

Web Standards – An Introduction

What are Web Standards?

In all industries, standards, regulations and compliance exist in order to ensure that consumers can buy products which they know are safe and of a particular quality. The World Wide Web Consortium (W3C) recognised the need for such regulation within the World Wide Web and, over time, has created what are now known as Web Standards. Web Standards are simply a set of rules and guidelines for those who design and develop websites and use specific technologies that can be accessed by a wider variety of devices than the web technologies previously in place. These include devices such as normal web browsers, screen readers, handheld pda's, and mobile phones. As Web Standards are not device-specific, they will invariably be accessible from any future devices that come onto the market.

Web Standards are the leading web technology, offering significant benefits over other existing technologies and will become the norm for the industry over the next few years. The commercial benefits will certainly focus businesses on using this technology, but the changes to The Disability Discrimination Act (DDA) means that websites that do not use Web Standards are not easily accessible by users with disabilities and may be subject to legal action for non-compliance. The RNIB have already sued several websites and forced them to use Web Standards in order to comply with the Act.

The key differentiator between websites that are designed using Web Standards and those that are not is their structure, as standard compliant websites separate style from content

Style is the overall look and feel of the website and includes colours, fonts, layouts and certain graphics that are used across the whole website, such as logos and icons. The style of the website is contained in what are known as Cascading Style Sheets, CSS or Style Sheets.

Content is the text and associated graphics, such as photos and illustrations, as well as the overall structure of the site. The structure includes the navigation, the use of titling and headers in a similar way as one would construct a word document. The content of the website is contained in the website's code which is a technology called XHTML.

In non-Web Standard technologies, the style and content are both contained within the HTML, which means that if any style changes are required across the website, such as colour or font, the web developer needs to alter the HTML of the entire website in every place that code for the specific style occurs (which may be hundreds or even thousands of changes, depending on the size of the website). With the use of CSS, one change to the colour or font within the CSS will instantaneously make the necessary changes across the website.

A single website can have several different Style Sheets, which can be read by different devices. When connecting to the website, the device automatically knows which Style Sheet to access and will display the site as is appropriate to the device. Style Sheets can also be used to create printer friendly formats within the website.

Creating websites in this way considerably reduces production time, as developers have to use less code in the structure of the website

In order for a website to be deemed Standards-compliant, a website must be built in accordance with the Web Standards specifications and guidelines as published by the W3C. To find out if a website is Standards-compliant, you can use the Validator on the W3C website.

What is XHTML?

XHTML is an acronym for "eXtensible HyperText Markup Language", a reformulation of HTML 4.0 (the standard publishing language of the World Wide Web) as an XML 1.0 application. XHTML provides the framework for future extensions of HTML and aims to replace HTML in the future.

Why not continue to use HTML?

Originally designed for the exchange of data and documents between scientists HTML now resides in the very different environment of the demanding hi-tech Internet. Since its inception it has been hacked and stretched into an unrecognisable language, and the resulting sloppy markup practices (sometimes referred to as tag soup) makes it difficult and, in some instances, impossible for some user agents (e.g. browsers, spiders, etc) to make sense of the web.

XHTML Today

The requirement for a more strict version of HTML was due, in part, to the sloppy markup practices mentioned above and also by the ever increasing demand for the delivery of content from the internet to many "new" devices/platforms such as PDA's, Mobile Phones, hand-helds, media centres and even gaming devices, as-well as traditional computers. XHTML fulfills these requirements, offering more enhanced accessibility whilst delivering clean, well formed and W3C standards compliant mark-up that promises long-term durability (more commonly called "forward compatibility") with user agents.

What is CSS?

Cascading Style Sheets (CSS) is a simple styling language which allows developer to link style to HTML/XHTML elements. Designed to separate style from content, CSS is used to control colours, typography, and the size and placement of elements and images.

How does it work?

CSS works like a template. By defining the style and layout in an external style sheet you are able to control all elements that use that style throughout an entire site's web pages. As this drastically reduces the amount of code on every page, it consequently significantly speeds up the development time of any project. Separating style from content also increases the speed and download time of a web page (as the CSS is only downloaded once), makes a website more manageable as changes can be made "site-wide" very quickly and enhances accessibility by allowing a wide variety of user agents access to the content of a site even if they cannot render the style sheet or are designed not to do so, such as screen readers.

What are the benefits of using Web Standards?

The benefits of web standards affect everybody - the website developer, the websites users and the website owner. For the developer, project development and production is easier. For the user, the user experience is greatly enhanced and the potential for the website to be seen by the largest possible audience is vastly improved. For the owner, the benefits are the most extensive:

- Simplified development and maintenance means quicker production time
- Dramatically lower costs of Bandwidth and Hosting
- Tremendous search engine optimisation and ranking potential
- Future-proof
- Provides print friendly versions for all pages
- Improves the User Experience - Pages load quicker and are more responsive, which means that users do not get annoyed waiting for your site to download and go to a competitor's website to find what they are looking for
- Increased accessibility for users with disabilities - Content is accessible to a wider range of devices (screen readers, browsers, text based browsers, hand-helds, search robots, printers, fridges etc)
- The site is not designed for use by web browsers only. It is stable across a wider variety of devices, such as Screen Readers, Mobile Phones and PDA's
- Any knowledgeable developer can understand and alter code, therefore less dependency on a single developer
- The ability to make rapid, site-wide changes for styling and layout

Links

[W3C - Web Content Accessibility Guidelines](#)

[W3C - Homepage](#)

[The Web Standards Project - Homepage](#)

**This article was written by Sandi Wassmer of London based digital agency, Copious
www.copious.co.uk.**

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