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## WEB FONT USER GUIDE

Version 2.0

# WEBFONT USER GUIDE

**A guide to web fonts and best  
practices for implementation.**



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# What are web fonts?

Fontsmith now offers fonts designed specifically for use on the web.

For years web designers had two choices when it came to type on the web:

- Use one of the few “web safe” default fonts preinstalled on operating systems.
- Substitute text with images or flash.

Developments in web standards that implement the @font-face CSS declaration and new web font file formats make it possible to render HTML text in Fontsmith typefaces adding a new rich layer of content to the web design process.

For example, an organization whose identity uses FS Albert can now deliver the fonts directly to the web, using true dynamic HTML text.



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# Why use web fonts?

## Dynamic & Streamlined Production

HTML text is far more flexible and easier to update than any image.

Using web fonts gives you type that is both customized and dynamic.

## Searchable = Improved Site Performance

Search engines don't like images nearly as much as text.

Now all the branded typography on a page can be found and indexed.

## Editable & Selectable

HTML text can be resized, copied, and edited by website visitors, you can create stylized interfaces, forms, and applications without relying on Flash or other hacks.

## Browser Delivery

Fontsmith web fonts are delivered in the WOFF, EOT and SVG file formats, these formats are supported by the most commonly used browsers.



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# Fontdeck vs Self-Hosted?

The exclusive library of Fontsmith typefaces is available to use on the web. Our fonts can be licensed via our webfont hosting partner Fontdeck or directly from Fontsmith for self-hosting on your or your clients web servers.

### Fontdeck Hosting Service

- Fontdeck host the web font files and are implemented by using code linking to Fontdeck's web font servers.
- A subscription model. You are charged on the number of pageviews per year.
- Fontdeck keeps track of the pageviews per year your site receives.

### Fontsmith Self-Hosting License

- You are given the WOFF, EOT and SVG font files to self-host on your site's web servers.
- You are charged a one-time fee based on the number of pageviews per month.
- You keep track of the pageviews per month your site receives.
- You can extend your license to support more pageviews if required.

If you would like to obtain a quotation or discuss our self hosting licenses, please e-mail us at [info@fontsmith.com](mailto:info@fontsmith.com)



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# Browser Support

Fontsmith supply three web font formats for self-hosting – WOFF, EOT and SVG. The majority of web browsers support WOFF yet different versions of each browser can support different formats. Below is a breif overview.

**Internet Explorer:** Supports EOT files from Version 4.0 | WOFF files from Version 9.0

**Firefox:** Supports WOFF files from Version 3.6

**Chrome:** Supports WOFF files from Version 6.0 | SVG files from Version 4.0

**Safari:** Supports WOFF files from Version 5.0.6 | SVG files from Version 3.2

**Opera:** Supports WOFF files from Version 11.10 | SVG files from Version 9.0

**iOS Safari:** Supports WOFF files from Version 5.0 | SVG files from Version 3.2

**Andriod Browser:** SVG files from Version 3.0

**Blackberry Browser:** Supports WOFF & SVG files from Version 7.0

**For more detailed information visit:**

<http://caniuse.com/woff>

<http://caniuse.com/eot>

<http://caniuse.com/svg-fonts>



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# Using web fonts with Cascading Style Sheets (CSS)

- 1) Upload the appropriate web font file formats to your web server.
- 2) Copy the code snippet example below into your CSS to address your webfonts. Replace the example font file URL with the appropriate path to the files on your server.

```
@font-face {  
    font-family: 'SampleName';  
    src: url('FSAlbertWeb-Regular.eot'); /* IE9 */  
    src:    url('FSAlbertWeb-Regular.eot?#iefix') format('embedded-opentype'), /* IE6-IE8 */  
    url('FSAlbertWeb-Regular.woff') format('woff'), /* Modern Browsers */  
    url('FSAlbertWeb-Regular.svg#svgFontName') format('svg'); /* Legacy iOS */  
    font-weight: normal;  
    font-style: normal;  
}
```

The value of the 'font-family' property ('**SampleName**' in this example) is only used internally in your style definitions, you could set it to any name you like. Make sure it's shorter than 32 characters though, or Internet Explorer will not display your fonts. When the @font-face rule for EOT precedes the rule for WOFF fonts, older Internet Explorer versions will use the EOT fonts and Internet Explorer 9 will use the WOFF fonts.

The '**svgFontName**' is the SVG id. It is usually the font files name without the file extension (FSAlbertWeb-Regular, in this example). You can check it by opening the SVG font file in any text editor. Search for a line similar to this at the beginning of the SVG font file.



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# Using web fonts with Cascading Style Sheets (CSS)

You can then reference your font family in CSS font stacks by the name you gave it as you would any other (system) font. For example:

```
body {  
  font-family: SampleName, Arial, sans-serif;  
  line-height: 1.4em;  
}
```

You always better set the line-height CSS property, otherwise the baseline positions and line spacing will be set by and differ between browsers.



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# Using web fonts with Cascading Style Sheets (CSS)

## Building Style-linked Groups of Fonts

Style-linked fonts are being used in all HTML elements that usually display variants of their default fonts. e.g. *em* (emphasis: italic by default) and **strong** (strong emphasis: bold by default). Use the `font-weight` and `font-style` properties inside your `@font-face` rules to define groups of style-linked fonts under a common family name —

```
@font-face {  
    font-family: FSLolaWeb;  
    src: url ("/fonts/fs_lola_web-regular.woff") format("woff");  
}  
  
@font-face {  
    font-family: FSLolaWeb;  
    src: url ("/fonts/fs_lola_web-bold.woff") format("woff");  
    font-weight: bold;  
}  
  
@font-face {  
    font-family: FSLolaWeb;  
    src: url ("/fonts/fs_lola_web-bold_italic.woff") format("woff");  
    font-weight: bold;  
    font-style: italic;  
}
```





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# Using web fonts with Cascading Style Sheets (CSS)

You don't have to stick to the usual Regular + Bold + Italic + BoldItalic combination; you can build any groups you want. The example below makes a group that links the Light to the Heavy weight of our FS Me typeface:

```
@font-face {  
    font-family: FSMWeb;  
    src: url("/fonts/fs_me_web-light.woff") format("woff");  
}  
  
@font-face {  
    font-family: FSMWeb;  
    src: url("/fonts/fs_me_web-heavy.woff") format("woff");  
    font-weight: bold;  
}  
  
@font-face {  
    font-family: FSMWeb;  
    src: url("/fonts/fs_me_web-heavy_italic.woff") format("woff");  
    font-weight: bold;  
    font-style: italic;  
}
```

Please note that Internet Explorer ignores CSS style-linking for EOT fonts and uses synthetic styles instead, so these style-linking definitions are only useful for WOFF web fonts.

### A good reference:

<https://tinyurl.com/q6n63rn>



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# Kerning and Ligatures via CSS

You can use the non-standard CSS selector `text-rendering` to control the usage of kerning and ligatures in Firefox (version 3+). It can take these four values:

- **auto**—The browser will make educated guesses about when to optimize for speed, legibility, and geometric precision when displaying text. Firefox currently uses **optimizeLegibility** if the font size is 20 pixels or larger, and **optimizeSpeed** for smaller fonts.
- **optimizeSpeed**—Rendering speed takes precedence over legibility and geometric precision. Kerning and standard ligatures are disabled.
- **optimizeLegibility**—Legibility takes precedence over rendering speed. Kerning and standard ligatures are enabled.
- **geometricPrecision**—Prefers geometric precision to rendering speed and legibility. Currently results are identical to **optimizeLegibility** in this setting. On Mac OS X and Windows, Firefox ignores these settings and always uses **optimizeLegibility**. On Mac OS X and Windows, Opera ignores these settings and always render the font without kerning, as does Internet Explorer on Windows.

Support for ligatures varies between browser (see page 19).



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# Tracking and leading via CSS

You can use the CSS properties to control the tracking (space between letters) and line-heights (space between lines) using CSS properties.

## Adjusting tracking

Using the letter-spacing CSS selector you can increase/decrease the space between all letters.

```
.loose { letter-spacing:0.1px; }  
.tight { letter-spacing:-0.01em; }
```

Please note that only Firefox supports this selector fully as of date of writing. Other browsers will round up or down the letter-spacing value to whole pixels or the tenth of em.

## Adjusting leading

Using the line-height CSS selector you can increase/decrease the space between the lines.

```
.loose { line-height:140%; }  
.tight { line-height:0.8em; }
```

100% line height equals 1em. As previously mentioned, it is a good practice to define the line-height as different browsers use different default values, which may lead to an inconsistent display of the web site's design.

## A good reference

<https://tinyurl.com/kmtrs5f>



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# Securing/hiding web fonts

Fontsmith actively encourages the protection of font software. Here are a few methods that can be implemented to support our endeavour by hosting web fonts in a more secure way —

- You can use Base64 encoding to send your .woff or .svg files to the browser. This makes the .CSS files bigger but there will be less HTML requests. Base64 encoded fonts are difficult to encode back to working desktop fonts. Any decoded fonts will not embed or print in any application. Unfortunately, there is no way to encode .eot files.
- In order to prevent hot linking of font files (or any other web asset) you can set up a .htaccess file on your server. This will allow only the selected urls to access your files. Although it won't prevent downloading the fonts if they navigate to the folder directly. Your IT server provider will be able to help you set an .htaccess file.



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# Operating systems and rendering engines

Different browsers on different operating systems use different rendering techniques to display the same content either using the same or different font files. This has an effect on the text —small or big.

### Rendering techniques used by OSs and browsers

- **greyscale** (certain browsers on MacOS, iOS, fonts look nice)
- **Core Text** (certain browsers on MacOS, iOS, sub-pixel antialiasing, fonts look nice)
- **DirectWrite** (Windows 7, Windows Vista, sub-pixel antialiasing, fonts look nice)
- **GDI+ w/ Cleartype** (Windows 7, Windows Vista, and Windows XP, sub-pixel antialiasing)
- **GDI+ w/ Standard** (Windows 7, Windows Vista, and Windows XP, grayscale antialiasing)
- **GDI+ w/o antialiasing** (Windows 7, Windows Vista, and Windows XP, no antialiasing)

**Note 1.** ‘ClearType’ is enabled in Windows 7 and Windows Vista. ‘Standard’ is enabled in Windows XP by default. When ‘Standard’ is enabled in Windows XP, smaller texts looks a bit fuzzy whilst bigger sizes looks smooth and clear. ‘ClearType’ makes small text look sharp but there are hard horizontal edges which can look unpleasant in bigger sizes. Unfortunately, this setting is out of the font designer’s reach as it can only be set within the browser.

**Note 2.** MacOS X and iOS use their own rendering method. Even when the font has been hinted this information within the font is ignored.

**Note 3.** Users can overwrite all these settings in all OS to a certain degree.



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# Font rendering on Windows®—ClearType

Fontsmith web fonts are optimized for screen display with ClearType ® font smoothing turned on. ClearType is enabled by default in Windows Vista ®, Internet Explorer 7, Firefox 4 and newer versions.

### How to turn ClearType on and off:

- 1) Click **Start**
- 2) select **Control Panel**
- 3) select **Appearance and Themes**
- 4) then click **Display**
- 5) In the **Appearance** tab click **Effects**.
- 6) Click to select the “**Use the following method to smooth edges of screen fonts**” check box, then select **ClearType** in the list box.
- 7) Click **OK** in the two open dialog windows to apply the changes.

### For further information on ClearType see:

<http://support.microsoft.com/kb/306527>



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# Font rendering on Windows® — Small Text

Users often find that text rendered on a Mac looks quite different on a Windows PC. This difference in appearance is caused by the different software rendering engines used across different computer environments. The issue is particularly prominent when text is used in smaller sizes and it is broadly advised by many type foundries and leading web developers alike that live dynamic type should be limited to medium to large sizes because of these fluxuations and differences in web font renderings.

**The Fontsmith web font files provided with our web license have been thoroughly tested across many browsers and platforms in order to ensure the best possible rendering results for across all supporting browsers.**



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# Web font rendering, examples on Windows

Rendering samples showing the same font (FS Emeric Regular) in the same size (16px) in different browsers with different rendering methods. The differences between the results of renderings may get extreme in certain cases (counters closing in etc.)

In IE12, rendering with ClearType DirectWrite on Windows 8

Regular

In Chrome, rendering with ClearType on Windows 8

Regular

In Chrome, rendering with greyscale on Windows XP

Regular





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# Adjusting font rendering on Mac OS X

A quick overview of how to turn OpenType features on and off in browsers (supported only by browser versions listed on p19)

Place this piece of code into your CSS file. It shows all the options, some of which need to be deleted with regards to your preferences but do not worry, your developer will know how to do this:

```
body{  
    /* Can be placed into any CSS element like 'div', 'p' or so, not just in 'body' */  
    /* This is how you tweak rendering in browsers with support */  
    -webkit-font-smoothing: antialiased;  
    /* Slightly lighter letters; for webkit-base browsers like Safari and Chrome  
    (effect on Mac only) */  
    -webkit-font-smoothing: subpixel-antialiased;  
    /* Slightly bolder letters; for webkit-base browsers like Safari and Chrome  
    (effect on Mac only) */  
    -moz-osx-font-smoothing: grayscale;  
    /* Slightly lighter letters; for Firefox (effect on Mac only) */  
    -moz-osx-font-smoothing: auto;  
    /* Slightly bolder letters; for Firefox (effect on Mac only) */
```

These settings will affect text-rendering in only the latest Safari, Chrome and Firefox browsers on Mac OS X.



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# Web font rendering, examples on MacOS X

Rendering samples showing the same font (FS Emeric Regular) in the same size (16px) in different browsers with different rendering methods.

In Chrome (and Safari), rendering mode set to ‘antialiased’ (greyscale) on Mac OS X

Regular

In Chrome (and Safari), rendering mode set to ‘subpixel-antialiased’ on Mac OS X

Regular

In Firefox, rendering mode set to ‘greyscale’ on Mac OS X

Regular

In Firefox, rendering mode set to ‘auto’ (subpixel-antialiased) on Mac OS X

Regular



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# Using OpenType features

A quick overview of how to turn OpenType features on and off in browsers.

Place this piece of code into your CSS file.

```
body{  
  -moz-font-feature-settings:"liga", "dlig", "kern", "onum";  
  -moz-font-feature-settings:"liga=1, dlig=1, kern=1, onum=1";  
  -ms-font-feature-settings:"liga", "dlig", "kern", "onum";  
  -o-font-feature-settings:"liga", "dlig", "kern", "onum";  
  -webkit-font-feature-settings:"liga", "dlig", "kern", "onum";  
  font-feature-settings:"liga", "dlig", "kern", "onum";  
}
```

These features are not supported in all browsers.

Here is a list of browsers where OpenType features will work:

- Internet Explorer 10+ (not in IE mobile yet)
- Firefox 4+ (syntax change in FF 14, 25+ for Android)
- Chrome (15/16+ Win, 22+ Mac, 31+ Android)
- Safari: 6.1+ (7+ on iOS)
- Opera: 15+ (16+ mobile, not in Opera mini)
- Android: coming in 4.4
- Blackberry browser: 10+

**For more information please visit:**

<http://blog.webink.com/opentype-features-css>



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# Chrome Specific Hack on Windows

Older versions of Chrome for Windows may not render WOFF or TTF files with correct antialiasing which results in an unpleasant look. Since Chrome can use the SVG font file format which it renders well, we can tweak the @font-face stack like so:

```
@font-face {  
    font-family: 'FSMeWebRegular';  
    src: url('fs_me_web-regular.eot');  
    src: url('fs_me_web-regular.eot?#iefix') format('embedded-opentype'),  
    url('fs_me_web-regular.svg#FSMeWeb-Regular') format('svg')  
    url('fs_me_web-regular.woff') format('woff');  
}
```

Here we have re-arranged the code stack so that the SVG source link comes in before the WOFF file source link.

### Some Disadvantages:

- A slight increase in file size — server hit.
- A slightly slower font rendering.
- Updates to Chrome happen frequently, and it usually updates itself automatically. The latest versions (25+) have no problem with .woff rendering.
- It is advised to use this as a targeted Chrome hack eg - checking whether the browser that loads the webfonts is an older version of Chrome.



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# Troubleshooting

Things sometimes just won't work. Here are a few tips to help.  
Please ensure you are using the web font files provided by Fontsmith.

### No webfonts at all

Most certainly there is a broken or miss-spelled link in your CSS code.  
Check all the links and all the referenced files are correctly in place.

### No webfonts in iPhone or iPad

This happens if you use IIS as a webserver. IIS doesn't serve file types (MIME types) it doesn't know so you have to set the MIME type for SVG to "image/svg+xml" in the server settings.

### No webfonts in Firefox or IE

Firefox and IE (9+) intentionally blocks files from different domains (or sub-domains). You can host the fonts on your server or it is possible to add WOFF to your list of MIME types. Another reason would be that you're may be using Firefox older than version 3.5. You need to update.

### No webfonts in IE

If you use a virtual machine for rendering different browser preview (using service like Browser Stack or Sauce Labs) it may not render @font-face for IE. Try testing the fonts on a real computer.

### No WOFF loading

It could be that you are using IIS as a webserver. IIS doesn't serve file types (MIME types) it doesn't know so you have to set the MIME type for SVG to "application/x-font-woff" in the server settings.



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# Troubleshooting

## No kerning

Are you using the text-rendering non-standard CSS selector in the right place?

If so, the kerning for the letter pair may not exist. Also check whether your browser supports this feature at all, IE and Opera do not support kerning.

## Ugly letters in Chrome

Are you using the supplied Fontsmith web font files? Are you using an older version of Chrome? Update the browser or tweak the tack in `@font-face` selector as mentioned in —‘Chrome Specific Hack on Windows’.

## Ugly letters in all browsers

Make sure you are using the original web font files Fontsmith has provided for you and not a version which has been created using an online web font generator. Always use the original supplied Fontsmith webfont files, they have been tested in order to ensure the best possible rendering results for across all supporting browsers.

## Fonts files are too big

Fontsmith webfonts have been optimized in character set and size and the average .woff and .eot file size is around 65KB, these files are compressed and optimised for download. However you can still set your server to serve all the font files gzipped. Your server is usually set to do so. This won't change the .woff and .eot files sizes significantly but will affect the .svg files size considerably.



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# Any further questions?

Whilst we have endeavoured to make this guide as comprehensive as possible, you may still have a specific question regarding our web fonts. If you do, please contact us at the

### Fontsmith Support Helpdesk Online

<http://www.fontsmith.com/support/support-form.cfm>

### Telephone

+44 (0) 20 7490 9380

We will try our best to help! If you would like to obtain a quotation or discuss our self-hosting licenses, please e-mail to [info@fontsmith.com](mailto:info@fontsmith.com)

Thank you,  
Team Fontsmith.