

Facing up to Fonts

Richard Rutter

Fonts. Typefaces. The bane of the web typographer's life right?

In previous talks eschewed discussion of typeface

Not because of lack of choice but because there's more important fundamentals.

- correct glyphs, leading, margins & white space, vertical rhythm, layout, size system

“When the only font available is Times New Roman, the typographer must make the most of its virtues. The typography should be richly and superbly ordinary, so that attention is drawn to the quality of the composition, not the individual letterforms.”

Elements of Typographic Style by Robert Bringhurst

- As Bringhurst said...
- going beyond that now, because exciting things are afoot



So this talk is about fonts.
General rule is that web pages must be rendered using fonts installed on the reader's computer.
Let's look at some of these...

Times New Roman

Times New Roman is a serif typeface commissioned by the British newspaper, *The Times*, in 1931, designed by *Stanley Morison* and *Victor Lardent* at the English branch of *Monotype*. It was commissioned after Morison had written an article criticizing *The Times* for being badly printed and typographically behind the times.

Arial

Arial is a sans-serif typeface designed in 1982 by *Robin Nicholas* and *Patricia Saunders* for *Monotype Typography*. Though nearly identical to *Linotype Helvetica* in both proportion and weight, the design of Arial is in fact a variation of *Monotype Grottesque*, and was designed for IBM's *laserxerographic* printer.

Times New Roman and Arial you'll be familiar with...

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THE VENUE WILL INFORM THE DISCUSSION TOO, SEED WILL BE HELD IN THE "CATHEDRAL OF MODERNISM"

CROWN HALL *by* Mies van der Rohe

Painstakingly renovated in 2005, Crown Hall stands as one of the most important buildings of the modern age and it was also held in the highest regard by Mies himself who said it best represented his "architecture of almost nothing."

* THE DAY'S SCHEDULE *and* INVITED GUESTS *

CARLOS SEGURA is the founder of **Segura, Inc.** an internationally recognized visual communications company and the creator of **T.26** the web's original digital type foundry as well as the **5"** retail brand and the **Cartype** weblog.

JASON FRIED is the founder of **37signals**, influential creators of web-based communication and collaboration tools **Basecamp**, **Highrise**, **Backpack & Campfire** and authors of the book **Getting Real** and the popular weblog **Signal vs. Noise**.

JAKE NICKELL is the Founder and **JEFFREY KALMIKOFF** is the Creative Director of **skinnyCorp**, the force behind the unstoppable community-based tee shirt design concept **Threadless** and a steady stream of other great ideas.

Cartype weblog

Signal vs. Noise

Great Ideas

You can do beautiful things with just Times New Roman. Seed conference designed Coudal Partners.

Georgia

Georgia is a transitional serif typeface designed in 1993 by *Matthew Carter* and hinted by *Tom Rickner* for the *Microsoft Corporation*. It is designed for clarity on a computer monitor even at small sizes, partially due to a relatively large x-height. The typeface is named after a tabloid headline titled *Alien heads found in Georgia*.

Verdana

Verdana is a humanist sans-serif typeface designed by *Matthew Carter* for *Microsoft Corporation*, with hand-hinting done by *Tom Rickner*. Bearing similarities to humanist sans-serif typefaces such as *Frutiger*, Verdana was designed to be readable at small sizes on a computer screen.

Georgia and Verdana likewise.

All four are fine, well designed and built fonts.

Trebuchet

A humanist sans-serif typeface designed by *Vincent Connare* for the *Microsoft Corporation* in 1996.

Impact

A realist sans-serif typeface designed by Geoffrey Lee in 1965 and released by the Stephenson Blake foundry.

Courier New

A monospaced slab serif typeface designed by *Howard "Bud" Kettler* in 1955.

Andale Mono

A monospace sans-serif typeface designed by *Steve Matteson* for Apple and IBM.

Four more you'll be familiar with. Fairly specialist but even so, you can pretty much rely on them being installed as they are part of the core web fonts bundled with Windows and Mac OS X.

But I think I've missed one...

Comic Sans!

A casual script typeface designed by Vincent Connare and released in 1994 by the Microsoft Corporation. It is classified as a casual, non-connecting script, and was designed to imitate comic book lettering, for use in informal documents.

Everybody's favourite.
So those were the classic 'core web fonts'.

Calibri	0123abcd ^{ef} ghiJKlmnopQRStuv
Cambria	0123abcd ^{ef} ghiJKlmnopQRStu
Candara	0123abcd ^{ef} ghiJKlmnopQRStu
Constantia	0123abcd ^{ef} ghiJKlmnopQRStu
Corbel	0123abcd ^{ef} ghiJKlmnopQRStuv

But now there's more: new Microsoft Typefaces shipping with Vista.
Note the ligatures (fi) and numeral cases (lining and old-style).

Cambria

Designed by *Jelle Bosma* in 2004, with *Steve Matteson* and *Robin Nicholas*. It is a serif font with very even spacing and proportions. Diagonal and vertical hairlines and serifs are relatively strong, while horizontal serifs are small and intend to emphasize stroke endings rather than stand out themselves. The regular weight has been extended with a large set of maths and science symbols.

0123456789 abcdefghijklmnopqrstuvwxyz

0123456789 ABCDEFGHIJKLMNOPQRSTUVWXYZ

I'm particularly fond of Cambria. Lovely modern take on the so-called Egyptian typeface. Unfortunately we may get tired of it as it's now the default font in Word. For now I really like it.

Calibri	0123abcd ^{ef} ghIJKlmnopQRStuv
Cambria	0123abcd ^{ef} ghIJKlmnopQRStu
Candara	0123abcd ^{ef} ghIJKlmnopQRStu
Constantia	0123abcd ^{ef} ghIJKlmnopQRStu
Corbel	0123abcd ^{ef} ghIJKlmnopQRStuv

So let's have another look – definitely worth bearing in mind. Vista accounts for about 13%, rising about 1% each month at the moment.
Also included in the latest versions of Office on Mac and PC, so distribution will be higher.
Also distributed with Powerpoint Viewer so if you have older version of Office you can install that to get these fonts legally.

Baskerville Old Face

Bauhaus 93

Bell

Bernard Condensed

Book Antiqua

Bookman Old Style

Britannic Bold

Brush Script

Calisto

Century Gothic

Century Schoolbook

Colonna

Cooper Black

COPPERPLATE GOTHIC B

COPPERPLATE GOTHIC L

Curly

Edwardian Script

ENGRAVERS

Footlight Light

Garamond

Gill Sans

Gill Sans Ultra Bold

Gloucester Extra Condensed

Goudy Old Style

Haettenschweiler

Harrington

Imprint Shadow

Lucida Bright

Lucida Calligraphy

Lucida Fax

Lucida Sans

Lucida Sans Typewriter

Matura Script Capitals

Mistral

Modern No. 20

Monotype Corsiva

Onyx

Papyrus

Playbill

Rockwell

Rockwell Extra Bold

Tahoma

Speaking of Office. There's also these typefaces which get installed with it.

Baskerville Old Face	Bauhaus 93	Bell
Bernard Condensed	Book Antiqua	Bookman Old Style
Britannic Bold	<i>Brush Script</i>	Calisto
Century Gothic	Century Schoolbook	Colonna
Cooper Black	COPPERPLATE GOTHIC B	COPPERPLATE GOTHIC L
<i>Curly</i>	<i>Edwardian Script</i>	ENGRAVERS
Footlight Light	Garamond	Gill Sans
Gill Sans Ultra Bold	Gloucester Extra Condensed	Goudy Old Style
Haettenschweiler	Harrington	Imprint Shadow
Lucida Bright	<i>Lucida Calligraphy</i>	Lucida Fax
Lucida Sans	Lucida Sans Typewriter	Matura Script Capitals
<i>Mistral</i>	Modern No. 20	<i>Monotype Corsiva</i>
<i>Onyx</i>	Papyrus	Playbill
Rockwell	Rockwell Extra Bold	Tahoma

There's pretty decent typefaces there. Gill Sans, Garamond. Also Book Antiqua (a Palatino imitator) and Bell, a fine serif font favoured by Jan Tschichold.



icanhaz.com/cooperblack

Anyone spot this too? Cooper Black! Woefully mis- and over-used, but gorgeous none-the-less.

	Mac OS		Windows OS		Office Windows		Office Mac	Adobe Creative Suite					
	OS X Tiger	OS X Leopard	Windows XP SP2	Windows Vista	Office 2003	Office 2007	Office 2004	Acrobat 7	Illustrator CS2	InDesign CS2	CS2 extras	CS3 install	CS3 disk
Adobe Caslon Pro									X	X		X	
Adobe Garamond Pro									X	X		X	
Adobe Jenson Pro										X			
Agency FB					X	X							
Agency FB Bold					X	X							
American Typewriter	X	X											
Andale Mono	X	X	X	X		X	X						
Apple Chancery	X	X											
Arial	X	X	X	X		X	X						
Arial Black	X	X	X	X		X	X						
Arial Narrow	X	X			X	X	X						
Arial Rounded MT Bold	X	X			X	X	X						
Arial Unicode MS		X			X	X							
Arno Pro												X	
Baskerville	X	X											
Baskerville Old Face					X	X	X						
Bauhaus 93					X	X	X						
Bell Gothic Std												X	
Bell Gothic Std												X	
Bodoni 62					X	X	X						
Bodoni Old Style					X	X	X						

icanhaz.com/fontmatrix

Font matrix showing fonts on major operating systems, Office installs and Adobe CS installs.



So let's think about how we specify fonts in a web page, using CSS.


```
body {  
    font-family: verdana, arial, helvetica, sans-serif;  
}
```

We use font-family of course. We specify a comma-separated list of typefaces in order of preference.

The standard font stack the comes out of Dreamweaver and just about all HTML & CSS editors is inappropriate.

Verdana

The quick brown fox jumps over a lazy dog.

The quick brown fox jumps over a lazy dog.

Arial

Verdana appears much larger than Arial, so Arial is not a suitable back-up for Verdana. If it's not suitable, don't specify it.

```
body {  
    font-family: verdana, tahoma, sans-serif;  
}
```

Verdana

The quick brown fox jumps over a lazy dog.

Tahoma

The quick brown fox jumps over a lazy dog.

Tahoma is probably a better fall-back. Narrower but similar x-height and the letter shapes are far more alike.

```
body {  
    font-family: "Helvetica Neue", Arial, Helvetica, sans-serif;  
}
```

Helvetica Neue

The quick brown fox jumps over a lazy dog.

Arial

The quick brown fox jumps over a lazy dog.

Helvetica

The quick brown fox jumps over a lazy dog.

If you're going the Helvetica route, remember to specify Helvetica Neue first. It's installed on Mac OS X. A rubbish version of Helvetica is sometimes found on PCs so best to ensure PCs can Arial instead.

```
body {  
    font-family: "Clarendon LT Std", "Clarendon Std",  
    "Clarendon", "Bookman Old Style", Georgia, serif;  
}
```

Clarendon

The quick brown fox jumps over a lazy dog.

Bookman Old Style

The quick brown fox jumps over a lazy dog.

Georgia

The quick brown fox jumps over a lazy dog.

Let's get more adventurous. Increasingly ubiquitous is Clarendon, a nice friendly slab serif that's been around since 1845. Not that many people will have it and we need to specify a few names to cover the bases.

Then Office has Bookman Old Style installed so we can use that as it is similar in feel and x-height (although not really typographically related). Then we specify Georgia which is the closest core web font, and finally serif.

```
body {  
    font-family: "Egyptienne F LT Std", "Egyptienne F Std",  
    "Egyptienne F", Cambria, Georgia, serif;  
}
```

Egyptienne

The quick brown fox jumps over a lazy dog.

Cambria

The quick brown fox jumps over a lazy dog.

Georgia

The quick brown fox jumps over a lazy dog.

Let's get more adventurous. A favourite font of mine is Egyptienne F, designer by Adrian Frutiger. Not many people will have it installed, but some will. Cambria is a good fall back, being a similarly weighted Egyptian slab serif. Georgia follows up nicely.

```
body {  
    font-family: "Lucida Grande", "Lucida Sans Unicode",  
    "Lucida Sans", Verdana, Tahoma, sans-serif;  
}
```

Lucida Grande

The quick brown fox jumps over a lazy dog.

Lucida Sans Unicode

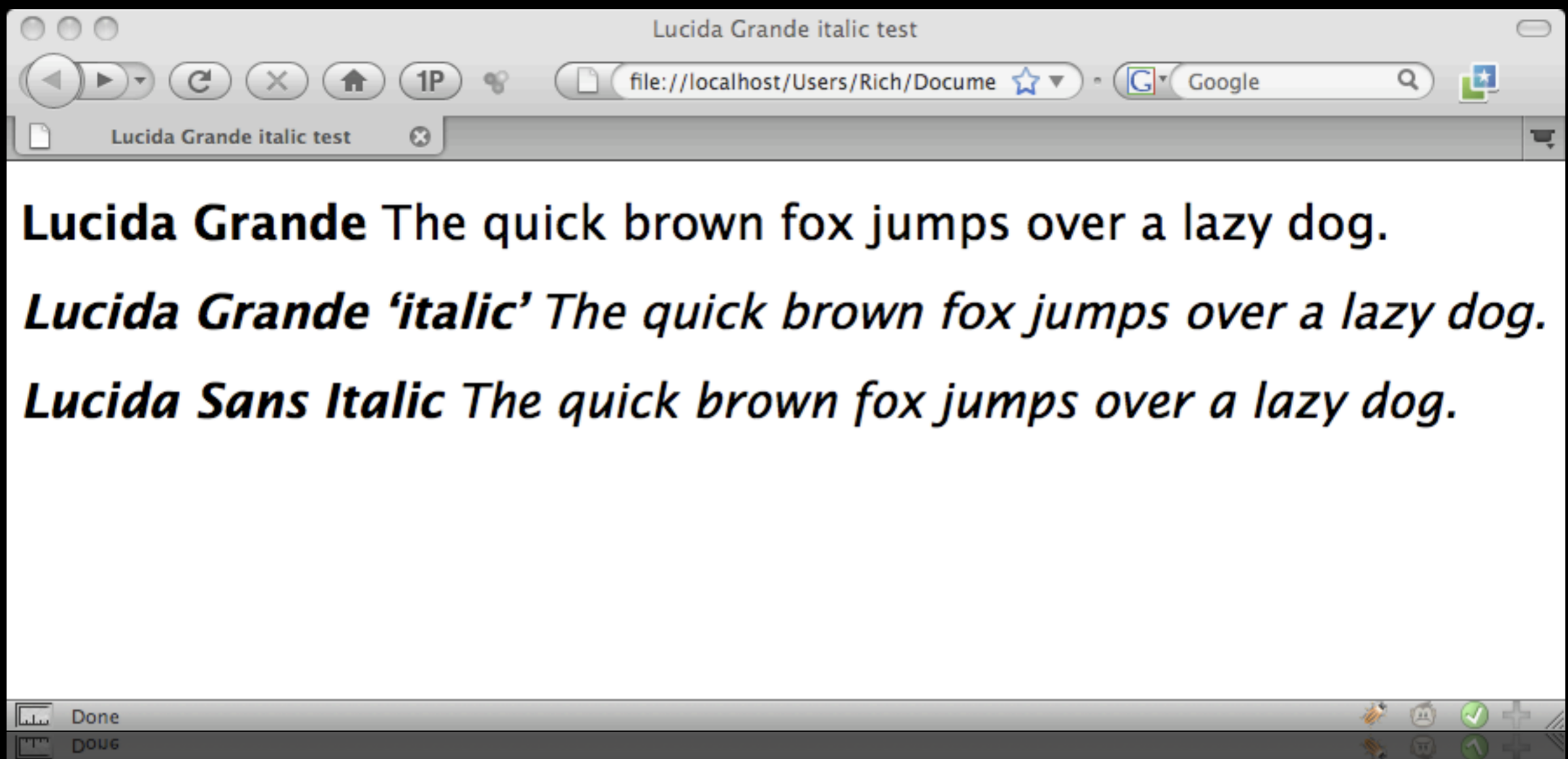
The quick brown fox jumps over a lazy dog.

Verdana

The quick brown fox jumps over a lazy dog.

Mac-based designers are quite taken with Lucida Grande. Specially designed for Apple's OS X it's a fine screen font. Can be followed up nicely with Lucida Sans Unicode which comes as standard with Windows.

However both these flavours of Lucida are missing something. An italic.



Lucida Grande is mechanically obliqued to fake an italic, whereas Lucida Sans has a properly drawn italic (note the f, the a, and the bowls of letters such as q and b).


```
em, cite, i {  
    font-family: "Lucida Sans", "Lucida Grande",  
    "Lucida Sans Unicode", Verdana, Tahoma, sans-serif;  
}
```

Lucida Sans

The quick brown fox jumps over a lazy dog.

Lucida Grande

The quick brown fox jumps over a lazy dog.

Verdana

The quick brown fox jumps over a lazy dog.

Mac-based designers are quite taken with Lucida Grande. Specially designed for Apple's OS X it's a fine screen font. Can be followed up nicely with Lucida Sans Unicode which comes as standard with Windows.

However both these flavours of Lucida are missing something. An italic.



One thing Lucida Grande does have is a bold. But life isn't just regular, bold and italic.

UltraLight	Joseph Müller Brockmann
Light	Joseph Müller Brockmann
Regular	Joseph Müller Brockmann
Bold	Joseph Müller Brockmann

Here's the standard Helvetica Neue as installed in OS X. Not just regular and bold, but also light and ultralight. How do we specify those in CSS?

```
strong {  
  font-family: "Helvetica Neue", Arial, Helvetica, sans-serif;  
  font-weight: bold;  
}
```

The bold is easy. We all know how to use font-weight like this – using the ‘bold’ keyword.

```
em {  
  font-family: "Helvetica Neue", Arial, Helvetica, sans-serif;  
  font-weight: 300;  
}
```

But to set a weight lighter than regular, or indeed heavier than bold, we need to resort to the numerical scale specified in CSS 2.1.

Values for font-weight property

Weight	Style
100	Thin
200	UltraLight/ExtraLight
300	Light
400	Book/Regular/Normal
500	Medium
600	DemiBold/SemiBold
700	Bold
800	ExtraBold
900	Heavy/Black/UltraBlack

But to set a weight lighter than regular, or indeed heavier than bold, we need to resort to the numerical scale specified in CSS 2.1.

But things are never that simple. These are only supported in Firefox 3. For everything else we need to add some fonts to our font stack.

```
em {  
  font-family:  
    "Helvetica Neue Light", "HelveticaNeue-Light",  
    "Helvetica Neue", Arial, Helvetica, sans-serif;  
  font-weight: 300;  
}
```

The screen name of the font we want to display is 'Helvetica Neue Light'. We add that for Camino, older Firefox and IE compatibility. The PostScript name of the font is 'HelveticaNeue-Light' so we add that for Safari compatibility (although webkit nightlies fix this).

Condensed	Robert Slimbach
SemiCondensed	Robert Slimbach
Regular	Robert Slimbach
SemiExtended	Robert Slimbach

I wanted to show you something similar for condensed and extended fonts. These are handled – in theory – by the font-stretch property but there is still no support for that whatsoever.



So far I've talked mostly about fonts which are likely to be installed on your readers' computers. But as you may well know, things are changing on that front.

What we have now is font embedding where browsers can automatically download a font and use it for rendering the web page.

```
@font-face {  
  font-family: "Fontin Sans";  
  src: url("http://server.com/FontinSansR.otf")  
        format("opentype");  
}
```

```
h1 { font-family: "Fontin Sans", "Trebuchet MS", sans-serif }
```

And this is how. The @font-face rule, first introduced 10(!) years ago.

@font-face describes the font with a name (same as if it was installed), src and format (EOT, opentype, truetype). Won't download the font if a font with the same name is already installed system.

```
@font-face {  
  font-family: "Fontin Sans";  
  src: url("http://server.com/FontinSansR.otf")  
    format("opentype");  
  font-style: normal;  
  font-weight: normal;  
}
```

```
@font-face {  
  font-family: "Fontin Sans";  
  src: url("http://server.com/FontinSansI.otf")  
    format("opentype");  
  font-style: italic;  
  font-weight: normal;  
}
```

Usually need to add more detail, especially if the font isn't a normal weight and style. Font-style and font-weight can be comma separated if the font file contains more than one weight or style.

Also: font-stretch and font-variant but no support as yet.

Unfortunately Safari messes up the font-weight at the moment.

```
@font-face {  
  font-family: "Fontin Sans Bold";  
  src: url("http://server.com/FontinSansB.otf")  
    format("opentype");  
  font-style: normal;  
  font-weight: bold;  
}
```

```
h1, h2, b, strong {  
  font-family: "Fontin Sans Bold", "Trebuchet MS", sans-serif;  
  font-weight: bold;  
}
```

In Safari you need to specify different family names for the different weights, which is a pain cos you need to do it each time something is bold.
Hopefully fixed in the next release, although there's no sign of it in the Webkit nightlies yet.

Browser support for Webfonts

Internet Explorer 4 Embedded OpenType (EOT)

Safari 3.1 TrueType, OpenType(TT) & OpenType(PS)

Opera (dev) TrueType, OpenType(TT) & OpenType(PS)

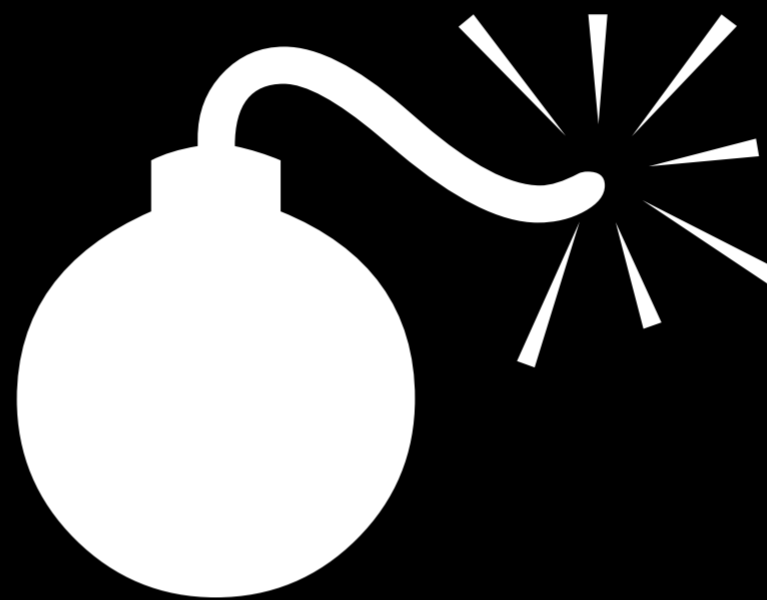
Firefox 3.1 beta TrueType, OpenType(TT) & OpenType(PS)

Actually wide support for @font-face itself. Worth noting that IE has supported it since 1998, although only in EOT.

```
@font-face {  
  font-family: "Fontin Sans";  
  src: url("http://server.com/FontinSansR.otf")  
        format("opentype"),  
        url("http://server.com/FontinSansR.eot")  
        format("embedded-opentype");  
}
```

So how does one get around supporting multiple file formats? The spec allows for it, in order of preference.

Also means you can specify alternative URLs for the same font file in order to have redundancy.



Downloadable fonts are a legal and ethical minefield.
Basically most fonts don't have a license to make them available for download (H&FJ).
Many fonts allow embedding (but this is not the same as downloading).
Font foundries & designers generally running scared that their fonts will freely distributed.
They are at least talking about it now, but not actually doing much pro-active.
Thomas Phinney, Bert Bos written report following consultation.

Andika	designed by A Olsen & V Gaultney
Anivers	designed by Jos Buivenga
Delicious	designed by Jos Buivenga
Diavlo	designed by Jos Buivenga
Fertigo	designed by Jos Buivenga
Fontin	designed by Jos Buivenga
Fontin Sans	designed by Jos Buivenga
Gentium	designed by A Olsen & V Gaultney
Graublau Web	designed by Georg Seifert
Fell English	designed by Iginio Marini
Fell French	designed by Iginio Marini
Museo	designed by Jos Buivenga
Tallys	designed by Jos Buivenga

However some designers are doing something about it. All these fonts are free and allow embedding. Some have Pro versions which cost money but come with more glyphs and weights eg. GrauBlau. There's already Web versions of Myriad for example, so maybe that's a way to go.

– There's Fontin Sans in the middle.

Worth noting that one driving reason for webfonts is non-Latin scripts which are generally poorly served.

EOT

So what's all the fuss about EOT?

Was a Microsoft proprietary format. They now want it to be an open W3 standard.

What does it do? It's a wrapper for OpenType font files. Allows subsetting, compression and tying the font to a given document or domain. All of which are **optional**. But smell a bit of DRM.

Create fonts using WEFT – Windows only at the moment. Also doesn't deal with different weights, but that could change.

In some ways no different to processing a photo for web display.

Open format means it can (and will) be reverse engineered. Font foundries – including Adobe – accept this but like the idea of a hurdle to the general user.

Microsoft are refusing to do regular OpenType like the other browser makers.

Adobe indicating they will license their fonts for EOT. Maybe a bitter pill, but pragmatically maybe better to swallow it – though it feels like bullying.

Fonts as a Web Service

This is what I think could be the future. Foundries or trusted third parties could license the webfont.

Use similar technology to Google Maps to tie typefaces to domains, so direct downloading is not possible.

Put the hurdle at the server not the file format.

Means web-wide caching could happen (like with Google's hosting of Javascript libraries and Yahoo! with CSS frameworks)

Puts control in hands of vendors.

Either way everyone needs to move fast – get something in place before Firefox 3.1 comes out.

Take Homes:

- 1 Think about typefaces **beyond the core** web fonts.
- 2 Make sure your **font stacks** make sense and are useful.
- 3 Font **embedding is here** and now.

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<http://webtypography.net/talks/head08/>

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