Cascading Style Sheets, Level 1
W3C Recommendation 17 Dec 1996, revised 11 Jan 1999

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**Introduction**

Standards are all around us; we find them in everything that we use. The countertop that you prepare your food on is a standard height; the power cord that you plug your computer in with is a standard size and shape. Without the world of standards we would find ourselves at best, mixed up in the world around us. This paper will describe standards, as they are concerned with the World Wide Web. More specifically the way we format information to be displayed for the web, using Cascading Style Sheets.

**Why have Standards?**

Web standards are made to ensure that all web browsers are able to display information in the same way. This makes certain complete usability through the wide variety of web users. When web developers keep these standards in mind it simplifies and lowers the cost of web production. Not to mention, it will deliver web sites that are accessible to all kinds of Internet devices as well as reach more people. As companies and developers use these web standards to bring new information digitally we can be ensured that this information will be available while web browsers evolve and grow and many new devices especially handheld ones come into the market. Among the many groups and other standards bodies, one is the most popular, the World Wide Web Consortium (W3C). This group consists of more than four hundred member organizations from more than forty countries, including AT&T, Google, Microsoft, and the Mozilla Foundation. This all sounds great so why is there groups like the World Wide Web Consortium? As the web continues to grow, the way we display information has evolved, many of the leading browser makers have failed to comply with the way we
display information. This is even seen with some of the members of the W3C. The Cascading Style Sheet Level 1 specification was completed in 1996 and yet Microsoft’s Internet Explorer 3 was released later that year featuring limited support for CSS. In fact, it was more than three years before any web browser achieved almost (>99%) full compliance to the standard. That was Microsoft’s Internet Explorer 5.0 for the Macintosh platform. Currently, it is generally understood that Microsoft’s IE has the worst support for Cascading Style Sheets among all modern web browsers, including Mozilla, Opera, and Safari. But in their defense there is no browser that has fully implemented the Cascading Style Sheet level 2 standard, as of July 2006.

**Why CSS as a Web Standard?**

Cascading Style Sheets are a simple style sheet mechanism that enables developers, authors, as well as readers to attach a personal style to a web document. This style sheet enables a Hypertext Markup Language or HTML documents to be altered (layout, colors, text, spacing) to fit the needs of the user or developer. Even more important then making the web documents look good, these pages are able to be changed to help those with a human or technological handicap. The Cascading Style Sheet language is human readable and writable which makes it extremely easy to use and

```css
/* CSS Document */

.header {
    background-color: #CCCCCC;
    font-family: Verdana, Arial, Helvetica, sans-serif;
    font-size: large;
    color: #000000;
    text-align: right;
    padding-right: 10px;
}

.left {
    width: 18%;
    font-family: Verdana, Arial, Helvetica, sans-serif;
}
```
should be supported by all major browsers in order to let the vastly different web users access the information important to them.

**The Authors**

There are two authors that undertook the Level 1 specification of Cascading Style Sheets. First was Hakon Wium Lie, a major player in the idea of style sheets to format the web. He is a graduate of the MIT Media Lab. It is this lab that he credits the concept of Cascading in CSS. He states that even though the Media Lab at MIT did not invent the web, a man named Tim Berners-Lee invented it; the media lab is responsible for pioneering many of the applications that were later built on the web. In 1994 Lie proposed the idea of Cascading Style Sheets, he felt that the way would be able to format information could be improved and Cascading Style Sheets is the way to do it. Hakon Wium Lie is currently employed by Opera Software to make sure that there is more than one browser on the web. He also is based at INIRA, which stands for in English “The French National Institute for Research in Computer Science and Control”, site in Southern France, which is one of the hosts of the World Wide Web Consortium, along with MIT. He is a strong advocate against the Microsoft monopoly and pollution on the web.

The second author of the Cascading Style Sheet Level 1 specification is Bert Bos. Bert wrote his thesis on Graphic User Interfaces while studying mathematics in Groningen. He has worked on an Internet browser and surrounding infrastructure for the Faculty of Arts in Groningen. He is currently working for the World Wide Web Consortium on style sheets. Bert co-authored a book with Hakon Wium Lie called Cascading Style Sheets – Designing for the Web.
Status of CSS Level 1

From the original publication of the standard on the World Wide Web Consortium in December of 1996, the Cascading Style Sheet Level 1 recommendation has been reviewed by the W3C members and has been approved. It is now considered a stable document and may be used as a reference or cited as a normative reference from another document. The CSS Level 1 document has not been replaced by or replaced any other standard. Instead it has been expanded upon with the CSS Level 2.1 and 3 recommendations. For instance the CSS Level 2 recommendation builds upon the Level 1 recommendation with very few exceptions. All valid CSS1 style sheets are also valid in CSS2. Cascading Style Sheet Level 2 supports media-specific style sheets so that authors may adapt the appearance of their documents to visual browsers, aural devices, printers, Braille devices, and handheld devices. This specification also supports content positioning, downloadable fonts, table layout, features for internationalization, automatic counters and numbering, and some properties related to user interface.

Conforming to the CSS1 specification requires very little. The User Agent, a web browser or web client that uses it to display documents has to attempt to fetch all referenced style sheets and parse them according to the recommendation. The browsers also need to sort the declarations according to the cascading order. Finally, it must implement the CSS1 functionality within the constraints of the presentation medium. Examples of these constraints are limited resources, for example fonts and colors, and limited resolution so margins may not be accurate. The user agents may also offer readers different choices on presentation, for example, to those with visual impairments. The Level 1 recommendation also suggests but does not require the web browsers to
allow the reader to specify their own personal style sheet, but be able to turn them on or off.

It is hard to say whether or not the Cascading Style Sheet recommendation is working. If developers and users write their CSS to the Level 1 specification at least, it will work without a hitch in modern popular browsers. The Level 2 support is still varied depending on browsers. Just a few months ago in November of 2006 Microsoft released Internet Explorer 7 with support for CSS2, but it took many years to get the browser there considering the recommendation was published in May of 1998. The only objections that one could find on the web to Cascading Style Sheets is not against the standard itself but against many popular browsers lack of support to the language. CSS is so powerful and so easy to use that all major and non-major web browsers should support it.

**Conclusion**

As you can see from this one example of a web standard that the World Wide Web Consortium has the best interests of the users at heart. Without standards the web would be unusable. Users would need many different browsers to look at the sites they commonly visit. With these standards there is hope that all information on the web will easily accessible to those who use it even with human or technological handicaps. The Cascading Style Sheet Level 1 recommendation is just one example how the W3C is making the World Wide Web a better and more accessible information resource.
Works Cited


B. Bos, “Home Page of Bert Bos” http://www.w3.org/People/Bos/


H. Lie and B. Bos, “Cascading Style Sheets, level 1” (17 Dec 1996) http://www.w3.org/TR/1999/REC-CSS1-19990111


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Def. - something established by authority, custom, or general consent as a model or example

Web Standards are commonly set by the W3C or World Wide Web Consortium
CSS as a Standard?

- Cascading Style Sheets enable developers, authors, as well as readers to attach a personal style to a web document.
- This style sheet enables a Hypertext Markup Language or HTML document to be altered (layout, colors, text, spacing) to fit the needs of the user or developer.
- Most important this makes the web documents customizable to help those with a human or technological handicaps.
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  - Proposed the idea of Cascading Style Sheets in 1994
  - This was inspired by his work done at the MIT Media Lab
  - He felt that the way we format information could be improved and Cascading Style Sheets is the way to do it
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• Bert Bos
  – worked on an Internet browser and surrounding infrastructure for the Faculty of Arts in Groningen
  – co-authored a book with Hakon Wium Lie called Cascading Style Sheets – Designing for the Web
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End.