EAST ASIAN WEB TYPOGRAPHY

Crossing cultural boundaries for web layout inspiration
At the end of the day, perhaps typography

Public spaces, typeface, hope for society

Inclusivity, typeface, hope for society

Gothic or Helvetica? For

Brands, fonts help tell a story

Waan Sharif

Pakistan Prime Minister

Netflix unveils Netflix Sans,
new custom typeface
developed with Dalton Maag

It's Nice That

Its Nice That
What is typography?

“Typography is writing with prefabricated letters”
—Gerrit Noordzij
And the other side:

Aa   Бб   Вв   Гг   Гг'   Дд
Ee   Ее   Жж   Зз   Ии   Іі
Йй   Йй   Кк   Лл   Мм   Нн
Оо   Пп   Рр   Сс   Тт   Уу
Фф   Хх   Цц   Чч   Шш   Щщ
Ьь   Юю   Яя   Українська (33)

Аа   Бб   Сс   Дд   Ее   Ff
Gg   Hh   Іі   Jj   Kr   Ll
Mm   Nn   Oo   Pp   Qq   Rr
Ss   Тт   Uu   Vv   Ww   Xx
Yy   Zz   English (26)

Arabic (28)

Hebrew (22)
Hippopotamus
(English) 12 letters

河马
(Ге Ма)
місцезнаходження
(Ukrainian) 16 letters

位置
(Вей Жи)
Grianghrafadóireachta
(Irish) 21 letters

摄 影
(Ше Їн)
Phoenician alphabet
<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>Aa AcAa Aa</td>
<td></td>
</tr>
<tr>
<td>House</td>
<td>⠝</td>
<td>⠝</td>
<td>B</td>
<td>B</td>
<td>b</td>
<td>b</td>
<td>Bb Bb Bb Bb</td>
<td></td>
</tr>
<tr>
<td>Camel</td>
<td>⠏</td>
<td>⠏</td>
<td>G</td>
<td>G</td>
<td>g</td>
<td>g</td>
<td>Gg Gg Gg Gg</td>
<td></td>
</tr>
<tr>
<td>Door</td>
<td>⠑</td>
<td>⠠</td>
<td>D</td>
<td>D</td>
<td>d</td>
<td>d</td>
<td>Dd Dd Dd Dd</td>
<td></td>
</tr>
<tr>
<td>Window</td>
<td>⠸</td>
<td>⠸</td>
<td>E</td>
<td>E</td>
<td>e</td>
<td>e</td>
<td>Ee Ee Ee Ee Ee</td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>⠭</td>
<td>⠭</td>
<td>M</td>
<td>M</td>
<td>m</td>
<td>m</td>
<td>Mm Mm Mm Mm</td>
<td></td>
</tr>
<tr>
<td>Eye</td>
<td>⠉</td>
<td>⠉</td>
<td></td>
<td></td>
<td>o</td>
<td>o</td>
<td>o o o o o</td>
<td></td>
</tr>
<tr>
<td>Cross</td>
<td>⠅</td>
<td>⠅</td>
<td>T</td>
<td>T</td>
<td>t</td>
<td>t</td>
<td>Tt Tt Tt Tt</td>
<td></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>D</th>
<th>D</th>
<th>马</th>
</tr>
</thead>
<tbody>
<tr>
<td>金文</td>
<td>日</td>
<td>日</td>
<td>马</td>
</tr>
<tr>
<td>小篆</td>
<td>日</td>
<td>月</td>
<td>马</td>
</tr>
<tr>
<td>隶书</td>
<td>日</td>
<td>月</td>
<td>马</td>
</tr>
<tr>
<td>楷书</td>
<td>日</td>
<td>月</td>
<td>马</td>
</tr>
<tr>
<td>草书</td>
<td>日</td>
<td>月</td>
<td>马</td>
</tr>
<tr>
<td>行书</td>
<td>日</td>
<td>月</td>
<td>马</td>
</tr>
</tbody>
</table>
“Chinese-script projects are crazy. The scope is mind-blowing.”
—David Biezina from The long, incredibly tortuous, and fascinating process of creating a Chinese font
Distribution of languages used around the world

- English (~5%)
- Every other language (~95%)

Distribution of content languages on the web

- English (~52.0%)
- Every other language (~48.0%)

Sources: Worldometers, Ethnologue, W3Techs
Local content

“Local content is a critical component of efforts to bridge the digital divide.”

—Internet Society Policy Brief: Local Content
Internationalisation (i18n)

“To ensure that the technology supports text in any writing system of the world.”

—W3C Internationalisation
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>Supported by</th>
</tr>
</thead>
<tbody>
<tr>
<td>WOFF2 (Web Open Font Format 2)</td>
<td>Microsoft</td>
</tr>
<tr>
<td>WOFF (Web Open Font Format)</td>
<td>Microsoft</td>
</tr>
<tr>
<td>OTF (OpenType)</td>
<td>Microsoft</td>
</tr>
<tr>
<td>TTF (TrueType)</td>
<td>Microsoft</td>
</tr>
<tr>
<td>EOT (Embedded Open Type)</td>
<td>Microsoft</td>
</tr>
<tr>
<td>SVG (Scalable Vector Graphics)</td>
<td>W3C</td>
</tr>
</tbody>
</table>
@font-face

```css
@font-face {
  font-family: 'Infini';
  src: url('infini.woff2') format('woff2'),
       url('infini.woff') format('woff');
}
```

WOFF - Web Open Font Format
Compressed TrueType/OpenType font that contains information about the font's source.

<table>
<thead>
<tr>
<th></th>
<th>IE</th>
<th>Edge</th>
<th>Firefox</th>
<th>Chrome</th>
<th>Safari</th>
<th>IOS Safari</th>
<th>Opera Mini</th>
<th>Android</th>
<th>Samsung</th>
<th>Internet</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td></td>
<td></td>
<td>9</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td></td>
<td></td>
<td>10</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td></td>
<td></td>
<td>11</td>
<td>11</td>
<td></td>
</tr>
</tbody>
</table>

WOFF 2.0 - Web Open Font Format
TrueType/OpenType font that provides better compression than WOFF 1.0.

<table>
<thead>
<tr>
<th></th>
<th>IE</th>
<th>Edge</th>
<th>Firefox</th>
<th>Chrome</th>
<th>Safari</th>
<th>IOS Safari</th>
<th>Opera Mini</th>
<th>Android</th>
<th>Samsung</th>
<th>Internet</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td></td>
<td></td>
<td>9</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td></td>
<td></td>
<td>10</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td></td>
<td></td>
<td>11</td>
<td>11</td>
<td></td>
</tr>
</tbody>
</table>

Data from cani.use whistleblou.de
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 | semi-expanded;
    unicode-range: <urange> #;
    font-variant: normal | none | [ <common-lig-values> | <discretionary-lig-values> | <historical-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/linbiolimum.woff2') format('woff2'),
        url('fonts/linbiolimum.woff') format('woff');
    unicode-range: U+0400-U+04FF; /* Unicode range for Cyrillic characters */
}
місцезнаходження
(Ukrainian) в6 letters

位置
(Вей Жи)
Descriptors
describe individual font faces

Properties
requests for styling
## Basic CSS font properties

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

This is a run of text in Georgia.

This is a run of text in Georgia with font-size-adjust set to 0.555, which is the (estimated) aspect ratio for Merriweather.

This is a run of text that's supposed to be set in Noticia Text but the font doesn't exist, so the fallback of Georgia has been invoked, with the font-size-adjust set to 0.550, which is the estimated aspect ratio of Noticia Text. Georgia has an estimated aspect ratio of 0.481.
font-synthesis

Minion Pro
afwn
Minion Pro Faux Bold
afwn
Minion Pro Bold
afwn

Roboto
afwn
Roboto Faux Bold
afwn
Roboto Bold
afwn

Minion Pro
afeunyi
Minion Pro Faux Italic
afeunyi
Minion Pro Italic
afeunyi

Image credit: Piotr Grochowski
Font feature properties

font-kerning

No kerning
Kerning applied

font-variant-position

C\textsubscript{10}H\textsubscript{16}N\textsubscript{5}O\textsubscript{13}P\textsubscript{3}

font-variant-position- ligatures

fi → fi
fiž → fiž
WORDS → WORDS
labor of love → labor of love

font-variant-numeric

1\textsuperscript{st} 17\textsuperscript{th} 2\textsuperscript{a} → 1\textsuperscript{st} 17\textsuperscript{th} 2\textsuperscript{a}
2 1/3 → 2\frac{1}{3}
Lining: 409,280 367,112 155,068 171,792
Old-Style: 409,280 367,112 155,068 171,792

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

Jesuits → Jesuits
quick → quick
Quick → Quick
incroyable → incroyables
• → ─

519 → 519
麹町・麹町
大学・大学
欧文フォント・欧文フォント

font-variant-east-asian
Variable fonts

Image credit: John Hudson
Variable Fonts Experiments

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

Special credit to Daniel Belcher for the fonts at https://www.veryveryvar.com
濃愁 小猶豫
小時候的煩惱很清澈，長大的煩惱卻很混濁。
如果以湯頭比喻煩惱這件事，
小時候的像是昆布鲣魚湯，溫暖的血騷動著整鍋的情緒，
但一眼就看出端倪來，
長大了莫名就變成南瓜牛奶湯，
就算再煮下去，
也只會，唉，越來越「濃愁」。

https://www.axis-praxis.org/
幼年世界
自由国民・別冊
第三巻
第三号
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!
<table>
<thead>
<tr>
<th>writing-mode property</th>
<th>从1987到现在</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1987到现在</td>
</tr>
<tr>
<td>sideways-lr*</td>
<td>从1987到现在</td>
</tr>
</tbody>
</table>

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

mixed
downright
upright
sideways
text-combine-upright property

民國107年5月25日

none

民國107年5月25日

all

民國107年5月25日

digits <integer>*

Codepen example for text-combine-upright

民國107年5月25日
NBL女子决赛：昔日女篮精英再聚首

今天晚上，NBL女子决赛将在一场盛大的比赛中拉开帷幕。昔日的女篮精英们再度聚首，共同争夺NBL女子冠军的桂冠。比赛将在SPORTS球场举行，吸引了众多篮球迷的目光。

在上一届NBL女子决赛中，李铭和小凤共同带领队伍取得了胜利。今年，她们将再次携手出战，向冠军发起冲击。此外，新加入的球员们也纷纷展现出了强大的实力，为队伍增添了新的活力。

比赛的悬念在于，新加入的球员们能否迅速融入球队，与李铭和小凤形成良好的化学反应。而李铭和小凤则需要在对阵强敌时保持冷静，发挥出她们的顶尖水平。

总的来说，这将是一场充满悬念和看点的比赛。我们期待着看到一场精彩绝伦的对决，期待李铭和小凤带领她们的队伍再次登顶NBL女子冠军。
Yayoi Kusama

is a prominent contemporary Japanese artist known for her signature style of polka dots and her immersive and chaotic art installations. Born in 1929 in Naganuma, Japan, Kusama was raised in a dysfunctional family and was shielded from the horrors of World War II. She later studied art in Tokyo and later moved to the United States where she began experimenting with the visual and sensual making of her work. She started painting at the age of 10 when her family's disappointment in her interest in art began. Her mother, a long-time sufferer from mental illness, was so she has claimed, nevertheless scarred by dysfunctions and family trauma.

Kusama was born in 1929 into a well-off but art world family. She once said, "People may call me an Italian, my whole life has been in my own terms." She is known for her distinctive style utilizing approaches associated with Abstract Expressionism, Minimalism, Pop art, Feminist art, and Institutional Critique—yet she always denies her association with any one movement. From the late 1950s to the early 1970s, Yayoi Kusama developed a distinctive style utilizing her signature style of polka dots and immersive art installations. She is known for her large-scale installations and immersive environments, as well as her distinctive style of polka dots. Her work often explores themes of repetition, infinity, and the human condition.
### 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>Edge Safari</th>
<th>Opera Mini</th>
<th>Chrome for Android</th>
<th>Android Browser</th>
<th>Samsung Internet</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>15</td>
<td>58</td>
<td>64</td>
<td>10.1</td>
<td>10.3</td>
<td></td>
<td></td>
<td>4.4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>16</td>
<td>59</td>
<td>65</td>
<td>11</td>
<td>11.2</td>
<td></td>
<td></td>
<td>4.4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>17</td>
<td>60</td>
<td>66</td>
<td>11.1</td>
<td>11.3</td>
<td>all</td>
<td></td>
<td>66</td>
<td>66</td>
<td>6.2</td>
</tr>
</tbody>
</table>

Data from caniuse.com | Based on caniuse.com stats
Understanding Logical Properties And Values

In the past, CSS has dealt
with a plethora of dimensions
and standards, physically
defining the layout of content.

Now, CSS has evolved to
support more advanced
features, such as grid systems
and flexbox.

Members support Smashing

Are you smashing, too?

https://www.smashingmagazine.com/2018/03/understanding-logical-properties-values/
多次拿三分球扩大比分，当加来莫有三分球，我们并没有特别抢眼，乔老师拿到2分。尽管如此，陈慧敏在比赛中的表现依然出色。最终，陈慧敏以5分的优势赢得了比赛。

高明队的许文在比赛中的表现也极为出色。他率领球队以53比45的比分获胜。许文在比赛中拿下了23分，其中23分来自篮板。乔老师在比赛中拿下了22分，其中22分来自助攻。
文字的故事

记录：演變05/2020

人類和其他生物種族在生以自己獨特的方式和語言對大自然和自己的生命歷程留下記憶。最早的記憶傳達方式基本都是利用圖形進行的，早期北非和地中海史前的洞穴壁畫，古代人類的原始繪畫，時間約公元前1萬年左右。
The W3C Internationalization (I18N) Activity works with I18N working groups and liaises with other organizations to make it possible to use Web technologies with different languages, scripts, and cultures. From this page you can read the articles and other resources about Web Internationalization, and information about the groups that make up the Activity. Read also about the opportunity to participate and fund work via the new Sponsorship Program.

Recent highlights:
- For review: Inline markup and bidirectional text in HTML. December 4, 2017
- Updated article: Using character escapes in markup and CSS. August 30, 2017
- For review: Strings and Bidi. August 6, 2017
- For review: Posting times June 15, 2017
- New article: Approaches to full justification. April 3, 2017
- Talk titles: JIMA seminar
- Unicode Conference speaker submission deadline 28 March 2017
- For review: Approaches to full justification. June 21, 2017

All news:
Updated article: Inline markup and bidirectional text in HTML.
A new article about inline markup and bidirectional text in HTML has just been published.

This article talks about how to write HTML, where text with different writing directions is mixed within a paragraph or other: HTML-100 (<i>inline</i> or <i>intrinsic</i> content). The article has been updated to bring it in line with recent browser developments and to simplify the guidelines. Examples are linked to the versions, and indications are given for which features are supported by which browsers.
Penang Hokkien website

About page
Have a story? Send it in!

Why build this site?
Not yet k-ouk
Han-na, han-naaa

PCHK stories
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.
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.

Responsive vertical to horizontal layout
Without roots. Everywhere.

Vertical mobile navigation
<table>
<thead>
<tr>
<th>ID</th>
<th>Product</th>
<th>Component</th>
<th>Assignee</th>
<th>Status</th>
<th>Resolution</th>
<th>Summary</th>
<th>Changed</th>
</tr>
</thead>
<tbody>
<tr>
<td>256046</td>
<td>Core</td>
<td>Layout</td>
<td><a href="mailto:nobody@mozilla.org">nobody@mozilla.org</a></td>
<td>UNCO</td>
<td><strong>css flexbox</strong> creates pseudo css states: orient-vertical and orient-horizontal</td>
<td>Vertical margin and padding is percent in the inner of flex layout container</td>
<td>2017-02-27</td>
</tr>
<tr>
<td>155862</td>
<td>Core</td>
<td>Layout</td>
<td><a href="mailto:nobody@mozilla.org">nobody@mozilla.org</a></td>
<td>UNCO</td>
<td><strong>Vertical flex container does not correctly autosize on the main axis when it contains a flexed item</strong></td>
<td>Vertical flex container does not correctly autosize on the main axis when it contains a flexed item</td>
<td>2017-09-27</td>
</tr>
<tr>
<td>155796</td>
<td>Core</td>
<td>Layout</td>
<td><a href="mailto:nobody@mozilla.org">nobody@mozilla.org</a></td>
<td>UNCO</td>
<td><strong>flex children of a button are always vertically centered, despite align-items or justify-content</strong></td>
<td>Flex children of a button are always vertically centered, despite align-items or justify-content</td>
<td>2018-02-23</td>
</tr>
<tr>
<td>151795</td>
<td>Core</td>
<td>Layout</td>
<td><a href="mailto:nobody@mozilla.org">nobody@mozilla.org</a></td>
<td>UNCO</td>
<td><strong>Element occupies vertical space in flexbox when it has no height</strong></td>
<td>Element occupies vertical space in flexbox when it has no height</td>
<td>2018-02-20</td>
</tr>
<tr>
<td>152592</td>
<td>Core</td>
<td>Layout</td>
<td><a href="mailto:nobody@mozilla.org">nobody@mozilla.org</a></td>
<td>UNCO</td>
<td><strong>multilink elements are too tall, as flex items in a vertical flex container</strong></td>
<td>Multilink elements are too tall, as flex items in a vertical flex container</td>
<td>2018-09-10</td>
</tr>
<tr>
<td>152592</td>
<td>Core</td>
<td>Layout</td>
<td><a href="mailto:nobody@mozilla.org">nobody@mozilla.org</a></td>
<td>UNCO</td>
<td>investigate sizing of <strong>auto-height/auto-width</strong> multi-link elements in a vertical flexbox</td>
<td>Investigate sizing of auto-height/auto-width multi-link elements in a vertical flexbox</td>
<td>2013-04-01</td>
</tr>
<tr>
<td>152592</td>
<td>Core</td>
<td>Layout</td>
<td><a href="mailto:nobody@mozilla.org">nobody@mozilla.org</a></td>
<td>UNCO</td>
<td><strong>intrinsic width of vertical multi-line flexbox is incorrect, when wrapping is needed (with flex-flow: column wrap)</strong></td>
<td>Intrinsic width of vertical multi-line flexbox is incorrect, when wrapping is needed (with flex-flow: column wrap)</td>
<td>2018-02-22</td>
</tr>
<tr>
<td>152592</td>
<td>Core</td>
<td>Layout</td>
<td><a href="mailto:nobody@mozilla.org">nobody@mozilla.org</a></td>
<td>UNCO</td>
<td><strong>in vertical flex containers, treat intrinsic sizing keywords for flex-basis as if they were “auto”</strong></td>
<td>In vertical flex containers, treat intrinsic sizing keywords for flex-basis as if they were “auto”</td>
<td>2014-06-14</td>
</tr>
<tr>
<td>152592</td>
<td>Core</td>
<td>Layout</td>
<td><a href="mailto:nobody@mozilla.org">nobody@mozilla.org</a></td>
<td>UNCO</td>
<td>For flex items in a vertical flex container, only treat heights as defined (for resolving % heights on children) if the flex-basis or flex-conainers height is also defined.</td>
<td>For flex items in a vertical flex container, only treat heights as defined (for resolving % heights on children) if the flex-basis or flex-container height is also defined.</td>
<td>2018-08-12</td>
</tr>
<tr>
<td>152592</td>
<td>Core</td>
<td>Layout</td>
<td><a href="mailto:nobody@mozilla.org">nobody@mozilla.org</a></td>
<td>UNCO</td>
<td><strong>offsetWidth/offsetHeight calculation is slow in vertical flexbox, with flex item that has default “min-height:auto” and tons of child nodes</strong></td>
<td>OffsetWidth/offsetHeight calculation is slow in vertical flexbox, with flex item that has default “min-height:auto” and tons of child nodes</td>
<td>2017-06-26</td>
</tr>
<tr>
<td>152592</td>
<td>Core</td>
<td>Layout</td>
<td><a href="mailto:nobody@mozilla.org">nobody@mozilla.org</a></td>
<td>UNCO</td>
<td><strong>[css flexbox]</strong> Vertical-writing-mode flex item in horizontal flex container has wrong width.</td>
<td>[css flexbox] Vertical-writing-mode flex item in horizontal flex container has wrong width.</td>
<td>2017-12-03</td>
</tr>
<tr>
<td>152592</td>
<td>Core</td>
<td>Layout</td>
<td><a href="mailto:nobody@mozilla.org">nobody@mozilla.org</a></td>
<td>UNCO</td>
<td><strong>[css flexbox]</strong> orthogonal flows (vertical writing-mode inside horizontal) can produce intrinsic sizes of 0, e.g. in floats &amp; flex items</td>
<td>[css flexbox] Orthogonal flows (vertical writing-mode inside horizontal) can produce intrinsic sizes of 0, e.g. in floats &amp; flex items</td>
<td>2018-02-06</td>
</tr>
<tr>
<td>152592</td>
<td>Core</td>
<td>Layout</td>
<td><a href="mailto:nobody@mozilla.org">nobody@mozilla.org</a></td>
<td>UNCO</td>
<td><strong>[css flexbox]</strong> In Firefox flex item with writing-mode:vertical-rl stretches, not in Chrome</td>
<td>In Firefox flex item with writing-mode:vertical-rl stretches, not in Chrome</td>
<td>2017-07-17</td>
</tr>
<tr>
<td>152592</td>
<td>Core</td>
<td>Layout</td>
<td><a href="mailto:nobody@mozilla.org">nobody@mozilla.org</a></td>
<td>UNCO</td>
<td>Assertion failure: sideToMeasureFrom == sideBottom (We already checked that we’re dealing with a vertical axis, and we’re not using the top side, so that only leaves the bottom…).</td>
<td>Assertion failure: sideToMeasureFrom == sideBottom (We already checked that we’re dealing with a vertical axis, and we’re not using the top side, so that only leaves the bottom…).</td>
<td>2018-03-02</td>
</tr>
<tr>
<td>152592</td>
<td>Core</td>
<td>Layout</td>
<td><a href="mailto:nobody@mozilla.org">nobody@mozilla.org</a></td>
<td>UNCO</td>
<td><strong>Vertical inline-flex shows content away from where it should be</strong></td>
<td>Vertical inline-flex shows content away from where it should be</td>
<td>2017-11-27</td>
</tr>
<tr>
<td>152592</td>
<td>Core</td>
<td>Layout</td>
<td><a href="mailto:nobody@mozilla.org">nobody@mozilla.org</a></td>
<td>UNCO</td>
<td><strong>flex item with child-percent-packing-imposed aspect-ratio &amp; vertical MR isn’t sized the same as in other browsers</strong></td>
<td>Flex item with child-percent-packing-imposed aspect-ratio &amp; vertical MR isn’t sized the same as in other browsers</td>
<td>2018-02-20</td>
</tr>
</tbody>
</table>

**Bugs, bugs, bugs**
A long list of references

- 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
- 全球首款！文鼎易黑體支援可變式字體格式
- Creative text effects with CSS by Mandy Michael (video)
- W3C Internationalization & Text Layout Requirements
Дякую!

https://www.chenhuijing.com

@hj_chen

@hj_chen

@huijing

Font used is Infini, Sandrine Nugue / Cnap