

Using SVG in Web Pages

Intent Scale with zoom, Simple image updates

Alternatives Fonts, Raster images of different sizes

Motivation Raster images often do not scale well,
Updating raster images often takes more bandwidth

Applicability Icons, Buttons, Backgrounds, GIS
overlays, Trees, Graphs

We'll focus on three use cases

- As an HTML Image Source

```

```

- As a background image

```
<div class="interesting" />
```

```
.interesting: url(images/simple-box.svg);
```

- Directly in the markup

```
<svg><rect width="18" height="12" x="0" y="0"  
style="fill:#800000;fill-opacity:1;stroke:none"  
></svg>
```

But First, What About Browser Support

- Support in modern browsers after IE8
- As image <http://caniuse.com/#feat=svg-img>
- As background
<http://caniuse.com/#feat=svg-css>
- Inline <http://caniuse.com/#feat=svg-html5>
- SVG Fonts <http://caniuse.com/#feat=svg-fonts>

But Sometimes...

- Firefox (< 24) rendering does not scale in the same way as other browsers, when used in CSS.
- It creates a raster image from the SVG based on it's size and then places the image on the page
- This can cause fuzzy edges in many cases
- Workaround is available... May use lots of CPU cycles, careful...
- Fixed in FF24
https://bugzilla.mozilla.org/show_bug.cgi?id=600207
-

As an Image Source

- Simple for cases where the same SVG is rendered for all resolutions, e.g. responsive design
- Potential Drawbacks in some usage cases
 - Duplicate image src
 - Can be handled with LESS, SASS
 - Responsive Sites may download multiple images
 - But only in cases where SVG is different

Examples Using as an Image Source

```

```

IE9 or above

Or as an object, html5

```
<object data="your.svg" type="image/svg+xml">  
    
</object>
```

Example:

<http://jsfiddle.net/derekjwilliams/ebTN9/11/show>

W3C Link:

http://www.w3.org/Graphics/SVG/IG/resources/svgprimer.html#SVG_in_HTML

SVG as a background image

- Pretty simple to place an object

<http://jsfiddle.net/derekjwilliams/7DYdT/4/>

Note the background repeat and height.

- Can also combine images simple back drop

<http://jsfiddle.net/derekjwilliams/7DYdT/5/>

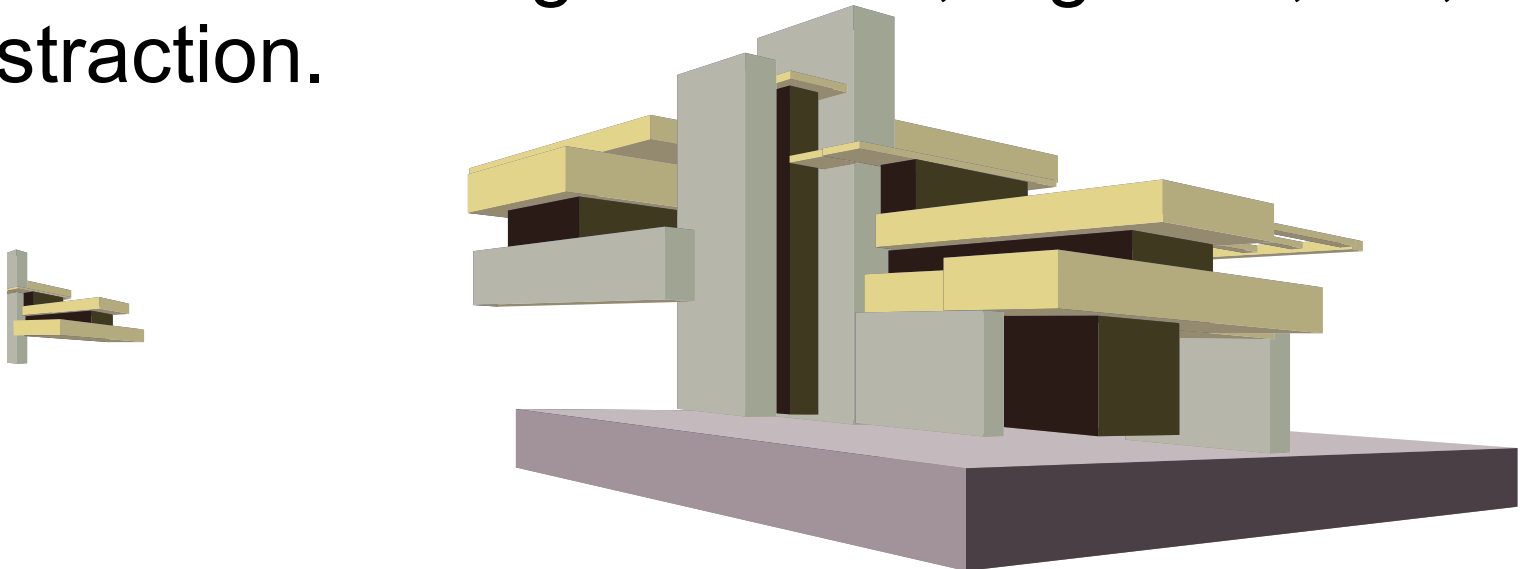
SVG in line

- Very simple example

<http://jsfiddle.net/derekjwilliams/euVvb/1/>

Why use different SVG images

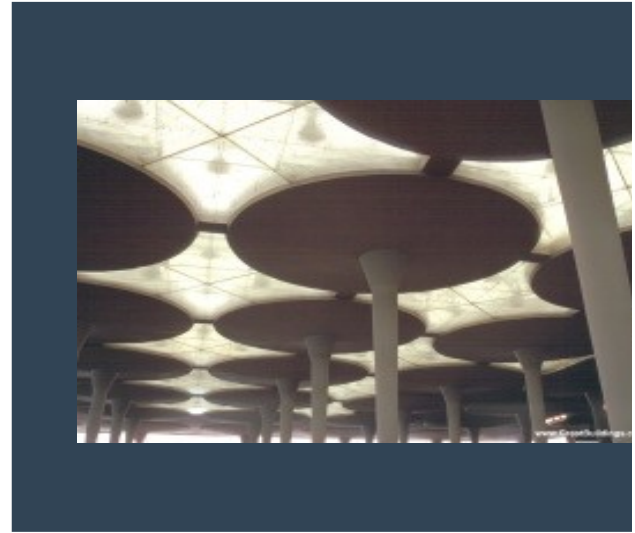
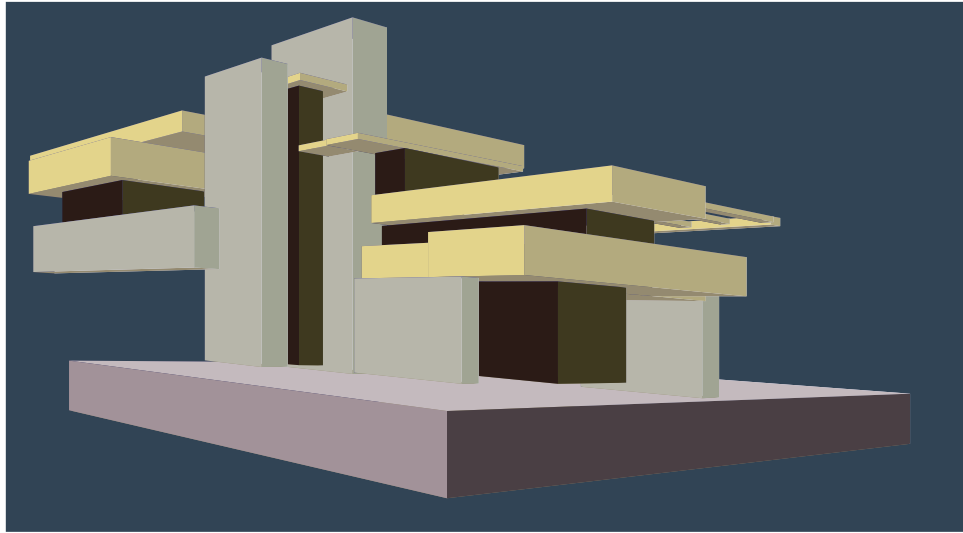
- Similar issues as fonts
 - Shape of letters with small font size are not simply scaled down versions of larger sizes
- In the same way a small SVG image may not be the same as a larger version, e.g. icon, tile, larger abstraction.



Smaller Icons may have different needs

- For a simple small icon a scaled down version of Falling Waters is not legible, so something simpler may be appropriate

Larger Version may have more details



One more thing...

- D3 JS Data Driven Documents

<https://github.com/mbostock/d3/wiki/Gallery>

- Cubism (based on d3)

<http://square.github.io/cubism/>

- Xcharts (based on d3)

<http://tenxer.github.io/xcharts/>