Chinese typography on the web

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Chen (Чэнь)
“Typography is writing with prefabricated letters”
—Gerrit Noordzij
PHOENICIAN ALPHABET
Hippopotamus
(English) 12 letters

河马
(Xe Ma)
продовольственный
(Russian) 17 letters
食品
(Щи Пин)
Grianghrafadóireachta
(Irish) 21 letters

攝影
(Ще Ин)
<table>
<thead>
<tr>
<th>ORIGINAL MEANING</th>
<th>Egyptian</th>
<th>Phoenician</th>
<th>Greek</th>
<th>Roman Capital</th>
<th>Roman Uncial</th>
<th>Roman Half Uncial</th>
<th>Miniscule</th>
<th>MODERN FORMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ox</td>
<td>🐄</td>
<td>☹</td>
<td>A</td>
<td>A</td>
<td>a</td>
<td>a</td>
<td>a</td>
<td>Aa Aa Ac Aa Aa</td>
</tr>
<tr>
<td>House</td>
<td>🏡</td>
<td>ֲ</td>
<td>B</td>
<td>B</td>
<td>b</td>
<td>b</td>
<td>b</td>
<td>Bb Bb Bb Bb</td>
</tr>
<tr>
<td>Camel</td>
<td>🐫</td>
<td>𐤀</td>
<td>G</td>
<td>G</td>
<td>g</td>
<td>g</td>
<td>g</td>
<td>Gg Gg Gg Gg Gg</td>
</tr>
<tr>
<td>Door</td>
<td>☛</td>
<td>𐤂</td>
<td>Δ</td>
<td>D</td>
<td>d</td>
<td>d</td>
<td>d</td>
<td>Dd Dd Dd Dd</td>
</tr>
<tr>
<td>Window</td>
<td>🗝️</td>
<td>𐤅</td>
<td>E</td>
<td>E</td>
<td>e</td>
<td>e</td>
<td>e</td>
<td>Ee Ee Ee Ee Ee</td>
</tr>
<tr>
<td>Water</td>
<td>🌰</td>
<td>𐤆</td>
<td>N</td>
<td>M</td>
<td>m</td>
<td>m</td>
<td>m</td>
<td>Mm Mm Mm Mm Mm</td>
</tr>
<tr>
<td>Eye</td>
<td>☪</td>
<td>¥</td>
<td>O</td>
<td>O</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>Oo Oo Oo Oo Oo</td>
</tr>
<tr>
<td>Cross</td>
<td>✠</td>
<td>✠</td>
<td>T</td>
<td>T</td>
<td>T</td>
<td>T</td>
<td>T</td>
<td>Tt Tt Tt Tt Tt</td>
</tr>
</tbody>
</table>

Illustrating the probable development of some of the letters of the alphabet.
<table>
<thead>
<tr>
<th>甲骨文</th>
<th></th>
<th></th>
<th></th>
<th>甲骨文</th>
</tr>
</thead>
<tbody>
<tr>
<td>金文</td>
<td></td>
<td></td>
<td></td>
<td>金文</td>
</tr>
<tr>
<td>小篆</td>
<td></td>
<td></td>
<td></td>
<td>小篆</td>
</tr>
<tr>
<td>隶书</td>
<td></td>
<td></td>
<td></td>
<td>隶书</td>
</tr>
<tr>
<td>楷书</td>
<td></td>
<td></td>
<td></td>
<td>楷书</td>
</tr>
<tr>
<td>草书</td>
<td></td>
<td></td>
<td></td>
<td>草书</td>
</tr>
<tr>
<td>行书</td>
<td></td>
<td></td>
<td></td>
<td>行书</td>
</tr>
</tbody>
</table>
故知知氏者莫如括，而括以亲见亲闻者所以有征。沈氏记其活字印书法曰：

“版印书籍唐人尚未盛行为之，自冯瀛王为大小版，庆历中有布衣毕昇又为活版，其字印，每字为一印，火烧令坚。先设一铁板，其上以松脂蜡和纸灰之类冒之。欲印，则以一铁范置铁板上，乃密布字印，满铁范为一板，持就火炀之，药稍熔，则以一平板按其面，则字平如砥。每一字为一印，每版十行，行十二字，换字时，但用一铁板，径长十有八分，径广一尺五寸，比之坚实，更互用之，无不立可取。一日版成，即以一板印刷，套印百千本，更互用之，则字之多寡，印之繁简，随心所欲。又不用木板，而用铁板，因板质坚，印之久，不至板印之坏。独家制此，遂以名氏。”
Printing Design and Layout

called. The difference is in the serif formation. The line cross strokes at the ends of the
up and down strokes are strong without appearing heavy. The general effect of a Jenson
typeface is that of a monochrome character, there being little contrast between the major
and the minor stroke.

From then onwards printers in Italy made increasing use of roman types, while the
few fonts of black letter imported from Germany were discarded. In France, how-
ever, and in England, the Greek design continued unchallenged for a few years.

Aldus Pius Manutius is famous as the inventor of italic type, which tradition says
was founded on the handwriting of the poet Petrarch. It is to Aldus that Venice owed
the wonderful reproduction it attained in the art of printing. While tutor to the young
prince of Capri, he had conceived the idea of setting up a press with the chief object
of issuing fine and correct editions of the classics. In spite of offers of assistance from his
patrons at Capri, he naturally turned to Venice as the ideal place for such an enterprise
and settled there in 1490. From that date he began to issue the numerous editions which
have made the Aldine Press famous in history. His first experiments were with the
Greek classics, for it was the good and solidity for Greek books which led him to devote
his life and powers to the production of these rare treasures.

It was during his familiarity with the Greek narrative that in one that inspir-
ated Aldus to produce his italic, in order to give the Latin language an informal and
compact type of a similar character. Following the custom which has survived until
this day with Greek fonts, there were no sloping capitals with the Aldine italic, the
small capitals of its roman font serving as italic capital letters.

Not all the books produced by the Aldine Press, however, were composed in these
italic types, for they were reserved for the cheaper editions, small compact volumes
which, owing to the condensed nature of the type, contained a great deal of information
and sold for the equivalent sum of two shillings in present day currency.

The most notable achievement of Aldus was his beautiful roman, which first
appeared in a little tract by the poet Pietro Bembo, entitled De Astris. This type, pro-
duced in 1496, was the first old face and was the result of extensive experiment and
the cooperation of the skilled corder, Francesco Griffo, who was also responsible for

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TO RESTORE TO BEAUTY ITS STRANGENESS

Such a decorating of perspectives, by way of China, appears at one solitary, nor in order to look elsewhere for a solution—an enterprise can never furnish anything other than a stopgap solution—but because it can provide a starting point from which to unravel the contradiction, in our days, otherwise closed in on us in like a vice. It may be impossible to continue to believe in the beautiful—the last rule to be abolished—but neither can we do without it. For if one sticks to this internal history alone, that of the beautiful brought by an after (taking) order to every
eight over it, but then they are also to drag set down in its fall, the situation thus turned out to be blocked.

And already (and) from a theoretical perspective, as Adorno said, "The beautiful cannot be defined, but

The BOOK of
Common Prayer,
And Administration of the
SACRAMENTS,
AND OTHER
RITES and CEREMONIES
OF THE
CHURCH,
According to the Use of
The CHURCH of ENGLAND:
TOGETHER WITH THE
PSALTER
OR
PSALMS of DAVID,
Pointed as they are to be sung or said in Churches.

CAMBRIDGE.
Printed by JOHN BASKERVILLE, Printer to the University
by whom they are sold, and by B. DOD. Baskettier,
in Ave-Mary Lane, London. M DCC LXII.
Price Eight Millings and Fourpence. Address.
A transliterating body will easily remind people to pay attention on the subject from the western side. Undeniably, lots of western words such as Coca-cola, Chocolate, Humor.
Web characteristics

- Later binding
- Multiple outputs
- Partial control
- Uncertain delivery

The web is a unique medium on its own.
## 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><img src="https://example.com/microsoft.png" alt="Microsoft Logo" /></td>
<td><img src="https://example.com/mozilla.png" alt="Mozilla Logo" /></td>
<td><img src="https://example.com/opera.png" alt="Opera Logo" /></td>
</tr>
<tr>
<td>WOFF (Web Open Font Format)</td>
<td><img src="https://example.com/microsoft.png" alt="Microsoft Logo" /></td>
<td><img src="https://example.com/mozilla.png" alt="Mozilla Logo" /></td>
<td><img src="https://example.com/opera.png" alt="Opera Logo" /></td>
</tr>
<tr>
<td>OTF (OpenType)</td>
<td><img src="https://example.com/microsoft.png" alt="Microsoft Logo" /></td>
<td><img src="https://example.com/adobe.png" alt="Adobe Logo" /></td>
<td><img src="https://example.com/apple.png" alt="Apple Logo" /></td>
</tr>
<tr>
<td>TTF (TrueType)</td>
<td><img src="https://example.com/microsoft.png" alt="Microsoft Logo" /></td>
<td><img src="https://example.com/apple.png" alt="Apple Logo" /></td>
<td><img src="https://example.com/apple.png" alt="Apple Logo" /></td>
</tr>
<tr>
<td>EOT (Embedded Open Type)</td>
<td><img src="https://example.com/microsoft.png" alt="Microsoft Logo" /></td>
<td><img src="https://example.com/microsoft.png" alt="Microsoft Logo" /></td>
<td></td>
</tr>
<tr>
<td>SVG (Scalable Vector Graphics)</td>
<td><img src="https://example.com/w3c-svg.png" alt="W3C SVG Logo" /></td>
<td><img src="https://example.com/svg.png" alt="SVG Logo" /></td>
<td></td>
</tr>
</tbody>
</table>
```css
@font-face {
  font-family: 'Magnetic Pro';
  src: url('..fonts/magnetic-pro-light.woff2') format('woff2'),
       url('..fonts/magnetic-pro-light.woff') format('woff');
}
```

### WOFF - Web Open Font Format

Compressed TrueType/OpenType font that contains information about the font's source.

<table>
<thead>
<tr>
<th>Browser</th>
<th>IE</th>
<th>Edge</th>
<th>Firefox</th>
<th>Chrome</th>
<th>Safari</th>
<th>Opera</th>
<th>iOS Safari</th>
<th>Opera Mini</th>
<th>Android Browser</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>13</td>
<td>51</td>
<td>56</td>
<td>9.1</td>
<td>42</td>
<td>9.3</td>
<td>4.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>14</td>
<td>52</td>
<td>57</td>
<td>10</td>
<td>43</td>
<td>10.2</td>
<td>4.44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>15</td>
<td>53</td>
<td>58</td>
<td>10.1</td>
<td>44</td>
<td>10.3</td>
<td>all</td>
<td>56</td>
<td>57</td>
</tr>
</tbody>
</table>

Data from caniuse.com | Ripped from caniuse.bitnetco.de
Picks font

Next alternative ‘font-family’

Matches criteria?

Yes

No
Declare your Latin fonts first

Font rendering for Mac and Windows is different, and sometimes the Latin characters in Chinese fonts don’t look good on Windows.

Put your font names in quotes. Just in case.
### Generic font families

Dependent on OS, HTML language, character set and browser.

<table>
<thead>
<tr>
<th>Type</th>
<th>Fonts</th>
</tr>
</thead>
<tbody>
<tr>
<td>serif</td>
<td>Times New Roman, SimSun, SongTi SC</td>
</tr>
<tr>
<td>sans-serif</td>
<td>Arial, Microsoft Yahei, PingFang SC</td>
</tr>
<tr>
<td>monospace</td>
<td>Consolas, SimSun, PingFang SC</td>
</tr>
<tr>
<td>cursive</td>
<td>Comic Sans MS, Apple Chancery, SimSun (oblique), SongTi SC (oblique)</td>
</tr>
<tr>
<td>fantasy</td>
<td>Gabriola, Impact, Papyrus, Microsoft Yahei, PingFang SC</td>
</tr>
</tbody>
</table>

Level 4 is adding `system-ui`, `emoji`, `math` and `fangsong`
# Basic font properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<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-stretch</td>
<td>Selects a normal, condensed or expanded face from a font family. Range spans over 9 keywords.</td>
</tr>
<tr>
<td>font-style</td>
<td>Allows italic or oblique faces to be selected.</td>
</tr>
<tr>
<td>font-size</td>
<td>Indicates the desired height of the glyphs. Takes absolute or relative values.</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>
Using non-system fonts

The `@font-face` rule allows us to link to fonts, either locally or external, which are fetched and activated when needed. We can use multiple `@font-face` rules to construct font families. A rule consists of the `@font-face` keyword followed by a block of font descriptors.
Anatomy of an @font-face rule

@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> |l| <discretionary-lig-values> |l| <histogram-values> ]
  font-feature-settings: normal | <feature-tag-value> #
}
@font-face {
    font-family: 'Magnetic Pro';
    src: url('magnetic-pro-light.woff2') format('woff2'),
        url('magnetic-pro-light.woff') format('woff');
    font-weight: normal;
    font-style: normal;
}

@font-face {
    font-family: 'Magnetic Pro';
    src: url('bender.woff2') format('woff2'),
        url('bender.woff') format('woff');
    font-weight: normal;
    font-style: normal;
    unicode-range: U+0020, U+0414, U+0425, U+0427, U+0436, U+0439, U+043d, U+0443, U+044c-U+044d;
}
Font feature properties (1/2)

font-kerning

font-variant-position

font-variant-position-ligatures

font-variant-numeric

font-variant-caps

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.

font-variant-alternates

incroyable → incroyable

Jesuits → Jefuits

quick → quick

519 → 519
Font feature properties (2/2)

font-variant-east-asian

大学 ▶ 大学
欧文フォント ▶ 欧文フォント

font-language-override

Señora ▶ Señora
Sorpresa ▶ Sorpresa
Trés ▶ Trés

font-feature-settings

Provides low-level control of advanced OpenType features
Configuring Typekit settings
當中文字躍上雲端
最先進的中文雲端型字型（web fonts）服務，讓您在網頁中直接使用字型

ADVANTAGE
SEO 增量 增加 網站 SEO 排名！

網中使用真正的文字，大幅增加網站 SEO 排名！

justfont

CDN 加速
瞬間加載字體

CDN ACCELERATE

our advantageous

justfont

yozikku
“Be formless, shapeless, like water. Now you put water into a cup, it becomes the cup. You put water into a bottle, it becomes the bottle. You put it in a teapot, it becomes the teapot. Now water can flow, or it can crash. Be water, my friend.”

—Bruce Lee
Looks familiar?

Some (hopefully) relevant text

Be thankful they didn’t ask for a carousel

Probably some more marketing copy for each of the 3 images above that will only get passed to you after you’ve built most of site, which is never the length of the lorem ipsum your designer used and hence he/she will ask you how come the columns cannot be the same height.
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. Vertical text is fun!
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.

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
<table>
<thead>
<tr>
<th>Writing Mode</th>
<th>From 1987 to Now</th>
</tr>
</thead>
<tbody>
<tr>
<td>horizontal-tb</td>
<td>从1987到现在</td>
</tr>
<tr>
<td>vertical-rl</td>
<td>从1987到现在</td>
</tr>
<tr>
<td>vertical-lr</td>
<td>从1987到现在</td>
</tr>
<tr>
<td>sideways-rl*</td>
<td>从1997到现在</td>
</tr>
<tr>
<td>sideways-lr*</td>
<td>从1997到现在</td>
</tr>
</tbody>
</table>
text-orientation property

从1987到现在
mixed

从1987到现在
upright

从1987到现在
sideways
text-combine-upright property

民國106年7月3日

none

民國106年7月3日

all

digits <integer>*
Typography suggestions

- Use and declare the correct font-family
- Make sure the font-size is large enough
- Set line-height for sufficient breathing room
- Use text-align: justify
- Keep lines to around 25-35 characters
- Set a margin-bottom for the p element
文字的故事

文字的出现是人类社会发展的一个重要里程碑。文字记录了人类的思想、活动和历史，成为知识传播的重要工具。最早的文字形式是图画和象形文字，随后发展出了更为复杂的文字体系，如甲骨文和金文。

法国发现的洞穴画是最早的岩画之一，大约由新石器时代的人类所创作。这些画作记录了人类的生活和思想，是人类文明早期的珍贵文化遗产。

文字的出现极大地促进了人类社会的发展，使得人类能够更有效地记录和传播知识，促进了文化的传承和发展。
MNBL女子决赛
昔加末攀高峰夺冠

【坡29日讯】昔加末女子联队昨晚在人满为患的明志街头球场，成功进军决赛。首回合92比80击败巫统后，昔加末在决赛中以60比51击败霹雳的高峰女队。

昔加末在首回合比赛中就展现出了强大的实力，他们以92比80的比分战胜了巫统，这场比赛的 Highlights除了陈慧晶的出色表现外，新晋球员陈慧晶也成为了球队的关键人物。在首回合的比赛中，陈慧晶一人独得了26分，为球队的胜利奠定了基础。

在昨晚的决赛中，昔加末的表现更加出色。他们在第一节就得到了28分，领先对手。尤其是在第三和第四节的比赛中，昔加末的防守更加严密，不让对手有太多的机会。最终，昔加末以60比51的比分战胜了对手，成功晋级。

昔加末的教练表示，这场比赛的成功离不开每一位球员的努力。他们在赛前就制定了详细的战术，并在比赛中严格执行。同时，他们还注重团队合作，无论是在进攻还是防守上，都能看到团队的力量。

昔加末的球员们也非常高兴能够晋级决赛。他们表示，他们在决赛中会全力以赴，争取取得胜利。同时，他们也希望能够为自己的家乡带来荣耀。

今晚的比赛将会在明志街头球场举行。比赛将会有大量的观众到场，为两队加油助威。这将会是一场激动人心的比赛，让我们一起期待吧。
New Jersey—and so began the rest of his
skirted transition, and made his way to
Grant, de Kooning shipped off
for Argentina. While the ship was docked
younger artist stowed away on a ship bound
commercial arts. In 1926, the adventurous
Rotterdam Academy, training in Fine and
improvised household and attended the
Rotterdam, where he grew up in an
peers as its leader. He was born in
artist, who was perceived by many of his
Kooning could be described as an artist's
the New York avant-garde, with de Kooning

With de Kooning
## CSS Logical Properties

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

<table>
<thead>
<tr>
<th></th>
<th>IE</th>
<th>Edge</th>
<th>Firefox</th>
<th>Chrome</th>
<th>Safari</th>
<th>Opera</th>
<th>iOS Safari</th>
<th>Opera Mini</th>
<th>Android Browser</th>
<th>Chrome for Android</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>13</td>
<td>14</td>
<td>51</td>
<td>56</td>
<td>9.1</td>
<td>42</td>
<td>9.3</td>
<td>all</td>
<td>4.4</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>14</td>
<td>14</td>
<td>52</td>
<td>57</td>
<td>10</td>
<td>43</td>
<td>10.2</td>
<td>all</td>
<td>4.4</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>15</td>
<td>15</td>
<td>53</td>
<td>58</td>
<td>10.1</td>
<td>44</td>
<td>10.3</td>
<td>all</td>
<td>56</td>
<td>57</td>
</tr>
<tr>
<td></td>
<td>54</td>
<td>59</td>
<td>TP</td>
<td>45</td>
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</tr>
</tbody>
</table>

Global: 5.8% + 83.6% = 89.40%

Data from caniuse.com | Embed from caniuselabs.com.de
文字的故事

人類和其他生物種類是在以自己的独特的方式和語言表達自然和自己的生命歷程。最早的視覺傳達方式基本都是利用圖形進行的。這是北非和中央亞洲古代人類的原始繪畫，大約西元前二萬年。
Bookshelf-style design with vertical text
This is a website dedicated to Penang Hokkien, the language of my hometown. I talk about the inspiration for the content of this site in the **inaugural story post**. But I am also a web developer, and so this site also serves as my CSS playground for experimenting with the concept of mixed writing-modes. If that sentence made sense to you, [technical details here](#).
Without roots.
Everywhere.
What is Penang Hokkien?

Penang Hokkien is a variant of the Hokkien dialect that is unique to Penang, Malaysia. Hokkien originated from the southern Fujian province in the Minnan region of China. As the Chinese settlers integrated themselves into the local community, they started incorporating indigenous words into their language. Penang Hokkien is an integral part of our cultural heritage and there has been a movement to rejuvenate interest and prevent the language from dying out.
Bugzilla@Mozilla

Chromium Bugs
A long list of references

- Consumer barriers to mobile internet adoption in Asia
- The Relationship between Local Content, Internet Development and Access Prices
- Usage of content languages for websites
- No @font-face Syntax will ever be Bulletproof, Nor Should It Be.
- 字体漫谈
- Source Han Serif / Noto Serif CJK History & Development
- Chinese Fonts & Related Issues
Спасибо!

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