# Introduction to Web Design & HTML

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- Tim Berners-Lee, at CERN, invents the Web with HTML as its publishing language;
- He aimed to enable researchers from remote sites across the world to organize and pool together information;
- He wanted cross-references from one research paper to another. He thought this could be done by using some form of hypertext, some way of linking documents together by using buttons on the screen.

- It was quickly realized by those outside of scientific documentation that HTML was relatively easy to learn, was self contained and lent itself to a number of other applications;
- With the evolution of the World Wide Web, HTML began to proliferate and quickly spilled over into the mainstream;
- TBL codes a prototype Web browser on the NeXT computer.

#### 1991-1995:

- Soon, companies began creating browsers and as they gained popularity it gave rise to competition;
- In 1994, Microsoft decide to get in on the browser market launching 'Internet Explorer' the following year on Windows 95.



- By this stage, another company, Netscape, had developed their own browser 'Netscape Navigator' and it was quickly growing in popularity;
- Now there was competition in the market and both companies wanted their browser to be more cutting-edge and more popular than their competitors;
- The HTML standard did not develop as fast however.

- This meant that company created new features in their browsers which did not appear in HTML specifications, called 'extensions';
- Thus began the so-called 'browser wars';
- Browser makers began inventing proprietary HTML elements that only worked with their browsers. MARQUEE (IE) and BLINK (Netscape) were two examples of this.

- A side effect of all this competition was that HTML became fragmented and web authors soon found that their web pages looked fine in one browser but not in another;
- It became increasingly difficult and time consuming to create a web page that would display uniformly across a number of different browsers;
- Only 15 years later is this beginning to improve!

#### Late 1990s:

- Meanwhile, an organization known as the World Wide Web Consortium (W3C) was working steadily along in the background to standardize HTML;
- Slowly new versions of the HTML spec were published seeing the birth of HTML 2.0 in September 1995, HTML 3.2 in January 1997 and HTML 4.01 in December 1999.

- By the turn of the millennium, Internet Explorer had eclipsed Netscape Navigator as the browser to use while surfing the net;
- This was largely due to the fact that the IE came bundled with all Windows operating systems;
- Again this dominance remained for at least 10 years.

#### Early 2000s:

- By now, the HTML spec had incorporated new elements and styling information that allow designers to make their pages look more 'pretty';
- However, many of the original developers of the HTML spec felt that it was drifting too far from it's original roots of document publishing;
- In short, document structure should be provided by HTML but styling information should be detached.

#### Early 2000s:

- Cascading Style Sheets (CSS) are born to solve this problem;
- However, companies were slow to integrate CSS into their browsers. There primary concern was market share (and thus profit) and implementing a new standard seemed like too much hard work.

#### Early 2000s:

- By 2002, Netscape had been blown out of the water by IE;
- IE had won 95% of the market share. It no longer needed to compete;
- IE6 released in 2001 for Windows ME and XP was the last new IE browser for 5 years;
- But a new company (or foundation actually) was on the block: Mozilla.

#### Mid 2000s:

- They began developing their own browser, Firefox. As a not-for-profit foundation, they were more interested in push web standards than IE;
- Firefox quickly grew in popularity. Microsoft began to realize that standards were actually important and their focus should be more on obeying them rather than ignoring them.

#### Late 2000s – Current Time:

- In 2008, the second browser wars began when Google entered the market. Their open-source browser, Chrome, met web standards from version 1;
- It's aim was to create a simple, yet rich, web experience by following and developing pro-actively web standards;
- This pushed the development of HTML5 and CSS3, the most modern and rich web standards we have.

# Web Design in 2013

We are now at a stage where four browsers have large market shares:

Internet Explorer	Firefox	Chrome	Safari	Opera	Others
22%	20%	33%	15%	2%	9%

June 2013, W3Counter data

# Web Design in 2013

#### Current Browsers:

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Internet	Mozilla	Google	Opera	Safari
Explorer	Firefox	Chrome	12.5	6
9/10	22	28		
Windows	Windows	Windows	Windows	Windows
Mac	Mac	Mac	Mac	Mac
Linux	Linux	Linux	Linux	Linux
Mobile	Mobile	Mobile	Mobile	Mobile

All have good support for the latest web design standards, HTML5 and CSS3. Their support can be checked and compared using the Acid3 test and html5test.

# The Process of Web Design

The usually process for building a website is:

- Create basic HTML structure;
- Add CSS and Javascript code to add style and interactivity;
- Save these files locally and test locally;
- Upload to web server using FTP client;
- Check the web site online.

Software such as Adobe Dreamweaver bundles all this functionality together. However, it is perfectly possible to use a simple text editor to create the code and an FTP client to upload it to the server.

#### The Alternatives to Dreamweaver

On a Windows computer, we can use Notepad to build websites. However, Notepad is a <u>very</u> basic program and it can make coding painful! A good alternative is the open-source code editor Notepad++.

This has the benefit of syntax highlighting and a tabbed interface so we can edit more than one document (i.e. HTML file and CSS file) at the same time.