THE WEB DEVELOPER'S DICTIONARY

This guide includes definitions of some of the most commonly used web development terms.

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ASP.NET

ASP.NET is a server-side web application framework that is designed for web development. It was developed by Microsoft to allow programmers to build dynamic websites, web applications and web services. ASP.NET pages have a file extension of .aspx. These files typically contain HTML markup, as well as markup defining server-side web controls and user controls. This type of programming language is most commonly hosted on a Windows server.

Backend

This is the portion of the site that you access with your content management system – and other parts of your site that are not accessible with your CMS. A backend developer maps all of the content in your database to the page templates created by your frontend developer. Backend developers configure content management systems, develop complex web tools, link sites with legacy systems, and much more.

Cache

Web cache is a mechanism for the temporary storage (or caching) of web documents to reduce bandwidth usage and server load. It lets you set aside a section of your computer's hard disk to store representations that you've seen. As you jump from web page to web page, caching those pages in memory lets you quickly go back to a page without having to download it from the web again.

If you examine the privacy preferences or history section of any modern web browser (like Safari, Firefox or Chrome), you'll notice settings for clearing your cache, cookies or history. When updates are made to your site, always clear your browser's cache, so you can see the changes. You might not see the changes otherwise, because you're looking at an old, cached version of your site.

When in doubt, clear your cache! It's one of those fallback tricks, like restarting your computer, which will resolve your issue more often than not!

Content Management System

A content management system (CMS) is a software system that provides website administration tools so users with little knowledge of web programming languages or markup languages can create and manage website content with relative ease. Examples of different types of CMS systems are ExpressionEngine, Wordpress, Joomla, Concrete5, and Drupal.

Different Strengths
Most web developers (and many web development companies) excel at either frontend *or* backend. Be sure to understand the strengths of your developer(s) as they relate to your project.

Don't get mad... clear your cache!
If you don't see changes that your developer claims to have made, clear your browser cache before you get too irritated!

You might just be looking at an old version of your site.

CSS3

The newest major addition to CSS (cascading style sheets). CSS is a style sheet language that developers use to establish visual and formatting patterns in a website. CSS3 allows developers to work with individual modules of CSS so we can make changes more efficiently.

Domain Name Registrar

This is an organization or commercial entity that manages the reservation of Internet domain names. An end user selects a registrar (think GoDaddy or Network Solutions) to provide the registration service, and that registrar becomes the "designated registrar" for the domain name chosen by the user.

Only the designated registrar may modify or delete information about domain names in a central registry database. It is not unusual for an end user to switch registrars, invoking a domain transfer process between the registrars involved.

When a registrar registers a .com domain name for an end user, it must pay a maximum annual fee of US $7.85 to VeriSign, the registry operator for .com, and a US $0.18 annual administration fee to ICANN. The maximum period of registration for a domain name is 10 years.

> **Maintain Control**
> Ideally your organization (not your web developer or marketing company) will own its domains*. They are valuable assets and your team should be in control of them.
>
> *and hosting!

Domain Name System

A domain name system (DNS) is an Internet service that translates domain names into IP addresses. Because domain names are alphabetic, they're easier to remember. The Internet, however, is really based on IP addresses. This means that every time you use a domain name, a DNS service must translate the name into the corresponding IP address.

The DNS system is, in fact, its own network. If one DNS server doesn't know how to translate a particular domain name, it asks another one, and so on, until the correct IP address is returned.

If you are building a new website or switching a domain, plan in advance to adjust your time-to-live (TTL) settings. The default for many companies is 12 hours for a change to go live. You may be able to lower this time to as little as 5 minutes, which will make your go live process smoother. Ideally, these changes should be made a couple of weeks in advance of your go live date. Read "Propagation Delay" to learn more.

Frontend

This is the portion of your website that people see. The frontend of your site requires HTML programming and will usually include CSS to create the look you want and a responsive layout. A frontend developer is the person who builds these interfaces.

File Transfer Protocol

This is the protocol for exchanging files over the Internet. File transfer protocol (FTP) is most commonly used to download a file from a server using the Internet or to upload a file to a server.

HTML5

This is the newest major revision of the standard HTML (hypertext markup language) code used for structuring and presenting content on the web. HTML is what every web page is based on.

JavaScript

JavaScript is a programming language used to make web pages interactive. It runs on your computer and doesn't require constant downloads. JavaScript support is built right into all the major web browsers, including Internet Explorer, Firefox, Chrome, and Safari.

Since the demise of Flash, JavaScript has become the go-to language to create many types of animation on the web today. Lightbox popup effects, slideshows, and photo galleries are all typically run on JavaScript. A bonus is that it works on mobile phones and tablet devices, so web developers can create a seamless experience across all platforms.

Persistent Elements

Persistent elements are items that will appear in the header and footer of every page of your website site. These are the most important elements on the page, including the navigation. Most of the time, the action you're hoping site visitors will take (your primary conversion) should be a persistent element.

PHP

PHP is a popular server-side scripting language that is designed for web development. PHP is now installed on more than 244 million websites and 2.1 million web servers. A PHP page is, essentially, a file with the extension .php that contains a combination of HTML tags and scripts that run on a web server. This type of programming language is most commonly hosted by a Linux server.

Friendly Feud
Programmers often fall into a .php or .aspx camp. Both languages can build great web tools. Think of them as hammers. Both can nail a nail, but the .aspx hammer usually costs more money!

Propagation Delay

When your website's address is entered into a browser, the computer requests the IP address of the server housing your site from your Internet service provider's (ISP) DNS records. If the site is not listed in the records, it queries registrars to find out who the DNS start of authority (SOA) is for your website. If you're using your registrar's name server as your SOA, it looks up the "A" record for your domain and returns the IP address of the server listed.

To speed the loading of websites, each ISP caches a copy of DNS records for a period of time, sometimes up to 48 hours. This means that they make their own copy of the registrar's master DNS records and read from them locally instead of making a direct request to the domain registrar every time a request for your site is made. This speeds up web surfing quite a bit.

The downside to caching the master DNS records is that each company or ISP only updates their records every few days, and any changes you make to your DNS records are not reflected between those updates. The slow updating of the cached records is known as the propagation delay because

your website's DNS information is being propagated across all DNS servers on the web. Once completed, everyone can visit your website.

> **Hurry Up and Wait**
> "Propagation delay" means that when you go live with a new website or make a change to a domain name, it can take 24-48 hours for everyone in the world to see that new site. You may see a site on your phone before you see it on your desktop computer – or your coworker may see it at their desk and you might not until hours later.

Responsive Design

A website created with responsive programming adapts and optimizes according the size of a user's screen – from desktop to tablet to mobile device. The layout of the site is elastic – it stretches and enlarges to look great on large screens, and shrinks and shuffles to stack into a single column for small screens. With a single website, you can offer an optimal website browsing experience to every user. Responsive is superfriendly, and it's the closest thing we have to future-proofing websites. Building a traditional, fixed-width website is obsolete.

Servers + Hosting

To have a website, you need an address (URL/domain name) and a place for that site to live – the server. The server that your site is on is called the "host." Many sites are hosted by national companies (MediaTemple, GoDaddy, Rackspace); some companies host their sites on their own servers, sometimes even servers in house.

Depending on your technical requirements, your site may live on a shared server with other sites. In this scenario, the hosting company is responsible for maintaining the server and will determine what sites will be on the same machine. If your site needs greater security, you have a lot of traffic or data, or you have multiple websites, you may need a dedicated server. A dedicated server means that only your files will be on the machine.

> **Don't Assume**
> Web development and server maintenance are very different. Don't assume that your web developer is an expert on servers. If you have your own server or specific server requirements, you may need a server admin to participate in portions of your project.

Dedicated hosting is more expensive than shared hosting. Depending on your hosting provider, it may also require your organization to be responsible for backing up your files and (possibly) keeping the server software current.

To keep your life simple, maintain control of your company's hosting rather than hosting it on a server owned by a marketing company or your web developer. It may take a little time to set everything up, but it will make moving your sites easier in the long run.

Sitemap

The pages of your site should be outlined in a sitemap at the beginning of the web development process. Ensure all the pages are listed and organized the way you want them to be on the final site. This is the guide a web developer follows when creating your site structure.

Secure Sockets Layer

Secure Sockets layer (SSL) is a security technology that allows an encrypted connection between you and a server. An SSL certificate contains the data your server will use for the encryption.

Typically, when you're sending data from one machine to another, it's sent as plain text. If your site sends vulnerable data (such as passwords or credit card numbers) without an SSL, that data could be intercepted by attackers. With SSL in place, the transmitted data is encrypted.

You can tell when a site is protected with an SSL by the green lock symbol next to the URL in your browser. The URL will also have an "S" (which stands for secure) after HTTP. If your website has a secure certificate, you'll likely need dedicated hosting.

Learn more about the world of web – in a language you speak – on the Papercut Interactive blog.