



Understanding writing modes

In the last post, we discussed logical attributes and how they depend on the vertical and horizontal directions of the text.

In this post we'll look at the `writing-mode` CSS attribute and the `direction` HTML attributes with its companion `:dir()` CSS pseudo class.

Writing mode

[CSS writing modes](#) specify the block flow direction and the direction in which inline content flows within a block container.

Writing modes are tricky because they vary from language to language.

The most common writing mode is “horizontal, left to right”, expressed as `horizontal-tb` with the `direction` attribute set to `ltr`. In the case of English and other western languages `direction` is optional since `ltr` is the default.

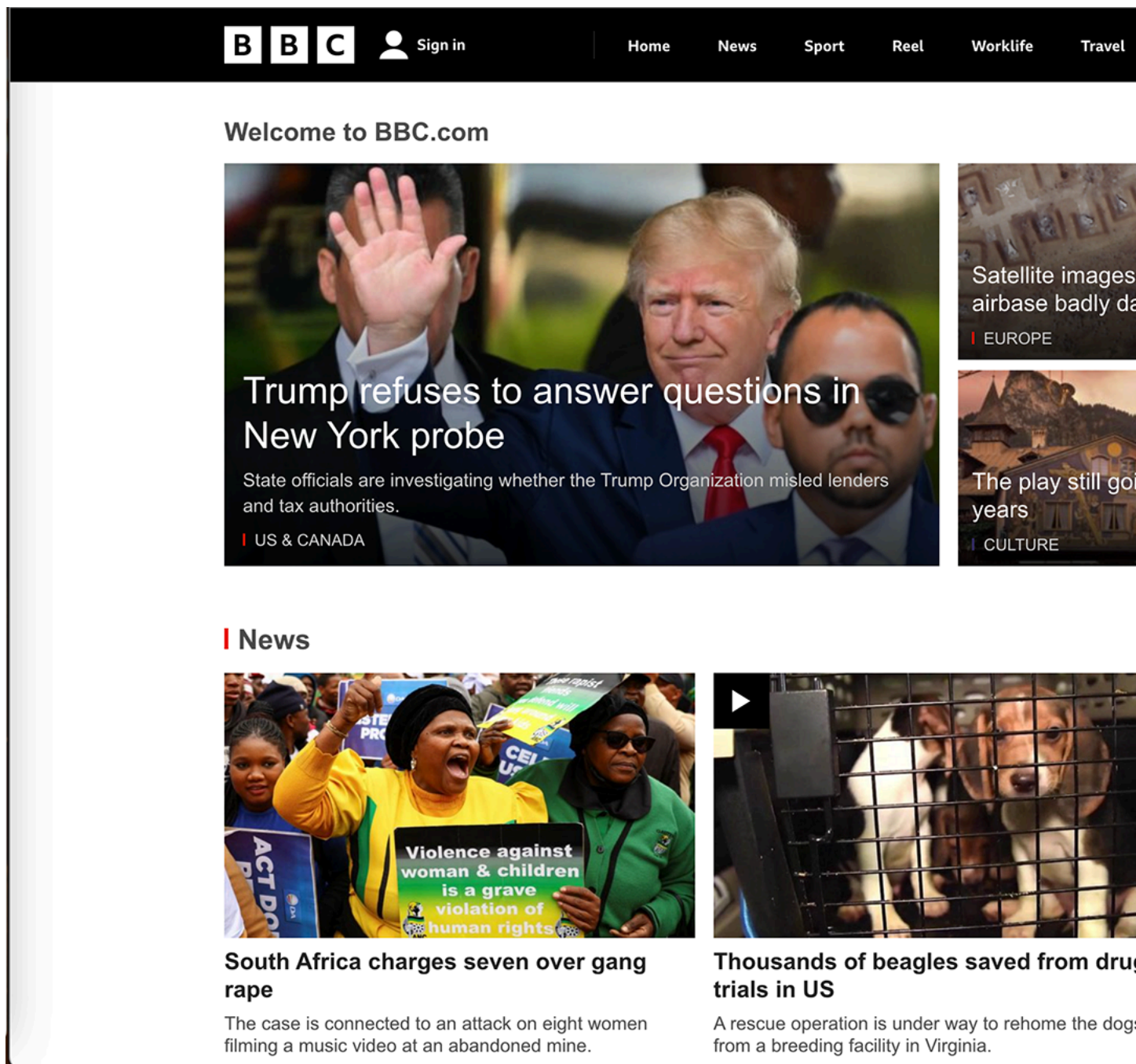


Figure 1: BBC homepage in English, a top to bottom and left to right language

Languages like Arabic and Hebrew are read from top to bottom but horizontally they are read from right to left.

In CSS this is also expressed as `horizontal-tb` but the direction attribute is expressed as `rtl`. In the case of right-to-left languages the direction attribute is mandatory since it's not the default.

اتهام عضو في الحرس الثوري الإيراني بالتخطيط لاغتيال مساعد سابق لترامب

مسؤولون أمريكيون يقولون إن محاولة قتل جون بولتون كانت على الأرجح انتقاما لمقتل قاسم سليمان، وطهران تندد بالاتهامات

قبل 9 دقيقة

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رئيس القضاء الإيراني يتعهد بمحاكمة ترامب

حشود غفيرة تتدفق على بغداد للمشاركة في إحياء ذكرى اغتيال سليمان والمهندس



قصة باكستانية قتلها زوجها السابق
بعد أن نشرت تفاصيل طلاقها على تيك
توك

قبل 5 ساعة



"غش عائلي" في امتحانات الثانوية يثير
جدلا في مصر

قبل 8 ساعة



روسيا في أوكرانيا بالخرائط

ساعة 5

المزيد

مباشر تعديل متوقع على موعد بدء انطلاق
كأس العالم 2020 في قطر، والحكم بالسجن
مع النفاذ على مرتضى منصور رئيس نادي



Figure 2: The Arabic version of the BBC home page, a top to bottom, right to left language

We can write Japanese text vertically, in which case the text is read from right to left or they can be used horizontally in which case it's read from left to right. It can also be combined with parts of a page being laid out vertically and others horizontally.

When writing Japanese text vertically we use the `vertical-r1` value for writing mode. We don't need the `direction` attribute in HTML.

When written horizontally, we use the same attributes as for western languages: `horizontal-tb` and `ltr` direction.

元来日本語は漢文に倣い、文字を上から下へ、また行を右から左へと進めて表記を行っていた。漢字と仮名の筆順も縦書きを前提としており、横書き不能な書体も存在する。

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Figure 3: When Japanese text is set vertically (right) it's read from top to bottom and the lines go from right to left. When it is set horizontally (left), it is read from left to right, like in European languages.

Cosmetical uses

Warning:

This feature is only supported in Firefox.

There are two additional values for `writing-mode`: `sideways-rl` and `sideways-lr`.

The values `sideways-rl` makes all characters to which it is applied lie on their right side. The text runs from top to bottom, and lines progress from right to left.

The value `sideways-lr` makes all the characters applied lie on their left side.

To see a comparison of sideways and vertical text, check the following pen in Firefox (the only browser that supports the feature).

The first row shows `sideways text`, `sideways-lr` and `sideways-rl` respectively.

The second row shows `vertical text`, `vertical-lr` and `vertical-rl`

direction

The [direction](#) HTML attribute sets the direction the text flow in the inline axis.

The possible values are:

- `ltr` for left to right languages like English and most Latin languages
- `rtl` for right to left languages like Arab and Hebrew

The CSS [:dir\(\)](#) pseudo class matches based on the direction indicated in the parameter to the class.

In the following snippet, the text with a `rtl` direction (right to left) will have white text with a purple background;

```
:dir rtl) {  
  color: white;
```

```
background-color: rebeccapurple;  
}
```

You can see the result of using `:dir()` in the following pen.

Additional resources

Here are additional CSS tools that you can use to change the direction of text on screen.

- [text-combine-upright](#)
- [text-orientation](#)
- [unicode-bidi](#)