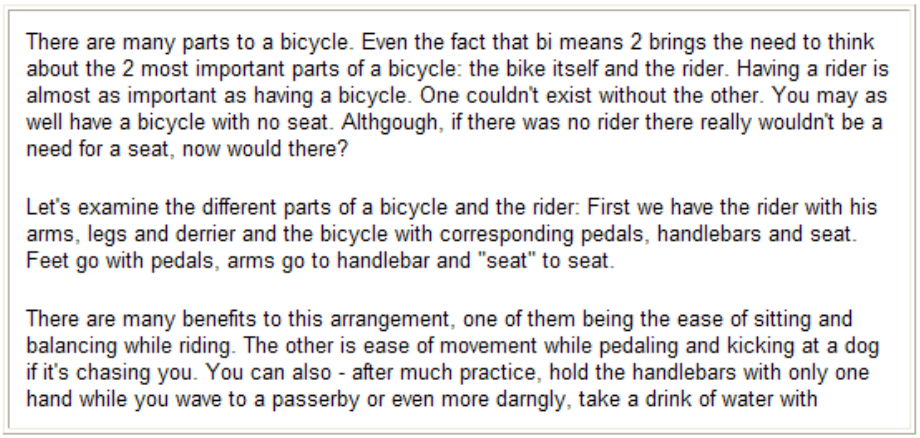
Most people only scan web pages looking for what they need, they won't read the whole page. Using headers and sub-headers announcing the content of the section coming up helps a lot. Also bulleted important items and ideas help in the scanning process.

White space helps move the eye to points you want them to find. Although this is mainly a "design" issue, it is still something you need to think of when you're gathering your content. When writing your content, use the "inverted pyramid" concept employed by most newspapers – it's basically, write the main idea in the first paragraph as an overview, then fill in the details from there. This way it will help your visitors get going with what they need. If it takes them 3 paragraphs to realize that's not what they need, they're not going to be very happy.

Many people don't like to scroll. This point is one of those that it really depends on who you talk to. Check the other sites in your target field and see how they handle the scrolling issue. This is a real double-edged sword. If you get the site built to a point where all the information fits on one page of a monitor with an 800 x 600 screen resolution, it'll look short on a 1027 x768 resolution monitor, etc. Plus, you usually end up with more clicks (less content per page means more pages, generally) for your visitors. This is something you'll need to decide before you do your build. Most sites still scroll and most people are used to it. If you can get all of your information on a page with no scrolling that's brilliant.

Take a quick look at the same content, with basically the same text, in the following two examples, and decide which is easier to scan and read.

Figure 1

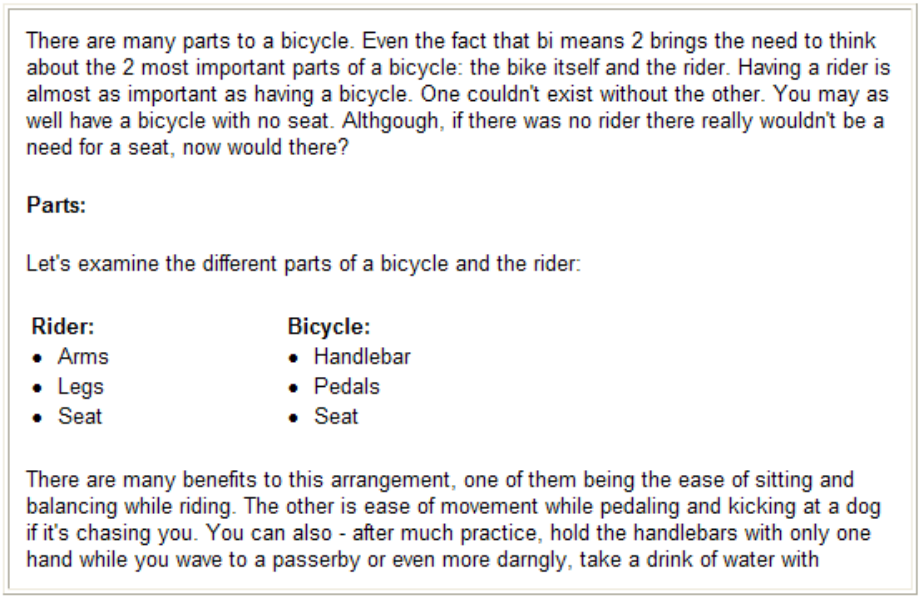


There are many parts to a bicycle. Even the fact that bi means 2 brings the need to think about the 2 most important parts of a bicycle: the bike itself and the rider. Having a rider is almost as important as having a bicycle. One couldn't exist without the other. You may as well have a bicycle with no seat. Althgough, if there was no rider there really wouldn't be a need for a seat, now would there?

Let's examine the different parts of a bicycle and the rider: First we have the rider with his arms, legs and derrier and the bicycle with corresponding pedals, handlebars and seat. Feet go with pedals, arms go to handlebar and "seat" to seat.

There are many benefits to this arrangement, one of them being the ease of sitting and balancing while riding. The other is ease of movement while pedaling and kicking at a dog if it's chasing you. You can also - after much practice, hold the handlebars with only one hand while you wave to a passerby or even more darngly, take a drink of water with

Figure 2



There are many parts to a bicycle. Even the fact that bi means 2 brings the need to think about the 2 most important parts of a bicycle: the bike itself and the rider. Having a rider is almost as important as having a bicycle. One couldn't exist without the other. You may as well have a bicycle with no seat. Althgough, if there was no rider there really wouldn't be a need for a seat, now would there?

Parts:

Let's examine the different parts of a bicycle and the rider:

Rider:
- Arms
- Legs
- Seat

Bicycle:
- Handlebar
- Pedals
- Seat

There are many benefits to this arrangement, one of them being the ease of sitting and balancing while riding. The other is ease of movement while pedaling and kicking at a dog if it's chasing you. You can also - after much practice, hold the handlebars with only one hand while you wave to a passerby or even more darngly, take a drink of water with

You can see in Figure 2 above that the headers and white space makes it easier to find the information.

Plan ahead

Planning ahead is something that you're already doing by reading this book, but it is even more important when gathering content. You'll need to already have the points above figured out (like

what your target market is, what these visitors are used to seeing, etc.). You'll need to start with an overall plan. It's always good to know where you're going before you go!

Here are some things that can help you in planning your content:

What are you trying to sell?
What are your main categories?
Will you use any subcategories?
What are the most important points you want to make in each category.
Does the content flow from section to section?

Your main categories are a good place to start. If you have looked at other sites (based on the "Know your target" principles we've already covered) and have an idea of the type of content your target market expects, you are already in pretty good shape. Take a look at this information and then begin planning your main categories.

Flowchart

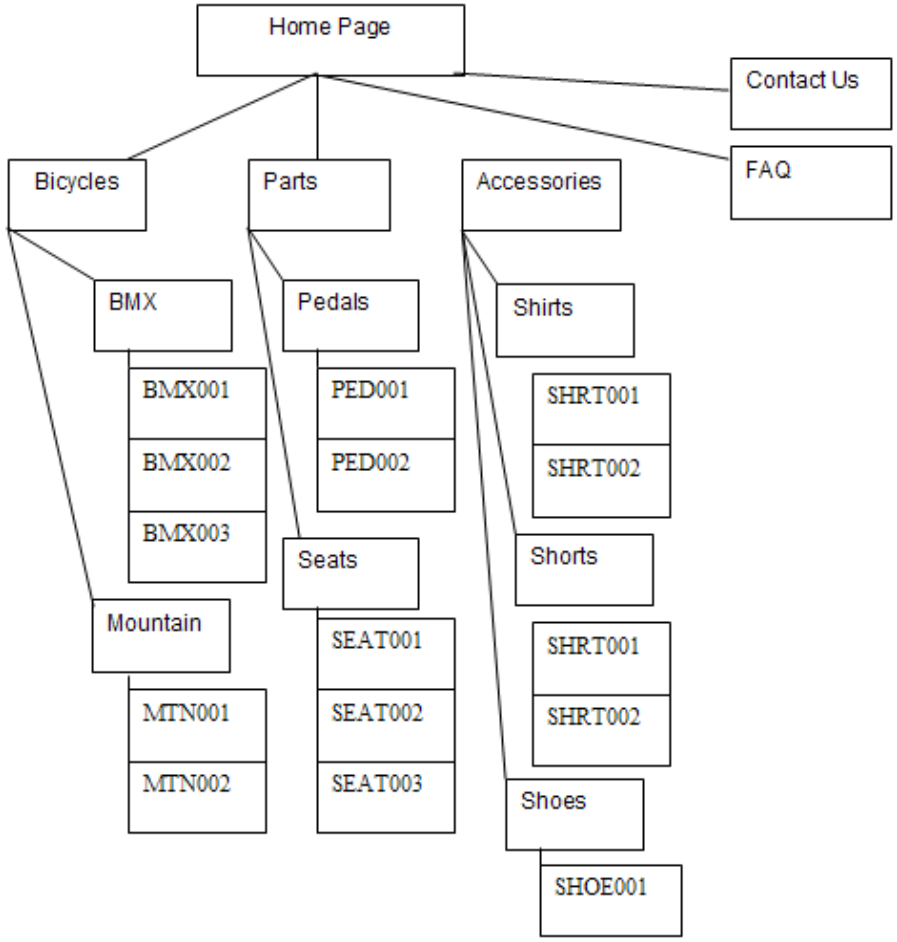
Once you have your main categories, you can draw out a flow chart showing the main category sections (they can, and probably will, be the items in your main navigation) and from there draw lines under it that show the subcategories of each main section. It doesn't have to be an elaborate *Visio* presentation. It can be as simple or elaborate as you wish, just as long as it's understandable to you and whoever else is working with you. Just don't scribble it on a napkin at lunch as you'll be referring to it often as you go further. OK, if you have to, make sure it's a cloth napkin.

Once you have your main, and subcategories, you can start putting together what the main points of those subcategories are – you see, these will become the headers and sub-headers to the pages themselves. This may seem a bit of the cart before the horse to some people, and you may have a different system you like to work with, but I've seen that this kind of planning will help you raise some questions you may not have had if you just started to write – "OK, this is page 1."

Seeing the flowchart will let you see at a glance any potential flow or overlap problems that you need to handle before you start to build. Remember: measure twice, cut once!

Below is an example of a simple flowchart for our bicycle site:

Figure 3



Think like a Copywriter

If you are in a position to hire a copywriter, that's good, but unfortunately, many of us aren't. If you can't hire someone else to do it, then you need to start thinking like one. Based on your observations, you can get the general flow of the copy (text) of other sites in your genre. If the writing style is generally colloquial, you don't want to get too formal. The same is true in reverse, you don't want to be too casual in a very formal business atmosphere (you probably won't see things like "Dude, welcome to your cash!" on a banking site).

You are the one generating the information so you really want to feel comfortable in what you need to write. If you are at a company and are not sure exactly what one of the products of another department are, go ask them. One word of caution regarding delegation: if you have many different groups that you need information from, and you have them each write what they want on the site, if you put it up as-is you'll probably lose some of your visitors due to the different styles of writing. If you do have others writing parts of the site, take a look at it – to qualify their writing to make sure it matches the tone and style you know will be best for your target market (because of what you've learned in this book!). If you have to rewrite it a bit,

that's fine. It should be done in such a way that it seems like the information is coming from one source. Visitors aren't usually considering that many people are behind a company when they visit a site (unless of course it's a portal-type site where there are many contributors, like msnbc,com and there the different writers are noted), to them, they are visiting a single site. You should present a singular tone and flow as much as possible.

If you need to delegate, just let the folks know that you may need to change the content slightly in order to keep consistency, but you should check with them before the site is launched so that you are both certain that the content presented is what was intended.

Flow

I mentioned above the importance of a consistent flow. Along these site-wide considerations you also want to keep a flow within a page. If I suddenly jumped here to discussing statistics on Web usage, it would be confusing. Keep your eye on the flow of what you're writing.

This is where a bit of surveying can come in handy. Ask some colleagues or potential visitors if they understand the content and ask them what they understood from it. This will help you hone-in on what you're trying to communicate. Content on a website is no different than a newspaper, magazine or book - there has to be a sensible flow.

Style

If you are going to undertake the job of copywriting, you may want to check out a very powerful little book (see Chapter 10 for a full list of references). It's called The Elements of Style by William Strunk and E.B. White. It is a guide to the dos and don'ts of writing and, unless you've got a degree in literature (and even if you do) this type of information certainly can't hurt.

This book will help you trim the fat of your copy and write more powerfully. It will actually help you in any of your writing endeavors – reports for work, résumés, etc.

With this in mind however, I want to stress that you need to keep your target audience in mind while writing. If, in spite of anything you may read (in Strunk's or anyone else's texts), your target audience is used to a certain way of speech, then by all means give it to them. Rules on writing will help, but you need to know when to break them too. If it's a matter of those rules costing you your audience, then out go the rules.

Summary

Start Early on content gathering
Write less
Use the inverted pyramid method
Write content that can be scanned – and don't fear white space

Plan ahead – try not to start build before your content is done, or at least planned out well
Create a flowchart to refer to throughout the process
Think like a Copywriter
Your content must flow

Chapter 6. Design

Design

The design is the first impression your visitors will have of you and your site. The way the site looks and feels will set the tone for your visitors, and right away they will feel like they're either in the right place, or the wrong place. This look and feel is determined mainly by the initial design. Knowing what your target market wants along the information in this chapter will help you make sure they get a feeling of being in the right place.

Design is one of the most fun and demanding aspects of the whole build. As much as I like to hand code HTML - and yes, I actually do - graphic design has always been my favorite part of the process. But, tragically, I've been a much better coder than an artist, so I usually end up hiring someone else to do that magic called design.

If you are not a trained artist, and you only have a very small budget, this is where you will get the most value for your money. Hire a designer. I will cover this in depth in the "Designer Considerations" section that follows. There are lots of very talented artists that can help you. My suggestion is, as usual, go to some sites that are in your target market and find a designer who can work in that realm.

Any of the site-building programs can help you do the nuts-and-bolts of cutting up and making a design work as a website, but they certainly can't create a good design for you.

Good and Bad

There is a definite difference between a good design and a bad one. As much as Art tends to be subjective, it still needs to serve its purpose and I have many tips in here that will help you toward a good design for your site. After all, a good-looking design may be a bad design for your market. There are many ways to create a good design, and unfortunately there are more ways to create bad ones.

Knowing what your target market expects is completely necessary to a successful design. For example, many very technical end-users don't really care for all of the whistles and bells of pretty graphics. They prefer a more streamlined, HTML based web site that they can get in and get out of quickly. Speed is more important to these users than anything. Different markets have different needs and desires of what the site should be. So (once again) know your target market!

I will go into more detail in this chapter than in any other. Although this is not a graphic design book, this area of design is one which gives the beginner, or newer site creator, a bigger problem than most. Therefore, this is information which I think will help you a great deal.

Current Trend

Once again, the trend currently in web design is for a more open, uncluttered look. This has many purposes:

It's easier to look at. The eye can get easily overwhelmed.
It's easier to feature what you want – in the same way that it's easier to notice a piece of paper on a clean floor than a messy one.
Open layouts often mean fewer images, meaning a faster download.

Also another trend we've been seeing for the last couple years is to make Ads not look like the standard banner ads we got so used to ignoring at the top of websites. The old banner is still used, but it's not nearly as effective as it once was because we are so used to them and mainly tend to tune them out. If you're going to create ads for your site, do it in a way that it becomes part of the design, not so it stands out like it doesn't belong.

Designer Considerations

There are a few things you need to consider with respect to designers. If you are not doing the actual design, but someone else in your company is, or if you're unsure of their experience, give them this book and have them read this chapter. It will hopefully save them, and you, some time in redesigns or major edits.

Print Design vs. Web Design

My suggestion to you is not to hire a designer who does mostly (or only) print work. If you work at a company who only has print artists, think twice before letting them do the design. I have nothing against artists who do this type of work. I am often amazed at the brilliance of ads and design I see in magazines and on billboards. But designing for a website is a world onto itself, and the approach is entirely different than that of the printed medium. You want someone who does web work – and the more the better. I'll say it again that I have nothing against print artists, but my experience has shown me that if you want an on-line brochure type-site (and remember, you don't!), hire a print artist.

I have two examples below, the first is of a Print design approach to a Web Design and the second is a Web Designer's approach. Notice the difference. Whereas the first design is beautiful, it doesn't lead your eye to anything fast – what am I trying to get? What information am I trying to retrieve?

Figure 6.1

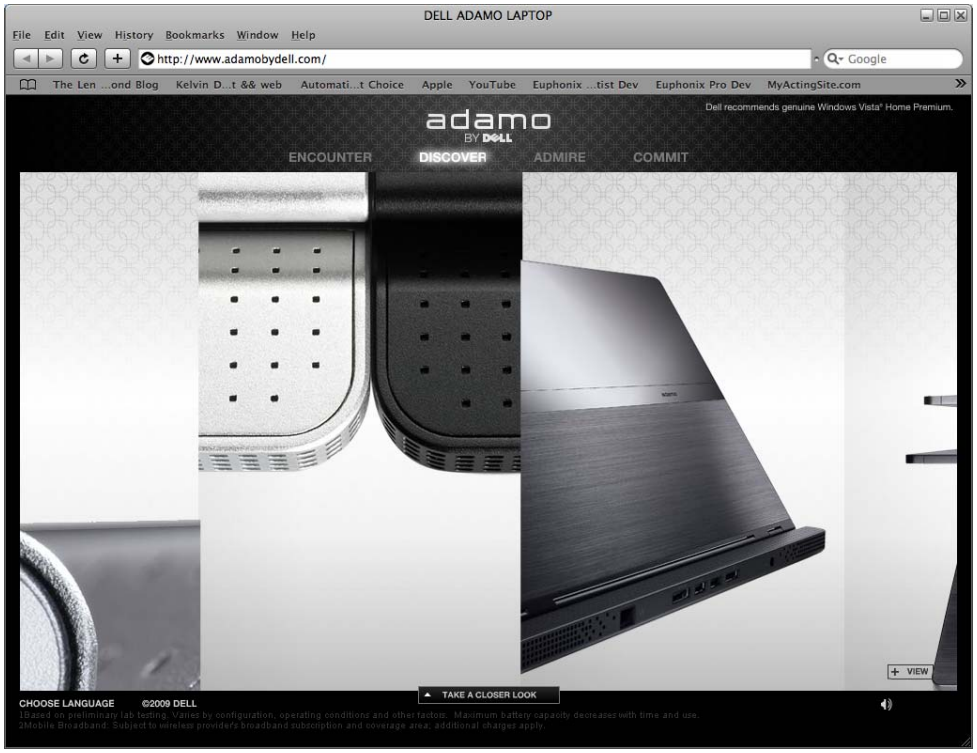


Figure 6.2

Experience Is King

We all know, the more you do something, the better you are at it. If there is a local designer that you know does lots of web work – and it's good – the difference you'd save hiring a less experienced (and less expensive) designer may not make up for the work the experienced artist will give you. There are many subtle things that an experienced web artist will do that make a big difference. Whoever it was who first said "it's the little things that really make it happen" knew a really good graphic designer.

First-time Designers

If you've never designed a site before – don't do it! Well, I don't want to scare you or beat this point into the ground, but if you are in the driver's seat and haven't done this before, I suggest trying to hire out for the design. Of course, failing that possibility, if you just keep your eye on the styles of other sites in the genre you're building, you could do a lot worse than to try and emulate the general feel.

Some things to look for:

Overall Color Scheme - are they very dark, pastel or red, white and blue?
Graphic Style – are there lots of lifestyle images (different people doing things) or more graphic design (cartoon-type people or line drawings)?
Navigation Type – Is it HTML navigation, graphic buttons or Flash?

Please don't take someone else's design! I saw a site designed for a pretty large Media company in Los Angeles a few years ago that was basically the Microsoft site – same shapes and navigation and everything - just with different colors and links. I was shocked when I saw it. That's not only bad form, I'm sure it's some sort of copyright infringement.

If you've never designed but feel you want to try anyway, go for it, be creative, enjoy it - it is fun, but be aware of the possibility you may not doing as good a job as you think and may need to have to redo it (See Chapter 8 for more on that point). Just remember that a good design is also a key factor in usability.

If you do hire a designer, make sure they can work in your target audience's site type. I'm sure every artist will say that they can, but you need to look at what they've already done. If you hire someone who has only ever done Heavy Metal band sites and you're building an on-line flower store, you might be in for a surprise when the design is delivered. This is not to say that I'm pigeon-holing anyone, especially designers, it is just that experience has shown me that different artists see different things. And that is, I believe, how it should be. Art is subjective, after all.

Let's get to some things that are less subjective.

Image Resolution and Page Weight

Here's an issue that is a real stickler. As a recent movie poster stated, size does matter. However, bigger is not better on the web - bigger almost always means slower. New graphic designers (and most print artists) usually make the mistake of graphics that are too "heavy" and if you're not aware of it, your site will be in big trouble once it hits the web. And I don't mean heavy visually, I mean heavy file size or weight-wise. Pages that load like a race horse on your own computer will react very differently when published on the web.

File Weight

Each graphic – image, photo, logo, etc. – has a file size. Just like any other file on your computer. That is its weight. The sum of all those graphics and all of the text on the page (and scripts, etc.), add up to the total page weight. This is a crucial point as far as speed is concerned. You can only fit so much information through a modem at any given point. There are websites that will give you an estimation of download time – http://www.netmechanic.com has some great tools like this, many you can try for free.

To really understand this as far as graphics are concerned, you'll need to understand a few technical points.

Pixels and Image Resolution

Computer monitors display an image as a series of dots (see Screen Resolution below). It looks smooth because there are tons of dots – millions actually - however, they can only ever show a certain number of dots per inch. These dots are called *pixels*. Each image is built with a certain amount of these pixels. That is called the images resolution. The problem with this, is that any pixels in excess of the amount that the monitor can display are ignored from viewing – but they still get loaded as they're part of the image! It has to load the whole image, no matter how much of it is actually displayed. Silly isn't it?

Screen Resolution

This concept, of how an image is displayed on a monitor, is called screen resolution (screen resolution is different than an image's own resolution, but they share the same basic principal of how many dots make up an image. We'll cover this more below). The problem of screen resolution gets even more interesting when you realize that Windows based "PC" and Apple Monitors have different resolutions. Nice, isn't it? All Apple (Mac) monitors display at 72 dots per inch, or "dpi." PC monitors display at 96 dpi. Remember, those dots are also called pixels and sometimes it's referred to as "ppi" or pixels per inch. Because of these variations in screen resolution, the standard resolution for images created for the web is 72 dpi. This is one of those "least-common-denominator" type things where if you built your graphics for a PC monitor (96 dpi), you'd be wasting all of those extra dots per inch on anyone who uses a Mac and the result would be slower load time.

This is also one reason why type looks smaller, and web images generally look a little sharper on a Mac. This screen resolution issue comes into play in a big way with what *font* (typestyle) you should use as well. We'll get deeper into typestyles a little bit later.

Further on this overall resolution issue, most print artwork is created at 300 dpi. This is image resolution I'm referring to now. Many graphics programs create graphics at a default of 300 dpi. You need to make sure that when you're creating graphics for the web, you create them at 72 dpi.

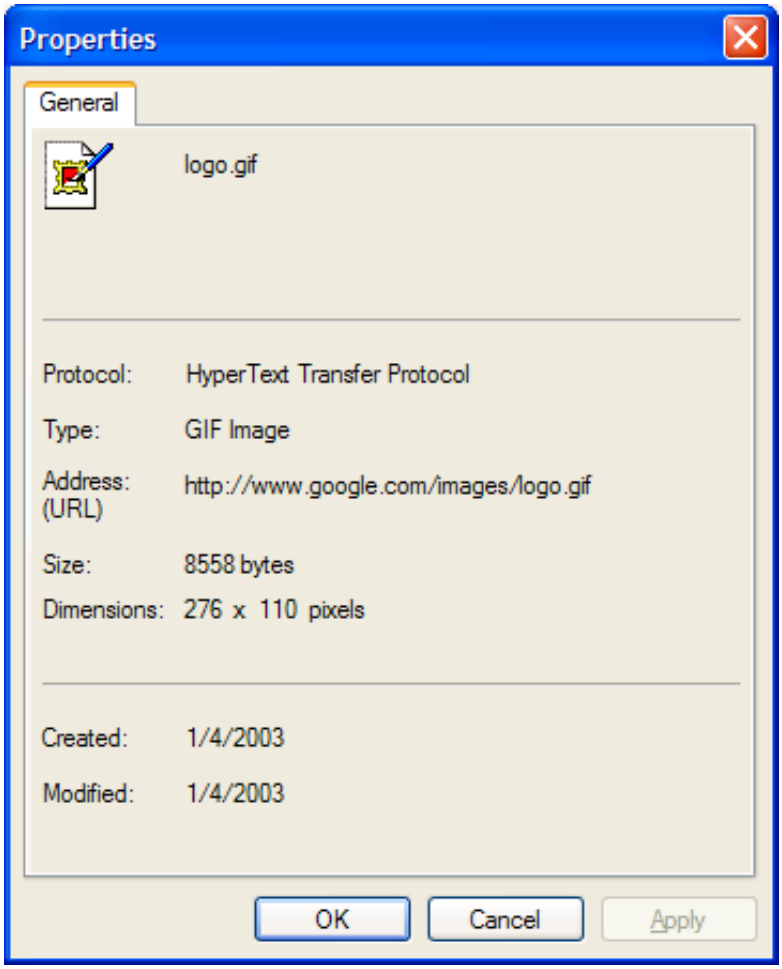
Some designers have a desire (through habit, or whatever) to create their designs at a higher resolution than 72dpi, and then have the developer reduce it when it's time to build. If they seem to be insistent in this, just tell them that their design will look worse (the lines will be less sharp, etc.) when you reduce the resolution of their artwork to 72 dpi. This usually snaps them into shape!

You may be saying to yourself: "Well, if the monitor only displays 72 or 96 dpi and the image is at 300dpi, how can I tell how it really look?" And it would actually be a good question. You wouldn't actually know until it got printed. You can however, know for sure that if it doesn't look good on your monitor, it won't look any better printed, but it's not always the same the other way around. Sometimes it looks fine on your screen but doesn't look good printed. You may have noticed that Web graphics don't look great when they're printed and that's because they are created (if done properly) at a much lower resolution than is required for good printing. There is also the issue of compression which I will go into in a little bit as well.

There are a number of ways to check on the size of an image. You should do this to some of your favorite sites just to see how they are doing. Check on some that are fast loading and some that are not. You may be surprised at what you find. You can right-click on the image on a PC (or for Macintosh, hold down the Option key and click or click and hold) and select properties. You will see a bunch of data about the image, including size and dimension.

Below is a properties list from Google's main logo, from Internet Explorer on a PC.

Figure 6.3



You will notice a bunch of things; next to "Size:" it gives you the size as the weight of the file: 8558 bytes. That's less than 9K - and that's the only real graphic they have on the whole opening page. Think they don't know the importance of speed? Anyway, you can also see here the dimensions of the file (height and width) and also when it was created and it's location on the web, even its name and file type, but most of this we don't really need here. We're most interested in Size and Dimensions.

When you design a page you need to be concerned with its overall weight. You have to think ahead to how big it will be. If you have a bunch of white space, that can be cut out completely and just use the white HTML background to save download speed (see how intertwined all these things are – we're still talking about Speed!).

There is really only so much information you can squeeze through any pipe at a time. Meaning, if you have a lot of heavy graphics, someone with a dial-up modem (yes there are still lots of folks with that) will have to wait for the page to load. If you are building an intranet (a

company-only website that is internal only) you could get away with more graphics – but why would you?

Graphic File Types

There are 3 main types of graphic files used on the web today: the ".jpg" (also seen as .jpeg), .png (also called "Pings") and the ".gif."

.JPG

A .jpg (pronounced jay-peg) is used primarily for photographs and other graphics with a great deal of detail. These can be *compressed* quite a lot and still retain a good-looking image. These tend to be the biggest files because of the detailed information.

.PNG

A .png file ("Ping") is used mostly when you want a transparent background but still retain a photographic quality image. There are 2 different kinds of .PNG files – 8 bit and 24 bit (these are compression options in programs like Photoshop) and the 24 bit is the most common. The trouble with these beautiful-looking files is that they are heavier than the others – kind of a lot heavier. So use them only when you need to have a transparent background – otherwise use a .JPG.

.GIF

A .gif (pronounced ghiff, or jiff) is used primarily for either line-art and more drawn images with less detail, or animated graphics. I'll get to the animated graphics in a bit.

As a side note there is a certain type of graphic file called a .gif that you can display as what's called an "interlaced" file. This means that the amount of the image that is already loaded will be shown – they look like someone taking a piece of paper and slowly showing you the picture from the top down. Sometimes they would show in a blurred fashion and get sharper. That way you don't really have to wait until the whole thing loads in this instance. My belief, although I wasn't there in the lab all those years ago, is that the reason this option exists at all is because people didn't understand the weight and resolution issues, and their ramifications, and needed some way to get around the "wait-until-it's-loaded-to-see-it" thing. I told you we don't like to wait. This type of .gif file isn't used that much now as generally they were used with the on-line brochure type sites, which are most often built with graphics that are much bigger than they should be.

Other Graphic file types

There are others that are used in other mediums such as .BMP, .TIF, EPS that some beginning designers use. There are generally far too heavy for Web use.

The main graphic formats are the two above, .JPG, PNG and .GIF. Stick with them and you'll be fine.

Compression

I remember the first website I built (may it rest in peace) had a HUGE graphic on the front and it took forever to download and I remember the blank feeling I had when a designer friend asked me what I used to compress it. "Compress it?" I asked. "What's that?"

I'm here to save you that embarrassment.

I'm not going to get too technical about it here, but will give you a quick run-down on what compression is, and how important it is to web graphics and the speed of a web page.

Compression is really just a process of making something smaller. When compressing any web graphics, smaller means making the weight (file size) less while retaining as much of the image quality as possible. The Dimensions remain the same, but the Size is less. However, the more you compress it, the less like the original it looks. Sometimes you can compress an image quite a bit before you notice it. You can also over-compress an image, which isn't really good either, but any good graphics program (see the Chapter on Tools) has a preview where you can see what it will look like after you compress it. The idea is to compress it as much as possible while still having the image communicate what was originally planned.

This is quite often a real issue between Web Designers and Web Developers. The Designers always want as much of the image as possible (with the least amount of compression) while the Developers want as much compression as possible to speed up the download of the page. You will have to judge for yourself where to draw the line between image purity and download speed.

The different file types compress in different ways. .JPG files compress with a percentage value, while in order to compress a .GIF, you need to lower the number of colors used to create it. In either case, try different settings (and save with different filenames) until you get the feel of how much you can push the compression of different types and still retain the integrity of the image.

HTML resized graphics

This is another mistake that many beginner designers make (mostly because the WYSIWYG programs do this so freely). The properties of an image (width, height, weight) are what they are - they're static. Unless you alter it (by compression, resizing, etc.) and resave it in the new form, it will remain what it is. It sounds obvious, right? But, you can change the height and width of an image in HTML – and this does NOT change the weight of the file. It only changes how it is displayed,

Here's an example: Take the image #1 below in *Figure 6.4*, it is – in its native form – 375 pixels in height and 500 in width. I've compressed it to 50% and saved it as a .JPG. With the compression, it is 33k in weight. This is still too big for use on most web pages.

Figure 6.4

1

2

3

Image #2 is the same image as #1, but resized with HTML to be 188 pixels in height by 250 in width. It is still 33k in weight. You may not see the code in your HTML creator, but if you were to look, all image tags should have height and width variables (they actually load faster if they do) and you can set those to whatever you want, changing the displayed size of the image. If you

changed the height and width with HTML, it will look smaller on the page – however the image will still carry the same weight.

You need to change the image in an image editor in order to change its weight. Image #3 is image #1 resized in Adobe Photoshop® to 188 pizels high and 250 pixels wide. It is 11k in weight. That weight difference can mean 5 seconds or more on' some modems!

The worst part about this double-edged sword of resizing with HTML is that the image is also pixelated. Meaning, it looks like it is made up of a bunch of blocks and the lines aren't sharp and just looks poor quality. Notice the lines on the hat in #3 and see how they are more jagged in #2. The difference is slight, but it is the little things that make all the difference between a professional site and a non-professional site.

Feel free to set the size of the image in your WYSIWYG if you need to in order to lay out your page. Just remember that after you change the display size, get the new size from the HTML code and then resize the image in an image editor. This will help out your page and your visitors.

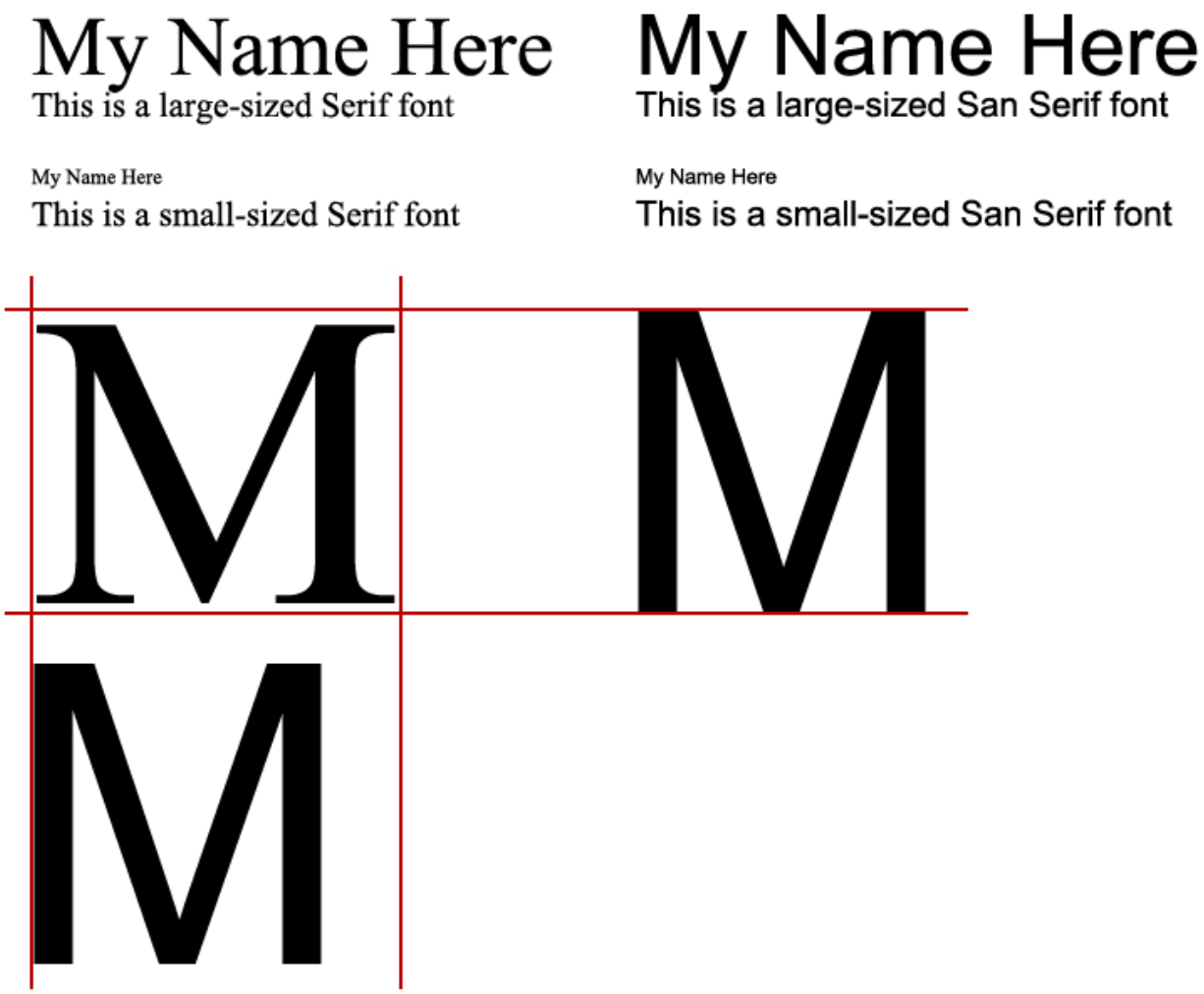
Type Styles - Fonts

As stated before, screen resolution has a lot to do with the font, or typestyle, you should select. This issue is both a usability and graphic issue. Although there are hundreds, if not thousands, of different fonts in use today, there are only two main categories of fonts used for writing – serif and san-serif. A serif is the little embellishment you see on letters. Most printed material is done with a serif font because it has been proven that the serifs help move our eyes along a printed page, making it easier to read. Times Roman is a very popular serif font, and was for some time the default font in the Netscape Navigator browser.

On the web and for a website however, things are quite different than for print. Usability studies have shown that on a computer monitor, it is actually easier to read a san-serif font (those fonts without the little hooks on the letters) than a serif font. This is partly because of the limited screen resolution of computer monitors, where the serifs can not be reproduced as sharply as they are in print. Another reason is that because of the serifs, the actual size of the character must be smaller than the same size san-serif font. You may notice that most websites use san-serif fonts. Some of the more popular san-serif fonts are Arial, Tahoma and Verdana.

Fonts are measured in point sizes. A default for most web pages is approx 11 pt (point). To better understand this concept, I have a diagram below of two letters that are the same point size. The letters are enlarged here to better display the differences.

Figure 6.5



The above fonts used are: Times New Roman for the serif font and Arial for the San-Serif font.

The allowed area is the same for both letters and phrases (the font sizes are the same). You will notice, however, that the area used for the san-serif letters is easier to read, even large and the space is more efficiently filled by the letter. Where the serif font (although the general area is the same, because the font size is the same) is not fully used and that is because of the need to allow for the serifs of other letters. So basically, the san-serif font looks bigger than the same sized serif font – because it actually is!

Style Sheets

Style Sheets are one of the greatest inventions of the Web Design industry. The advantage of using style sheets is having the flexibility to change something after the pages are built, without having to go do a lot of recoding. Special style sheet variables are added to the HTML *tags* (code) that get referred back to the style sheet. For example, let's say you have a style sheet that has a tag for "text" in it, and all of your pages where you had text contained that tag, and say you have the text set in the style sheet as a being black. So later on you wanted to change all the text to a dark blue, with the style sheet all you'd need to do is change the color once in the style sheet – basically in one place – and all of the coed on your site (if the tags are in the HTML) will automatically change. Most WYSIWYG programs have a style sheet capability.

Fun

If you want some entertainment while you learn about good web design, visit www.webpagesthatsuck.com. As tongue and cheek as they are, they are always spot-on with their evaluations and I know many design teachers who use it as a tool of examples of what not to do.

Summary

If you can hire out for one part of your site - hire a designer
Don't hire a print designer for web work
Make sure your design isn't too far from what your visitors will expect
Keep an eye on your overall image weights – it can quickly become your biggest page-loading problem
Compress all images
Don't resize your images with HTML
Use a San-Serif font

Chapter 7. Tools

Web Development/HTML Tools

There are many tools to help you builds your site and I am not getting paid by any of them, so I'll just give you a really quick run-down of my experience with the main ones. I'm sure there are more than I'll list here, but these are (in my experience) the most common and most used.

My suggestion, since you can get demonstration copies of all of these on a trial basis (usually a month), is to check out a few and see how the interface feels for you. You're going to be spending a lot of time with it and it should feel comfortable.

These prices are from early 2003, so make sure you check with your vendor before writing up a requisition for something using these prices!

Adobe Dreamweaver

This WYSIWYG program writes the most benign code of any of them. It is the one I recommend the most – only because I think it is a very powerful tool and one can do an awful lot either graphically or in the code itself. It is well-thought out and easy to use. It's beefy and can take some study to use it well, but from what I hear it is worth the investment – time and expense. It is one of the more expensive of the WYSIWIGs. The Full Version list price of Dreamweaver MX is $399.

Microsoft FrontPage

This is one of the most popular WYSIWIG programs around. An earlier version of this is what I first used to build sites. That was before I began to learn HTML. If you never have to look at the HTML code, this is a great tool. The code it writes is typical of Microsoft in that it's very proprietary, and honestly a bit messy. Their assumption I guess is that you don't ever need to look at the code with the graphic interface. Although each of the WYSIWYG programs' code are proprietary, this gets my vote as the most. It has a good interface and is very easy to use and to publish to the web. The Full Version list price for FrontPage 2002 is $169.

Adobe Flash

Flash is that very cool, animation program that you should think twice before doing your whole site in it. Although it's not an HTML tool specifically, it is used often on the web and you can build an entire site from it. The newest version is Flash MX and it is very powerful and really a lot of fun. Used sparingly it can add a lot to your site. It's not cheap and has a decent learning curve to do all of the cool things, but it's pretty impressive what you can do with it. The Full Version price for Flash MX is $499.

Graphic Tools

Adobe Photoshop

This is the industry standard for image manipulation (editing images). It is an incredibly versatile and powerful graphic tool. If you are planning on doing any serious graphic work, you need to invest in this program. The Full Version list price is $699 but they do make a version

called Photoshop Elements which is a very scaled-down version and lists for only $99. You lose many of the whistles and bells but if you have another doing the main graphic work, this will get you through the small work of resizing, and opening graphic files etc.

Adobe Illustrator

This is also an industry standard for designers. It is a wonderful graphic design tool that has more use as an initial design program than anything else. Many designers I know use Illustrator to do the initial design and then export it to Photoshop (or Fireworks) to cut it up for web use. The Full Version list price for Illustrator 10.0 is $399.

Other Tools

Apple Quicktime

This is one of those programs that is very handy for putting video clips on the web. It is well received by web builders and visitors alike, and although there are plug-ins involved, it is one of the more consistent and problem-free manners of posting video on the web. The clips created with this program stream server free – meaning you don't have to have it on a special server in order to benefit from streaming. The full Version list price for QuickTime Pro is $29.99.

Real Video

Here's another method of creating video for the web. It was once the forerunner of Video on the web. You need a server that has a special Real program running on it in order to get the full benefits of Real Video.

Chapter 8. "Wow, Look What I Did"

Risk

I took a risk at having this chapter toward the end, especially because I feel this is one of the biggest problems beginners have when building a site or creating graphics. You need to be two of the most difficult things when building a site yourself: *very* honest and *very* objective. You need to somehow step back from the fact that you were actually able to create something, especially if you're new, and honestly compare it with other sites that are out there. Be honest.

I have seen this as the most frustrating aspect of designing on your own. You put your head down and go all out creating a design that you think looks pretty good (wow, I did that?!?!) and then go right ahead and build it out without really looking up from your site building program long enough to see how it compares to the goal you had originally set. Every designer and developer I know has done it – yes, I've done it – and I'm just trying to save you some time and maybe save you from going through it as well.

It's not that you have to have an award-winning designed site, but an objective view of the way it's shaping out at various points along the way will save you a lot of time and money (and heartache too, as you may be putting a lot of yourself into your site).

These objective points should be:

After the initial content is gathered (comparing it to other site's content and flow)
After any major changes to the initial content
After initial graphic design concept
After any changes in initial design
After home page is built
After first section is built (you can do it with just one consecutive page, and may save you some time, but a full section will give you a better idea of flow)

This is where you become a professional and objectively compare your newly built site with the ones that you were looking at during the process. If you're close, and happy with the outcome – great! If not, even greater! That just means that you've been honest and can identify the difference and will be able to make your site very successful.

Change

As I said very early on, the web is always changing and your site will need to be changed often to keep the interest of your visitors and also keep your site up-to-date with current overall trends. This can be as simple as even changing out ads or other home page items. If your visitors come often (and that's the whole point, right?), they'll notice something changed and will be happy that they're visiting a site that seems to care if they get bored.

There are ways to automate changes, and you should investigate these if your staff is small (like just yourself) and time to update is at a minimum.

The main idea is to not rest on your laurels – or whatever you feel like resting on. Once you open up this cyber window to your visitors you need to keep showing them that you care about your site as much as you expect them to.

Summary

Don't be blinded by the fact that you built something on your own
Be very honest about your work
Check your progress against initial goals – often
Change your site to keep it fresh

Chapter 9 – Finish

I hope this little book has helped you gain some better understanding of what you need to do to create your own website – and I'm not trying to put my company out of business either. I think the best clients are those that are informed and can contribute to the end goal.

I wish you the best of luck and maybe Duffweb can help you achieve your goals on the web some time.

Glossary

ASP – Active Server Pages. A database-driven mark-up language that will build a web page "on-the-fly" depending upon what the visitor is requesting. These are different than HTML pages in that pages coded in ASP are built with "placeholders" and templates thus fewer actual pages are needed because these placeholders will be filled in "on-the-fly" with information being called from a database. Standard HTML pages are built complete with all of the information that will be displayed at the browser level.

Back-end – a slang term used to refer to the information processing section of the site. This is a part the user does not see. It's similar to a situation where your only interaction is with clerk, but the decisions the clerk are telling you are made in a back office you can't see. The web site can be considered the "front-end."

Branding – this is basically putting your company name in view. The Met-Life Snoopy blimp is an example of branding. It's any way you get your companies name and/or logo in front of a potential consumer.

CF – Cold Fusion. A database-driven mark-up language that will build a web page "on-the-fly" depending upon what the visitor is requesting. These are different than HTML pages in that pages coded in CF are built with "placeholders" and templates thus fewer actual pages are needed because these placeholders will be filled in "on-the-fly" with information being called from a database. Standard HTML pages are built complete with all of the information that will be displayed at the browser level.

Compressed, Compression – It really does mean to squash, or make smaller. Technically, this is a process whereby a graphic program will strip away information it considers unnecessary in order to reduce the overall weight while still retaining as much of the integrity of the image as it can. It is done through discarding numbers of colors and rendering a new version of the image at the smaller compressed size (the dimensions off the image stay the same). The more you compress an image, the smaller the weight and generally, the less it looks like the original.

Database – A collection of data categorized in such a way that it can be easily sorted and used for a variety of purposes. Its main function in web development is the storing of data in a pre-specified manner so that it can be "served" up to, and displayed by, the web page based on the request of the visitor. Generally they are used in e-commerce sites. The larger the number of items being sold and displayed (with variations, etc.), the more likely a database architecture would be employed. SQL s a type of database.

Dreamweaver – a graphic based web site design program (WYSIWYG) created by Macromedia.

E-commerce – Electronic Commerce. An e-commerce site is a website in which commerce is engaged. They will have a shopping cart to complete the transactions, and most have a database architecture because of the volume of items being sold.

Feed – companies that specialize in news and other timely information will send out this information, real-time, to various websites that subscribe to this information. It is a constant (or semi-constant) flow of information from the source to the client. This process is called a feed; sometimes it is called a serve.

Flash – a web animation program created by Macromedia

Font – A font is a type of a typestyle.

FrontPage – a graphic based web site design program (WYSIWYG) created by Microsoft.

GoLive! - a graphic based web site design program (WYSIWYG) created by Adobe.

Hand Code, or Hand Coding – typing the commands on some sort of editor, rather than having a program write the code of the page elements you paste in a WYSIWYG.

Homesite – a program originally created by Allaire and now by Macromedia. This is a more code intensive program that has many tools to hand-code your web pages in various languages. It is a standard among most HTML hand-coders because of its very helpful shortcuts and extensive reference library.

HTML – HyperText Mark-up Language. This is the language with which web pages are written. Web browsers (Internet Explorer & Netscape Navigator to name a couple) read this code and display the page based on the commands written.

Javascript – an object oriented programming language created for the web. It basically is a language you can use to give your website more life and function. This is not to be confused with Java. Java is a separate programming language. Most WYSIWYG editors have some form of Javascript capability built in.

Launch Date – The date a web site is scheduled to be taken live (made available) to the general Internet public.

Listing – a listing of sites that have applied to be included in the overall group of sites of the Listing. These differ from Search Engines in that listings do not "search" the web looking for new pages, listings have the pages submitted to them and then they will check them out and list them. Yahoo! is a Listing.

PHP – An open-source database-driven mark-up language that will build a web page "on-the-fly" depending upon what the visitor is requesting. These are different than HTML pages in that pages coded in PHP are built with "placeholders" and templates thus fewer actual pages are needed because these placeholders will be filled in "on-the-fly" with information being called from a database. Standard HTML pages are built complete with all of the information that will be displayed at the browser level. Open source refers to the fact that not one specific company owns the rights to the language. HTML is open source.

Pixel – a point of color that is displayed by a computer monitor. Also referred to as a dot.

Plug-in – this is a small program that resides on the end-users computer and allows the web browser to translate or display a certain type of information. Most web-based applications require a plug-in for them to work correctly, even though the main browsers do try to include the most popular and current ones in their releases. PDF documents (PDF stands for Adobe's Postscript Document Format, basically the standard for scanning and saving documents for the web), Flash movies, and others require a plug-in.

Screen Resolution – this is the number of pixels your monitor will display at any one time. However, there are two different meanings to this in fact. The first is the inherent hardware capability set as a standard for monitor displays (PC and Apple), and this is not variable. PC monitors display at 96 dpi and Apple monitors display at 72 dpi. The second definition is the way your monitor translates the information it is given to display. This is done through your computer display settings. If you have a higher Resolution setting, you will see more information on your monitor, but you will also notice that everything is smaller. The most common resolution settings are 800 x 600 and 1027 x 768.

Search Engine – a website with an engine that will go out onto the Internet and search for new pages that it hasn't yet found. This process is called "spidering." Search engines will then, based on varying and individual calculations, display sites that fit the criteria the visitor has entered. Google is a Search Engine.

Server – this is a computer that stores data (website pages, music, images, databases, etc.) to be viewed by someone visiting that site. Servers are generally in large, redundant type environments so that the information is always available to view.

Splash Page – a splash page is a page that comes up before the main home page.

Style Sheets – a language used with HTML code to affect the look (and also layout) of a page. The advantage of style sheets is flexibility to change after the pages are built. Special tags are added to the HTML code that get referred in the style sheet code. For example if a style sheet has all the text listed as a certain color (say black) and later on you wanted to change it all to a dark blue, all you'd need to do is change the color is the style sheet – basically in one place – and all of the coed on your site (if the tags are in the HTML) will automatically change. Most WYSIWYGs hae a style sheet capability.

Tag – a tag can be a line of code (as in <html>, which says the following code will be translated as HTML), or a variable that is placed within a line of HTML code that gives that line of code some special property.

Visio – a very in-depth flow-chart and planning program developed by Microsoft.

WYSIWYG – "What You See Is What You Get." It is an acronym given to graphic-based website design programs. Most WYSIWYG programs also allow you to program by hand-coding.