EAST ASIAN WEB TYPOGRAPHY

Crossing cultural boundaries for web layout inspiration
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What is typography?

“Typography is writing with prefabricated letters”

—Gerrit Noordzij
Communication
(English) 13 letters
Sagedussõnastik
(Estonian) 15 letters
Grianghrafadóireacht (Irish) 21 letters
Phoenician alphabet
Evolution of the Alphabet

Proto-Sinaitic
c. 1750 BCE

Phoenician
c. 1000 BCE

Archaic Greek
c. 750 BCE

Archaic Latin
c. 500 BCE

Roman
c. 1 CE

Modern Latin Script

By Matt Baker | UsefulCharts.com

Archaeological font by Juan Andrés Mico for Ancient Greek/Latin.
<table>
<thead>
<tr>
<th>甲骨文</th>
<th>金文</th>
<th>小篆</th>
<th>楷书</th>
<th>草书</th>
<th>行书</th>
</tr>
</thead>
<tbody>
<tr>
<td>车</td>
<td>车</td>
<td>马</td>
<td>车</td>
<td>马</td>
<td>车</td>
</tr>
</tbody>
</table>
宋体
Song Ti
仿宋体
Fang Song Ti
楷体
Kai Ti
黑体
Hei Ti
“Chinese-script projects are crazy. The scope is mind-blowing.”

—David Březina from *The long, incredibly tortuous, and fascinating process of creating a Chinese font*
Internet users: 1,276,521 (Dec 2017)
97.7% internet penetration rate

Sources: Internet World Stats
Distribution of content languages on the web

Sources: W3Techs
“...smaller languages are not being given a chance to evolve and keep up to speed in the digital age...”

—Rihards Kalnīš, The Guardian
“In order to tend to the continued development of our languages, we must continue to create technologies that provide smaller languages with the same support enjoyed by larger ones.”

—Rihards Kalniņš, The Guardian
Let's talk about CSS

CSS to do typography

CSS to do layout
Web fonts

The CSS3 Fonts specification describes the basic controls CSS provides for selecting and using fonts within documents.

What is a font?
And what are glyphs?
## Font formats for web use

<table>
<thead>
<tr>
<th>Format</th>
<th>Microsoft</th>
<th>Mozilla</th>
<th>Opera</th>
</tr>
</thead>
<tbody>
<tr>
<td>WOFF2 (Web Open Font Format 2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WOFF (Web Open Font Format)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OTF (OpenType)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TTF (TrueType)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EOT (Embedded Open Type)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SVG (Scalable Vector Graphics)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
```css
@font-face {
  font-family: 'Reform';
  src: url('reform1969-gris.woff2') format('woff2'),
       url('reform1969-gris.woff') format('woff');
}
```
Anatomy of an `@font-face` rule

```css
@font-face {
  font-family: <family-name>;
  src: [ <url> [format(<string> #)]? | <font-face-name> ] #; ]
  font-style: normal | italic | oblique ;
  font-weight: normal | bold | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 ;
  font-stretch: normal | ultra-condensed | extra-condensed | condensed | semi-condensed
  unicode-range: <urange> #;
  font-variant: normal | none | [ <common-lig-values> | <discretionary-lig-values> ]
  font-feature-settings: normal | <feature-tag-value> #;
}
```
@font-face {
  font-family: 'Infini';
  src: url('fonts/infini.woff2') format('woff2'),
       url('fonts/infini.woff') format('woff');
/* no range specified, defaults to entire range */
}

@font-face {
  font-family: 'Infini';
  src: url('fonts/linbioluminum.woff2') format('woff2'),
       url('fonts/linbioluminum.woff') format('woff');
  unicode-range: U+0400-U+04FF; /* Unicode range for Cyrillic characters */
}
Go to about:config from your address bar

Search for fonthighlighter and double-click it to change its value to true
Descriptors
describe individual font faces

Properties
requests for styling
## CSS font properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>font-size</td>
<td>Indicates the desired height of the glyphs. Takes absolute or relative values.</td>
</tr>
<tr>
<td>font-weight</td>
<td>Specifies the weight of the glyphs in the font. Can use keywords or numerical values.</td>
</tr>
<tr>
<td>font-style</td>
<td>Allows italic or oblique faces to be selected.</td>
</tr>
<tr>
<td>font-stretch</td>
<td>Selects a normal, condensed or expanded face from a font family. Range spans over 9 keywords.</td>
</tr>
<tr>
<td>font-size-adjust</td>
<td>Adjusts the font-size to preserve the x-height of the first choice font.</td>
</tr>
<tr>
<td>font-synthesis</td>
<td>Controls whether user agents are allowed to synthesize bold or oblique font faces when missing.</td>
</tr>
</tbody>
</table>
font-synthesis

Minion Pro
afwn
afwn
afwn
Minion Pro Faux Bold
afwn
afwn
afwn
Minion Pro Bold
afwn
afwn
afwn
Roboto
afwn
afwn
afwn
Roboto Faux Bold
afwn
afwn
afwn
Roboto Bold
afwn
afwn
afwn
Minion Pro
afeunyi
afeunyi
afeunyi
Minion Pro Faux Italic
afeunyi
afeunyi
afeunyi
Minion Pro Italic
afeunyi
afeunyi
afeunyi

Image credit: Piotr Grochowski
# Font feature properties

## Font-kerning properties

<table>
<thead>
<tr>
<th>font-kerning</th>
<th>AV Wa</th>
</tr>
</thead>
<tbody>
<tr>
<td>No kerning</td>
<td>AV Wa</td>
</tr>
<tr>
<td>Kerning applied</td>
<td>AV Wa</td>
</tr>
</tbody>
</table>

## Font-variant-position properties

<table>
<thead>
<tr>
<th>font-variant-position</th>
<th>C H N O P</th>
</tr>
</thead>
<tbody>
<tr>
<td>fi fi</td>
<td>C H N O P</td>
</tr>
<tr>
<td>tz tz</td>
<td>C H N O P</td>
</tr>
<tr>
<td>labor of love</td>
<td>labor of love</td>
</tr>
</tbody>
</table>

## Font-variant-numeric properties

<table>
<thead>
<tr>
<th>font-variant-numeric</th>
<th>1st 17th 2a</th>
<th>2 1/3 2 1/3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st 17th 2a</td>
<td>1st 17th 2a</td>
<td>1st 17th 2a</td>
</tr>
<tr>
<td>2 1/3 2 1/3</td>
<td>409,280 367,112</td>
<td>155,068 171,792</td>
</tr>
<tr>
<td>4000 4000</td>
<td>409,280 367,112</td>
<td>155,068 171,792</td>
</tr>
</tbody>
</table>

## Font-variant-caps properties

<table>
<thead>
<tr>
<th>font-variant-caps</th>
<th>The DOM, the HTML syntax, and the XHTML syntax cannot all represent the same content. For example, namespaces cannot be represented using the HTML syntax, but they are supported in the DOM and in the XHTML syntax.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jesuits</td>
<td>Jesuits</td>
</tr>
<tr>
<td>quick</td>
<td>quick</td>
</tr>
<tr>
<td>Quick</td>
<td>Quick</td>
</tr>
<tr>
<td>incroyable</td>
<td>incroyable</td>
</tr>
<tr>
<td>519</td>
<td>519</td>
</tr>
<tr>
<td>519</td>
<td>519</td>
</tr>
</tbody>
</table>
麹町・麹町
大学・大学
欧文フォント・欧文フォント
Drop a font!

Fonts aren't uploaded, they stay on your computer

https://wakamaifondue.com/
Variable fonts

Image credit: John Hudson
Variable Fonts Experiments

A collection of experiments with variable font effects. Warning: These are really heavy on your computer.

Special credit to Zach for the fonts: https://zach.com/fonts/
https://www.axis-praxis.org by Laurence Penney

http://play.typedetail.com by Zhang Wenting

https://v-fonts.com by Nick Sherman
Новість
Тарас Шевченко

Курупій
Новели
Нашого
часу

Льва Кобилянська
Земля

Бойківське
Будівництво
1927
The magic of Writing Modes

CSS Writing Modes Level 3 defines CSS features to support for various international writing modes, such as left-to-right (e.g. Latin or Indic), right-to-left (e.g. Hebrew or Arabic), bidirectional (e.g. mixed Latin and Arabic) and vertical (e.g. Asian scripts).
You can make your browser literally turn on its side from left-to-right.

Or make it read from right-to-left.
**writing-mode property**

<table>
<thead>
<tr>
<th>writing-mode</th>
<th>From 1987 to now</th>
</tr>
</thead>
<tbody>
<tr>
<td>horizontal-tb</td>
<td></td>
</tr>
<tr>
<td>vertical-rl</td>
<td></td>
</tr>
<tr>
<td>vertical-lr</td>
<td></td>
</tr>
<tr>
<td>sideways-rl*</td>
<td></td>
</tr>
<tr>
<td>sideways-lr*</td>
<td></td>
</tr>
</tbody>
</table>

Properties marked with * have been deferred to Writing Modes Level 4.
text-orientation property

mixed

upright

sideways
text-combine-upright property

none

all

digits <integer>*

Codepen example for text-combine-upright
古巴
Cuba

爱沙尼亚共和国
Estonia

列支敦士登
Liechtenstein
MNBI: 女子决赛
昔加末攀高峰夺冠

昔加末攀在女子决赛中表现出色，以60比51击败对手贾茜·贾姆拉，赢得了冠军。

昔加末攀在比赛中表现出色，多次得分，最终以56比43战胜对手。贾茜·贾姆拉在比赛中表现也很出色，但她未能抵挡住昔加末攀的攻势。

昔加末攀表示，她在比赛中全力以赴，没有给对手留下任何机会。贾茜·贾姆拉也对比赛结果表示了祝贺，称昔加末攀在比赛中表现出色，值得大家的掌声。

贾茜·贾姆拉表示，虽然在比赛中落败，但她在比赛中也学到了不少东西。今后她会继续努力，争取在下一次比赛中取得好成绩。
particularly my mental illness.

Artwork is an expression of my life, of her life. She has maintained that her will also fulfilling her creativity. For the rest unwavering hallucinations that would plague her made her begin experimenting the visual and , making her started painting at the age of 10. Disappearance of her interest in art nevertheless, scared by her mother’s cruelty, she was, as she has claimed, largely shielded from the horrors of World War II. She was, as she has claimed, a dysfunctional family in Nagano, Japan. Kusama was born in 1929 into a well-off but "I consider myself a heretic of the art world." People may call me otherwise. But I always defined herself in her own terms, "I am an obsessive artist", she once art, Feminist art, and Institutional Critique—Abstract Expressionism, Minimalism, Pop utilizing approaches associated with YayoI Kusama developed a distinctive style scene from the late 1970s to the early 1980s, A vital part of New York’s avant-garde art.
Logical directions

block-start

Ultimately it is the magic of shadows. Were the shadows to be banished from its corners, the alcove would in that instant revert to mere void.

inline-start

A phosphorescent jewel gives off its glow and color in the dark and loses its beauty in the light of day. Were it not for shadows, there would be no beauty.

inline-end

block-end
### CSS Logical Properties

Use start/end properties that depend on LTR or RTL writing direction instead of left/right.

<table>
<thead>
<tr>
<th>Property</th>
<th>Edge</th>
<th>Firefox</th>
<th>Chrome</th>
<th>Safari</th>
<th>iOS Safari</th>
<th>Opera Mini</th>
<th>Chrome for Android</th>
<th>Android Browser</th>
<th>Samsung Internet</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>9</td>
<td>15</td>
<td>60</td>
<td>67</td>
<td>10.1</td>
<td>10.3</td>
<td>4.4</td>
<td>4.4</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>10</td>
<td>16</td>
<td>61</td>
<td>68</td>
<td>11</td>
<td>11.2</td>
<td>4.4</td>
<td>4.4</td>
<td>6.2</td>
</tr>
<tr>
<td>3</td>
<td>11</td>
<td>17</td>
<td>62</td>
<td>69</td>
<td>11.1</td>
<td>all</td>
<td>67</td>
<td>67</td>
<td>7.2</td>
</tr>
<tr>
<td>4</td>
<td>18</td>
<td>63</td>
<td>70</td>
<td>70</td>
<td>12</td>
<td>12</td>
<td>all</td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>

Global: 4.72% | Support: 83.79% | {85.22%}

Data from caniuse.com | Enlarged from caniuse.com
多次投三分球扩大比分

今晚的三分球表现显得格外重要。比赛开始后不久，双方就展开了激烈的争夺。在第一节比赛中，双方的进攻火力都十分强劲，但领先的球队始终是三分球的得分手。

关键时刻，双方犯规频繁，比赛进入白热化阶段。在第二节比赛中，双方的三分球命中率都达到了40%以上，比赛的胜负悬念被完全保留到了第四节。

第四节比赛的最后几分钟，双方的防守强度明显提升，比分一直紧咬。关键时刻，一方的三分球命中率达到了50%，最终以8分优势取胜。
Bookshelf-style design with vertical text
Building for cross-browser compatibility

This is the third post of a multi-part series about developing the brand identity for Wismut Labs.

The previous post covered a number of design decisions made with regards to the overall style of the Wismut Labs brand. This post will focus on the actual building of the Wismut Labs website.

Vertical blog tags
responsive vertical to horizontal layout
Without roots. Everywhere.
I had wrapped the images that were supposed to do the stacking thing in a `div` that had `display: flex` applied, and this somehow messed up the rendering in Firefox while in vertical writing mode. I suspect this behaviour is related to the following bugs: Bug 1189131, Bug 1223180, Bug 1332555, Bug 1318825 and Bug 1382867.

In the meantime, I'm kinda intrigued by this effect that images, which are flex children, have in vertical writing mode on Firefox. It's like the browser just went nope 🙄 ```
Frequency of major browser releases
A long list of references

- Language Diversity Index Tracks Global Loss of Mother Tongues
- The Internet Is Killing Most Languages
- The Endangered Languages Project
- Source Han Serif / Noto Serif CJK History & Development
- Chinese Fonts & Related Issues
- Variable fonts, a new kind of font for flexible design
- Introducing OpenType Variable Fonts
- fvar — Font Variations Table
- Variable Fonts on the Web
- How to Use Variable Fonts on the Web
- Getting started with variable fonts

- Creative text effects with CSS by Mandy Michael (video)
- W3C Internationalization & Text Layout Requirements
Aitäh!

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