WHEN EAST MEETS WEST
Web typography and how it can inspire modern layouts
Chen Hui Jing
What does the web mean to you?
Distribution of languages used around the world (~95.1%)  

Every other language in the world (~48.8%)  

Distribution of content languages on the web (~51.2%)  

Sources: Worldometers, Ethnologue, W3Techs
Internationalisation (i18n)

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

—W3C Internationalisation
Do developers even care about typography?
“Web design is 95% typography”

— Oliver Reichenstein
“Typography is writing with prefabricated letters”

— Gerrit Noordzij
Phoenician alphabet
Hippopotamus
(English) 12 letters

河马
13 letters (Hebrew)
Grianghrafadóireachta
(Irish) 21 letters

Image credit: Dana Saylor
https://www.chenhuijing.com/slides/yglf-2017
<table>
<thead>
<tr>
<th>ORIGINAL MEANING</th>
<th>Egyptian</th>
<th>Phenician</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>Α</td>
<td>A</td>
<td>a</td>
<td>a</td>
<td>a</td>
<td>Aa Ac Aa Aa</td>
</tr>
<tr>
<td>House</td>
<td>🏡</td>
<td>⛪</td>
<td>Β</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>⃣</td>
<td>Γ</td>
<td>G</td>
<td>G</td>
<td>g</td>
<td>g</td>
<td>Gg Gg Gg gGg</td>
</tr>
<tr>
<td>Door</td>
<td>⛦</td>
<td>⌜</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>⎤</td>
<td>Ε</td>
<td>E</td>
<td>e</td>
<td>e</td>
<td>e</td>
<td>Ee Ee Ee Ee</td>
</tr>
<tr>
<td>Water</td>
<td>⚲</td>
<td>⧠</td>
<td>Ν</td>
<td>M</td>
<td>m</td>
<td>m</td>
<td>m</td>
<td>Mm Mm Mm Mm</td>
</tr>
<tr>
<td>Eye</td>
<td>👁</td>
<td>🎟</td>
<td>Ο</td>
<td>O</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>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</td>
</tr>
</tbody>
</table>

Illustrating the probable development of some of the letters of the alphabet.
SERIFS
serifs
SANS SERIF
https://www.chenhuijing.com/slides/yglf-2017
| 甲骨文 | 日 | D | 马 马 马 |
| 金 文 | 日 | 月 | 马 马 马 |
| 小 篆 | 日 | 月 | 马 马 马 |
| 隶 书 | 日 | 月 | 马 马 马 |
| 楷 书 | 日 | 月 | 马 马 马 |
| 草 书 | 日 | 月 | 马 马 马 |
| 行 书 | 日 | 月 | 马 马 马 |

https://www.chenhuijing.com/slides/yglf-2017
The Big Picture Presents

Europe 24

This data visualization of Air Traffic in Europe was created from real flight data. It shows the air traffic which flies on a typical summer day and highlights the intensity of the operation in Europe - an operation which runs 24/7, 365 days a year.

Video courtesy of NATS
nats.aero/blog
The web is a unique medium of its own
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>W3C SVG</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
@font-face rule

```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.

WOFF 2.0 - Web Open Font Format

TrueType/OpenType font that provides better compression than WOFF 1.0.
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 |
  font-stretch: normal | ultra-condensed | extra-condensed | condensed |
  unicode-range: <urange> #
  font-variant: normal | none | [ <common-lig-values> || <discretionary-lig-values> ]
  font-feature-settings: normal | <feature-tag-value> #
}
```
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>
font-size-adjust

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
font-synthesis

Minion Pro
Minion Pro Faux Bold
Minion Pro Bold

Roboto
Roboto Faux Bold
Roboto Bold

Minion Pro
Minion Pro Faux Italic
Minion ProItalic

Image credit: Piotr Grochowski

https://www.chenhuijing.com/slides/yg1f-2017
@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('carmelitegular.woff2') format('woff2'),
      url('carmelitegular.woff') format('woff');
  font-weight: normal;
  font-style: normal;
  unicode-range: U+05D5, U+05DB, U+05E9, U+05D1, U+05D6, U+05E8, U+05D5, U+05E2, U+05DB,

Declare your Latin fonts first

```css
font-family: 'Gentium Basic', 'PingFang TC', 'Microsoft JhengHei', '微軟正黑體', 'Heiti TC', '黑體-繁', sans-serif;
```

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.
Font feature properties

**font-kerning**

AV Wa
No kerning

AV Wa
Kerning applied

**font-variant-position**

C H N O P

C H N O P

**font-variant-position-ligatures**

fi & fi
tz & k

WORDS & WORDS
labor of love & labor of love

**font-variant-numeric**

1st 17th 2a
2 1/3 2 1/3

2 1/3 2 1/3

409,280 409,280
367,112 367,112

155,068 155,068
171,792 171,792

**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.

1st 17th 2a
2 1/3 2 1/3

2 1/3 2 1/3

409,280 409,280
367,112 367,112

155,068 155,068
171,792 171,792

**font-variant-alternates**

Jesuits & Jœufits

quick & quick
Quick & Quick

incroyable & incroyables

519 & 519

https://www.chenhuijing.com/slides/yglf-2017
font-variant-east-asian

麴町 • 麴町
大学 • 大學
欧文フォント • 欧文フォント

https://www.chenhuijing.com/slides/ygf-2017
font-feature-settings

Provides low-level control of advanced OpenType features

<table>
<thead>
<tr>
<th>aalt</th>
<th>cpssp</th>
<th>frac</th>
<th>jf83</th>
<th>mset</th>
<th>psts</th>
<th>smcp</th>
<th>ss15</th>
<th>twid</th>
</tr>
</thead>
<tbody>
<tr>
<td>abvf</td>
<td>cswh</td>
<td>fwid</td>
<td>jf90</td>
<td>nalt</td>
<td>pwid</td>
<td>smpl</td>
<td>ss16</td>
<td>unic</td>
</tr>
<tr>
<td>abvm</td>
<td>curs</td>
<td>half</td>
<td>jf04</td>
<td>nlck</td>
<td>qwid</td>
<td>ss01</td>
<td>ss17</td>
<td>valt</td>
</tr>
<tr>
<td>abvs</td>
<td>cv01-cv99</td>
<td>haln</td>
<td>kern</td>
<td>nukt</td>
<td>rand</td>
<td>ss02</td>
<td>ss18</td>
<td>vatu</td>
</tr>
<tr>
<td>afrc</td>
<td>c2pc</td>
<td>halt</td>
<td>jfbd</td>
<td>numr</td>
<td>xclt</td>
<td>ss03</td>
<td>ss19</td>
<td>vert</td>
</tr>
<tr>
<td>akhn</td>
<td>c2sc</td>
<td>hist</td>
<td>ligp</td>
<td>onum</td>
<td>rkrf</td>
<td>ss04</td>
<td>ss20</td>
<td>vhal</td>
</tr>
<tr>
<td>blwf</td>
<td>dist</td>
<td>hksa</td>
<td>ljmo</td>
<td>opbd</td>
<td>rlig</td>
<td>ss05</td>
<td>ssty</td>
<td>vjmo</td>
</tr>
<tr>
<td>blwm</td>
<td>dlig</td>
<td>hlig</td>
<td>lnnum</td>
<td>ordn</td>
<td>rphf</td>
<td>ss06</td>
<td>stch</td>
<td>vjna</td>
</tr>
<tr>
<td>blws</td>
<td>dnom</td>
<td>hqgl</td>
<td>locl</td>
<td>oxnn</td>
<td>rtrb</td>
<td>ss07</td>
<td>subs</td>
<td>vknn</td>
</tr>
<tr>
<td>calt</td>
<td>dtsl</td>
<td>hojo</td>
<td>ltra</td>
<td>palt</td>
<td>rtlm</td>
<td>ss08</td>
<td>supers</td>
<td>vpal</td>
</tr>
<tr>
<td>case</td>
<td>expt</td>
<td>hwid</td>
<td>ltrm</td>
<td>pcap</td>
<td>rtrm</td>
<td>ss09</td>
<td>swsh</td>
<td>vrt2</td>
</tr>
<tr>
<td>comp</td>
<td>falt</td>
<td>init</td>
<td>mark</td>
<td>pkna</td>
<td>ruby</td>
<td>ss10</td>
<td>tilit</td>
<td>vrttr</td>
</tr>
<tr>
<td>cfar</td>
<td>fin2</td>
<td>isol</td>
<td>med2</td>
<td>pnum</td>
<td>rvrn</td>
<td>ss11</td>
<td>tjmo</td>
<td>zero</td>
</tr>
<tr>
<td>cjet</td>
<td>fin3</td>
<td>ital</td>
<td>medi</td>
<td>pref</td>
<td>salt</td>
<td>ss12</td>
<td>tnam</td>
<td></td>
</tr>
<tr>
<td>cliq</td>
<td>fina</td>
<td>jalt</td>
<td>mgrk</td>
<td>pres</td>
<td>size</td>
<td>ss13</td>
<td>tnum</td>
<td></td>
</tr>
<tr>
<td>cpct</td>
<td>flac</td>
<td>jf78</td>
<td>mkmk</td>
<td>pstf</td>
<td>size</td>
<td>ss14</td>
<td>trad</td>
<td></td>
</tr>
</tbody>
</table>

https://www.chenhuijing.com/slides/yglf-2017  @hj_chen
Web layouts over the years
2017: the year of CSS Grid

March 2017

<table>
<thead>
<tr>
<th>Sun</th>
<th>Mon</th>
<th>Tue</th>
<th>Wed</th>
<th>Thu</th>
<th>Fri</th>
<th>Sat</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td>🌀️</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>12</td>
<td>13</td>
<td>🌀️</td>
<td>15</td>
<td>16</td>
<td>17</td>
<td>18</td>
</tr>
<tr>
<td>19</td>
<td>20</td>
<td>🌀️</td>
<td>22</td>
<td>23</td>
<td>24</td>
<td>25</td>
</tr>
<tr>
<td>26</td>
<td>🌀️</td>
<td>28</td>
<td>29</td>
<td>30</td>
<td>31</td>
<td></td>
</tr>
</tbody>
</table>

October 2017

<table>
<thead>
<tr>
<th>Sun</th>
<th>Mon</th>
<th>Tue</th>
<th>Wed</th>
<th>Thu</th>
<th>Fri</th>
<th>Sat</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>8</td>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
<td>13</td>
<td>14</td>
</tr>
<tr>
<td>15</td>
<td>16</td>
<td>🌀️</td>
<td>18</td>
<td>19</td>
<td>20</td>
<td>21</td>
</tr>
<tr>
<td>22</td>
<td>🌀️</td>
<td>YG</td>
<td>YG</td>
<td>LF</td>
<td>LF</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>🌀️</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

https://www.chenhuijing.com/slides/yglf-2017
“We need to translate ideas that we find in other places, not transfer them.”

—Jen Simmons
Flyingman Safety Matches

SINCERE MATCH & TOBACCO FACTORY LTD.
PETALING JAYA, KUALA LUMPUR, MALAYA.
Hanya satu sahja PANAU SALAP yang selalu dipakai orang yaitu

PANAU SALAP CHAP GAJAH

kerana penyakit

★ PANAU
★ KURAP
★ GATAL²
★ Dan Lain²

Ada terjual disemua kedai obat diseluruh Malaysia, Singapura dan Brunei.
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.

😊

\[ x \neq 0 \]
\[ y \neq 0 \]
\[ z \neq 0 \]

হা হা হা.
**writing-mode property**

<table>
<thead>
<tr>
<th>writing-mode</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.

https://www.chenhuijing.com/slides/yglf-2017
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

民國106年7月3日

digits <integer>*

Codepen example for text-combine-upright
多次靠三分球扩大比分 陈慧晶拿下生涯首个MVP

在决赛中，陈慧晶的表现非常出色。他不仅在进攻端连续得分，还多次助攻队友得分。他的三分球命中率高达50%，为球队的胜利奠定了基础。赛后，陈慧晶表示：“感谢队友们的配合，我们会继续努力，为球队取得更好的成绩。”
He, New Jersey—and so began the rest of his skittish immigation, and made his way to
in Argentina, de Kooning stepped off,
for Argentina, while the ship was docked
young artist stowed away on a ship bound commercial art. In 1926, the adventurous
Rotterdam Academy, training in fine and
tempted 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
de the New York avant-garde, William de
William 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>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>
<th>Chrome for Android</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9</td>
<td>14</td>
<td>54</td>
<td>60</td>
<td>10</td>
<td>46</td>
<td>10.2</td>
<td>all</td>
<td>56</td>
<td>4.4</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>15</td>
<td>55</td>
<td>61</td>
<td>10.1</td>
<td>47</td>
<td>10.3</td>
<td>all</td>
<td>56</td>
<td>4.4</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>16</td>
<td>56</td>
<td>62</td>
<td>11</td>
<td>48</td>
<td>11</td>
<td>all</td>
<td>56</td>
<td>61</td>
</tr>
</tbody>
</table>

Partial Support: 5.51%  Prefixed: 83.71%  Global: 89.22%
文字的故事

人類和其他生物物種總是在以自己獨特的方式傳播他們的遺傳信息。一些印跡，無論古人類的繪畫或岩洞壁畫都是從史前開始的。最早的時候（Visual Communication）的開始，是通過視覺傳遞的方式進行的。這些是從搞笑的克洛克岩洞中，古代人類的原始繪畫，約20000年前左右。
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.
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>1263934</td>
<td>Core</td>
<td>Layout</td>
<td>martijn</td>
<td>NEW</td>
<td>--</td>
<td>Marquee doesn’t work well in vertical writing-mode css</td>
<td>2016-04-12</td>
</tr>
<tr>
<td>1189131</td>
<td>Core</td>
<td>Layout</td>
<td>nobody</td>
<td>NEW</td>
<td>--</td>
<td>Flex align-items center displaces text when writing-mode is vertical-rl</td>
<td>2017-07-20</td>
</tr>
<tr>
<td>1223180</td>
<td>Core</td>
<td>Layout</td>
<td>nobody</td>
<td>NEW</td>
<td>--</td>
<td>Flex + vertical-writing-mode: flex items / text disappear</td>
<td>2017-08-16</td>
</tr>
<tr>
<td>1231656</td>
<td>Core</td>
<td>Layout</td>
<td>nobody</td>
<td>NEW</td>
<td>--</td>
<td>text-align and vertical-align don’t work as expected on table cells that are orthogonal to row (writing-mode)</td>
<td>2017-04-18</td>
</tr>
<tr>
<td>1234701</td>
<td>Core</td>
<td>Layout</td>
<td>nobody</td>
<td>NEW</td>
<td>--</td>
<td>Various crashes with CSS “writing-mode: vertical-rl” and float</td>
<td>Fri 08:03</td>
</tr>
<tr>
<td>1242660</td>
<td>Core</td>
<td>Layout</td>
<td>nobody</td>
<td>NEW</td>
<td>--</td>
<td>[css-writing-modes] Fragmentation issues with vertical writing-mode</td>
<td>2017-08-07</td>
</tr>
<tr>
<td>1260054</td>
<td>Core</td>
<td>Layout</td>
<td>nobody</td>
<td>NEW</td>
<td>--</td>
<td>Text and the scroll bar are not displayed with writing-mode: vertical-rl</td>
<td>2016-10-23</td>
</tr>
<tr>
<td>1269152</td>
<td>Core</td>
<td>Layout</td>
<td>nobody</td>
<td>NEW</td>
<td>--</td>
<td>orthogonal multi-column with a vertical writing-mode computes height to fill page rather than wrap contents</td>
<td>2016-05-01</td>
</tr>
<tr>
<td>1276735</td>
<td>Core</td>
<td>Layout</td>
<td>nobody</td>
<td>NEW</td>
<td>--</td>
<td>[css-flexbox][css-writing-modes] display: inline-flex with vertical item is growing on each reflow</td>
<td>2017-08-04</td>
</tr>
<tr>
<td>1318625</td>
<td>Core</td>
<td>Layout</td>
<td>nobody</td>
<td>NEW</td>
<td>--</td>
<td>[css-flexbox] Vertical-writing-mode flex item in horizontal flex container has wrong width</td>
<td>2016-11-25</td>
</tr>
<tr>
<td>1282940</td>
<td>Core</td>
<td>Layout</td>
<td>nobody</td>
<td>NEW</td>
<td>--</td>
<td>Flex item with indefinite flex-basis produces word overflow inside column container with vertical writing-mode</td>
<td>Tue 14:42</td>
</tr>
<tr>
<td>1329261</td>
<td>Core</td>
<td>Layout</td>
<td>nobody</td>
<td>NEW</td>
<td>--</td>
<td>All auto margins resolve to 0, on elements with vertical writing-mode (in a horizontal writing-mode parent)</td>
<td>2017-07-17</td>
</tr>
<tr>
<td>1349163</td>
<td>Core</td>
<td>Layout</td>
<td>nobody</td>
<td>NEW</td>
<td>--</td>
<td>[css-flexbox] In Firefox flex item with writing-mode:vertical-rl stretches, not in Chrome</td>
<td>2017-07-17</td>
</tr>
<tr>
<td>1322623</td>
<td>Core</td>
<td>Layout</td>
<td>nobody</td>
<td>NEW</td>
<td>--</td>
<td>intermittent writing-mode:tables/vertical-table-specified-width-2-ref.html</td>
<td>assertion count 2 is more than expected 1 assertions from ASSERTION: FinishReflowChild with unconstrained container width: <code>aContainerSize.width != NS_UNCONSTRAINEDSIZE</code></td>
</tr>
<tr>
<td>1403811</td>
<td>Core</td>
<td>Layout</td>
<td>nobody</td>
<td>NEW</td>
<td>--</td>
<td>intermittent [u'writing-mode:tables/vertical-table-specified-width-2.html; u='; u'writing-mode:tables /vertical-table-specified-width-2-ref.html'</td>
<td>assertion count 2 is more than expected 1 assertions</td>
</tr>
<tr>
<td>1404937</td>
<td>Core</td>
<td>Layout</td>
<td>nobody</td>
<td>NEW</td>
<td>--</td>
<td>intermittent writing-mode/1117210-1-vertical-baseline-snap.html = writing-mode/1117210-1-vertical-baseline-snap-ref.html</td>
<td>image comparison, max difference: 255, number of differing pixels: 32794</td>
</tr>
<tr>
<td>1404957</td>
<td>Core</td>
<td>Layout</td>
<td>nobody</td>
<td>NEW</td>
<td>--</td>
<td>intermittent [u'writing-mode:tables/vertical-table-specified-width-2.html; u='; u'writing-mode:tables /vertical-table-specified-width-2-ref.html'</td>
<td>assertion count 3 is more than expected 2 assertions, FinishReflowChild with unconstrained container width!</td>
</tr>
<tr>
<td>1405437</td>
<td>Core</td>
<td>Layout</td>
<td>nobody</td>
<td>NEW</td>
<td>--</td>
<td>intermittent writing-mode:1115916-1-vertical-metrics.html = 1115916-1-vertical-metrics-ref.html</td>
<td>image comparison, max difference: 255, number of differing pixels: 1092</td>
</tr>
<tr>
<td>1408037</td>
<td>Core</td>
<td>Layout</td>
<td>nobody</td>
<td>NEW</td>
<td>--</td>
<td>intermittent [u'writing-mode:tables/vertical-table-specified-width-2.html; u='; u'writing-mode:tables /vertical-table-specified-width-2-ref.html'</td>
<td>assertion count 2 is more than expected 1 assertions</td>
</tr>
</tbody>
</table>

Bugs, bugs, 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
- The faces of Microsoft
- 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
http://tategaki.github.io/awards/

http://labs.jensimmons.com/
http://www.chenhuijing.com

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