

Web Design/Development and What it all means

This article is designed as a tool or reference for anyone considering creating a website, but who is unfamiliar with the processes and technology necessary to plan, develop and market a website in order to make it a success.

Beware! The web world is full of acronyms. If you've just started your journey into learning about web development you are probably all too familiar with it. XHTML, WYSIWYG, SEO, CSS... it's all really B.S., but in order to become an educated consumer, one who is able to steer your project to success, knowing and understanding all of the terms and acronyms is vital.

This article is organized as a glossary, a glossary whose order closely matches the general progress of a web development project. Below are all of the vital items you will need to know to make your project a success, evaluate companies, and navigate the industry successfully:

Development	Technology	Marketing
Project Planning	XHTML	SEM (Search Engine Marketing)
Wireframes	CSS	SEO (Search Engine Optimization)
Screen Designs	Javascript (AJAX)	PPC (pay per click)
Prototypes	ASP (.NET)	Email Newsletter
Alpha	ROR (Ruby on Rails)	META Information
Beta	PHP	
	Hosting	
	Domain Names & DNS	
	CMS (Content Management System)	
	Shopping Cart	
	SSL	
	Payment Gateway	
	Database	
	Flash	
	XML, RSS Feeds (Podcasting)	
	Blog	

Development

Project Planning – Project planning refers to just that, the planning of your project. A project plan starts at the beginning, and typically before one line of code is written, or one design mocked up, lays out a foundation for the whole site, including timeline. Many companies use online or digital project planning software to allow them to more easily track the progress of a project as well as to allow you, a client, to see what is going on. Common software used for this purpose includes Microsoft Project & Basecamp.

Wireframes – Wireframes are very rough sketches of your website, what it will look like (in terms of what stuff – pictures, text, etc. – goes where), as well as examples of how users will interact with the elements of the site. Wireframes are sometimes not necessary, depending on the scope or scale of a project, but even the smallest project may find them helpful. A properly created wireframe speeds up the design process tremendously.

Screen Designs – Screen designs, usually created with a tool like Photoshop, are literal pictures of what your website will look like. Depending on the size or complexity of what is being proposed this may be just one screen design, or many (different layouts, pages, etc.). Screen designs allow both the designers, coders, and you the creator get a very real sense of what your site will look like.

Prototypes – Prototype refers to the second major step in your project. It will be different for different projects, but conventionally refers to one of two things, either 1) the “cutting up” of the screen design and converting into XHTML & CSS, or 2) a step in the complete process, including programming, that allows you, the site owner to begin testing. A prototype is something usually for your eyes only that allows you to begin interacting with the site in some way.

Alpha (Phase) – When everything is finished, it’s not finished. At the alpha stage prototyping is finished, preliminary bugs and tweaks have been made, but the Alpha stage is when you begin inviting close acquaintances into your project for testing. You may ask your friends, family, or loved ones, to join your temporarily exclusive site to use the tools, make suggestions, document bugs, etc. More complicated bugs are often only revealed when there is a lot of activity on your site. A bigger audience allows many more situations and circumstances to occur. The alpha phase is both to reveal these bugs as well as to improve the site’s aesthetics or functionality (based on user feedback) and prepare the site for launch.

Beta (Phase) – The beta phase is a live phase. The site is open to its natural audience and is actively being used by a live (non-testing audience). But, in this phase it is important to keep in mind that aesthetics may need to be quickly enhanced, functionality added, and perhaps even the grand scheme of the site may change.

Technology

XHTML – The acronyms begin! XHTML stands for: eXtensible Hypertext Markup Language. This is the backbone of the web. When combined with CSS it is literally what you see when you visit a website. XHTML is a language used to display and present content on the web. A website is either built directly with XHTML or using programming, is output using XHTML and then your web browser (the program

used to surf the web – Internet Explorer or Firefox) read that code and present it on your screen. XHTML in particular lends itself to being marketing friendly (search engine friendly), because of the organized less code heavy foundation of XHTML. XHTML is pretty much the ONLY thing search engines can read – keep this in mind when building or planning your site.

CSS – CSS, or Cascading Style Sheets, is a language or set of standards used to style a website, style all of that content. XHTML is for content; CSS is for the look, design, feel, style of that content. One of the greatest evolutions the web is currently going through is this separation of code and content from design. CSS allows you to set styles across the board for your entire site, for example you can say (using CSS) “I want the background of every page to be black!” Then in the future if you want to change this, you can simply update this one spot. This is light years faster than opening every page of your site and changing the background on every page.

Javascript (AJAX) – Javascript is a client side scripting language that adds more functionality to a website. If CSS controls the style elements of a website, Javascript controls some interaction with the website. Because it is a client side scripting language the actual code is run on the browsers computer, not the server the website is being served from. Javascript may be necessary in order to achieve some of the effects or experiences you or your users require. AJAX is not new, but a newly popular, extension of Javascript, where by data is either posted to or received from a server without having to reload a page.

ASP (ASP.NET) – ASP & ASP.NET are completely different, but lumped together here because they are Microsoft programming languages/frameworks. ASP.NET is the successor to ASP (active server pages). In a nutshell these are technologies programmers use to build dynamic websites. Right now there is a bit of a battle between online opensource programming/development and online Microsoft programming/development. There are pros and cons to both, but conventionally speaking Microsoft is more expensive, both to purchase/use the technology as well as to pay professionals. But, you may find some projects are faster using this technology, or will more easily integrate with existing systems.

ROR (Ruby on Rails) – Ruby on rails is an open source web development framework for ruby (another programming language) that allows programmers to create dynamic websites.

PHP – PHP is yet another programming (scripting) language. It is open-source and one of the most widely used languages of the web.

Hosting – Hosting refers to the server where your website is stored and, well... served from. You can think of it as rent (this is where your website lives). When someone wants to see your website, they type in your website’s address. Different websites require different kinds of hosting. A big part of what you need will be determined by what languages or technologies were used to develop your website. For example web sites developed using Microsoft technologies (ASP, ASP.NET, etc.) will invariably need a Windows based hosting environment (a server running Microsoft software), whereas for a site built with PHP it might be best to run it on a Linux server. Server costs vary greatly depending on all of these variables. Some websites may be fine sitting on a shared hosting environment (where space and resources are shared, sometimes among hundreds of other websites), where as some may require many

dedicated computers in order to handle traffic and advanced functionality. For that reason hosting can range from a few dollars a month to many thousands of dollars.

Domain Names & DNS – Websites actually aren't exactly where you think they are. The true address of your website is actually an IP address. IP stands for Internet Protocol. It is a number that you may be familiar with: 192.168.0.1 (this is the location of many routers on a local network). Unfortunately, humans aren't very good at remembering numbers like this, so instead we use Domain Names. Domain names (the actual name of your website – example.com – for example) are then pointed at, or forwarded to, the IP address to allow the website to appear. DNS and Domain Names play a key role in routing information around the web, particularly your own personal web traffic and email.

CMS – CMS, or content management systems, are programs or applications that have been developed (see the above 3 programming languages/frameworks mentioned), that allow end users to quickly update and manipulate a site. Conventionally, you will need to know programming or XHTML & CSS in order to add a page to your site, or add content and format. But, a content management system allows you to quickly add pages, add text, format pictures, etc. without having to learn any pesky languages. And, even for those who already know and have learned these things, content management systems can greatly speed up the process of adding content to a website.

Shopping Cart – A shopping cart can be different things depending on who you talk to, but at its core it is any program that allows you to sell goods, services, or information online. A user sees or selects inventory, makes a purchase, and has that inventory delivered – either physically or digitally. There are many monthly services available with canned shopping carts that allow you to get your items or services up quickly and begin selling to the Internet's vast audience, you can simply create a PayPal account and add simple buttons on your site that will allow transactions to occur between your audience and yourself, or you can create a completely custom, completely yours shopping cart.

SSL (Secure Socket Layer) - Secure Socket Layer is an encryption technology that encrypts vital or highly sensitive data as it is being stored or passed from one computer to another. This is a vital part of any shopping experience online, it ensures the sensitivity of this data. If you are using a service to host your website or allow transactions, make sure SSL's are in place. If you will be hosting and serving your own shopping cart, this is a vital part as well (you will have to purchase and maintain an SSL – usually \$100/year).

Payment Gateway – This is the company you will use to transact business on your website, it literally handles the hand off of money between your bank and your customers' bank (or credit cards).

Database – A database is really a glorified spreadsheet. It is the place on the server where information on users, files, text, is stored, retrieved, and updated.

Flash – Flash is a technology owned by Adobe that allows for very nice motion graphics and the transmission of sound. It is very good for transmitting or allowing your users to view or display this kind of information. Flash sites can be very interactive and appealing. Beware though, search engines cannot read the content within a flash website. Because of the nature of search engines, and the nature of web

users in general, Flash websites are not readily marketable (from a search engine optimization perspective).

XML, RSS Feeds (Podcasting) –XML stands for eXtended Markup Language. RSS stands for Really Simple Syndication. Both of these technologies or acronyms are essentially one and the same. They are a method for outputting information in an easily readable format (readable by computer programs). For example a website or blog may output an RSS feed at an address. A user can then pick up that address using an outside program and display the content as he or she desires, wherever he or she desires. Podcasting is simply an extension where by audio files are attached to this file. So, by having a program constantly looking at this address, users are instantly notified (and can download) whenever a new file or “podcast” is available.

Blog – a blog or web log is simply an online journal. But, don’t let the name, or your preexisting emotions about blogs fool you, a blog is not only about opinions. Yes, blogs have gained widespread notoriety, particularly in the political or entertainment fields where they have been used to promote agendas or push opinions, but at their core they are simply posts (articles) displayed in reverse date order (the newest on top). Blogs are one of the most simple and powerful ways you can market your website. [For more information on blogs check out “link to blog article.”](#)

Marketing

SEM (Search Engine Marketing) – SEM or search engine marketing is a blanket acronym or name for the marketing of anything using search engines. This is a nutshell – everything and way you can market yourself, your business, your website... online, through search engines.

SEO (Search Engine Optimization) – Right now, when you do a search you will see two things, organic results (those items typically on the left hand side) and paid results (typically on the right and slightly smaller). The organic results are those results that the search engines think you are looking for. Search engines have been scanning websites, storing the information, and when you do a search they look at that stored information and reveal to you the items they think you are looking for. Search engine optimization refers to the methods, technologies, and strategies you can employ in order to let the search engines know that when users are looking for “XYZ”, my site should appear. To briefly explain there are a few basic things that affect search engine optimization, the most important 3 things include, the content of your site (how relevant is it to what you want to rank for, and how often do you update/post?), the amount of links in to your site (how many sites across the web found your website so valuable and informative they just HAVE to link to you?), and finally, the coding of your website (does it use XHTML or another technology search engines can readily read?).

PPC (Pay Per Click) – The left side of search engine results contain organic results (those results the search engines think you are looking for) whereas the right hand side contains paid results. In this case an advertiser has placed an ad and said to the search engines “when a user searches for XYZ” I want my ad to appear. This is pay per click marketing, called such because advertisers are only assessed a charge when users literally click on the advertisers’ ads. Pay per click is one of the most powerful and immediate ways to market your business. Because of modern technology it allows you the ability to

laser target your audience and your ads only appear when they are searching for you, when they are in an emotional buying state.

Email Newsletter – Email newsletters are usually recurring newsletters put out by companies or organizations to inform those on their mailing lists of updates, news, events, or to inform. Email newsletters can be as simple as a mass email, for which you paste a number of addresses in the “to” field and you copy and paste the information you need to distribute or they can be as complicated as custom-branded, automatically generated based on different criteria.

META Information – Finally an aspect of marketing a site that always gets attention is your site’s and pages’ META information. META information is additional code you place at the top of your site to communicate to search engines exactly what the particular page they are on has, or is related to. This is accomplished primarily through the description and keyword tags. Although META information is not as important as it once was, Google does admit that the description tag in particular is important as it is the text that is used in this tag that will display on the list of results Google displays to your end users.

Whew... that was a lot, but it was just the icing on the cake. But, it should be a good start to educating you and preparing you for a successful shopping or website development experience.