

I **KNOW** I SHOULD  
USE SVGs BUT  
DON'T KNOW **HOW**

---

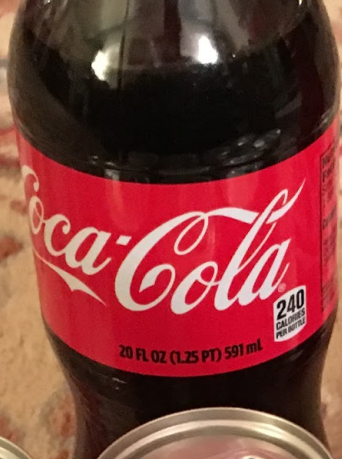
# Hello!

**COLIN LORD**

Senior Front End Developer  
Modea

@colinlord

@modea



**There's more to say.**

---







# HOW STANDARDS PROLIFERATE:

(SEE: A/C CHARGERS, CHARACTER ENCODINGS, INSTANT MESSAGING, ETC)

SITUATION:  
THERE ARE  
14 COMPETING  
STANDARDS.

14?! RIDICULOUS!  
WE NEED TO DEVELOP  
ONE UNIVERSAL STANDARD  
THAT COVERS EVERYONE'S  
USE CASES.



SOON:

SITUATION:  
THERE ARE  
15 COMPETING  
STANDARDS.

**SVGs compliment our  
other image types.**

# ■ Why are SVGs awesome?

- Smaller files (if used properly)

# ■ SVG vs JPG



SVG (0.5k)



JPG (12k)



# ■ Why are SVGs awesome?

- Smaller files (if used properly)
- HDPI ready

# SVG vs JPG



SVG (0.5k)



JPG (12k)

# ■ SVG vs JPG



SVG (0.5k)



JPG (21k)

# ■ Why are SVGs awesome?

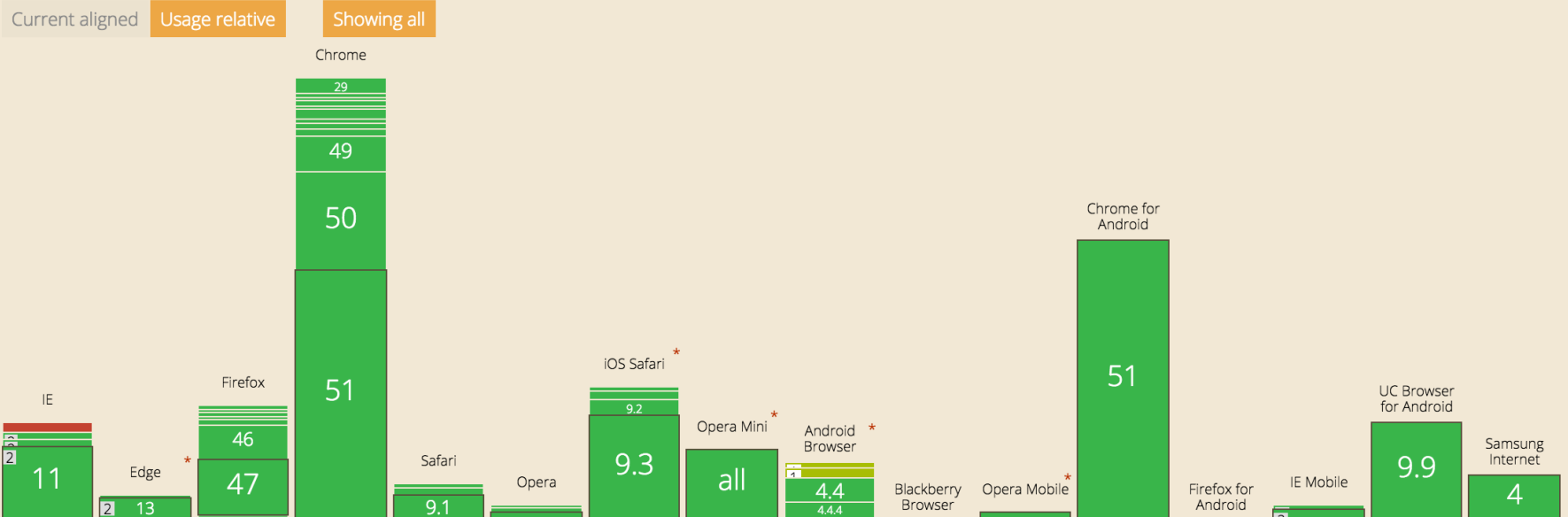
- Smaller files (if used properly)
- HDPI ready
- Fully supported in all modern browsers

# SVG (basic support) - REC

Global

96.22% + 1.03% = 97.25%

Method of displaying basic Vector Graphics features using the embed or object elements. Refers to the SVG 1.1 spec.





**97%**

---

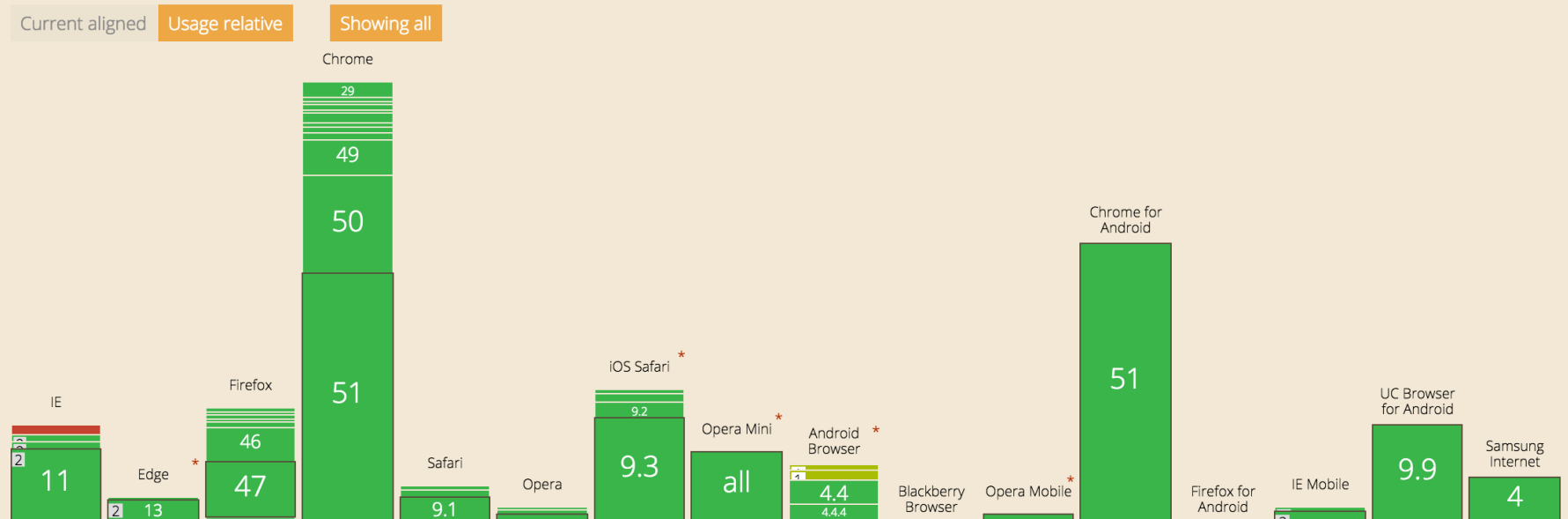
Global Browser Support

# SVG (basic support) 📄 - REC

Global

96.22% + 1.03% = 97.25%

Method of displaying basic Vector Graphics features using the embed or object elements. Refers to the SVG 1.1 spec.



# ■ Why are SVGs awesome?

- Smaller files (if used properly)
- HDPI ready
- Fully supported in all modern browsers
- Easy to animate
- Manipulate with CSS and JavaScript
- Perfect for responsive sites





A BOOK APART

*Brief books for people who make websites*

NO  
19

Chris Coyier

---

# PRACTICAL SVG

---

FOREWORD BY Val Head

People who exercise live longer, but those extra years are spent at the gym.







How do we use  
SVGs **correctly**  
and **efficiently**?

**Not every image**  
should (or can) be  
an SVG.



1.

# Image Tag

---

```

```



## HTML

```
1 
```

## CSS (SCSS)

```
1 img {  
2   width: 300px;  
3   height: 300px;  
4   margin: 50px auto;  
5   display: block;  
6 }
```





2.

# CSS Backgrounds

---

```
.svg {background: url("my-awesome.svg");}
```

```
HTML  
1 <div class="svg-container"></div>
```

```
CSS (SCSS)  
1 .svg-container {  
2   background: url('https://s3-us-west-2.amazonaws.com/s.cdn.io/747/modea-mark.svg');  
3   width: 300px;  
4   height: 300px;  
5   margin: 50px auto;  
6 }
```



SVG IS **NOT** LOADED  
INTO THE DOM

**3.**

# SVG Right In Your HTML

---



## HTML

```
1 <svg version="1.1" id="Layer_1" xmlns="http://www.w3.org/2000/svg"
  xmlns:xlink="http://www.w3.org/1999/xlink" x="0px" y="0px" viewBox="0 0 441 443"
  style="enable-background:new 0 0 441 443;" xml:space="preserve">
2 <g>
3   <path class="mountain-lg" d="M251.8,157.2161.4,106.4H190.3L251.8,157.2z M251.8,1221-
  91.9,159.2h183.8L251.8,122z"/>
4   <path class="mountain-sm" d="M179.3,177.1149.9,86.5h-99.9L179.3,177.1z
  M179.3,141.9L98.9,281.2h160.8L179.3,141.9z"/>
5   <path class="circle" d="M431.8,220.5c0,116.3-94.2,210.5-
  210.5,210.5C105,431,10.8,336.8,10.8,220.5C10.8,104.2,105,10,221.3,10
  C337.6,10,431.8,104.2,431.8,220.5z"/>
```

## CSS (SCSS)

```
1 svg {
2   width: 300px;
3   height: 300px;
4   margin: 20px auto;
5   display: block;
6
7   .mountain-sm {
8     fill: #3D3D3D;
9   }
10
11   .mountain-la {
```



**97%**

---

Global Usage - Inline SVG

**Why wouldn't we just  
use this every time?**

---

```
1 <?xml version="1.0" encoding="UTF-8" standalone="no"?>
2 <!-- Created with Inkscape (http://www.inkscape.org/) -->
3
4 <svg
5   xmlns:dc="http://purl.org/dc/elements/1.1/"
6   xmlns:cc="http://creativecommons.org/ns#"
7   xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
8   xmlns:svg="http://www.w3.org/2000/svg"
9   xmlns="http://www.w3.org/2000/svg"
10  xmlns:xlink="http://www.w3.org/1999/xlink"
11  xmlns:sodipodi="http://sodipodi.sourceforge.net/DTD/sodipodi-0.dtd"
12  xmlns:inkscape="http://www.inkscape.org/inkscape"
13  version="1.0"
14  width="4500"
15  height="2234"
16  viewBox="0 0 2752.766 1537.631"
17  id="svg2"
18  xml:space="preserve"
19  sodipodi:version="0.32"
20  inkscape:version="0.48.4 r9939"
21  sodipodi:docname="A_large_blank_world_map_with_oceans_marked_in_blue.svg"><metadata
22  id="metadata5398"><rdf:RDF><cc:Work
23    rdf:about=""><dc:format>image/svg+xml</dc:format><dc:type
24    rdf:resource="http://purl.org/dc/dcmitype/StillImage" /></cc:Work></rdf:RDF></metadata><sodipodi:namedview
25  inkscape:window-height="974"
26  inkscape:window-width="1677"
27  inkscape:pageshadow="2"
28  inkscape:pageopacity="0.0"
29  guidetolerance="10.0"
30  gridtolerance="10.0"
31  objecttolerance="10.0"
32  borderopacity="1.0"
33  bordercolor="#666666"
```



4.

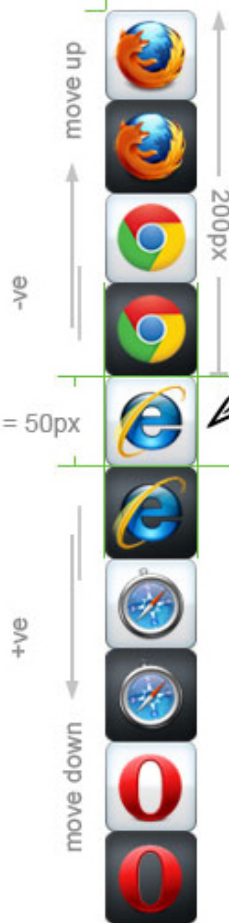
# SVG Sprite

---



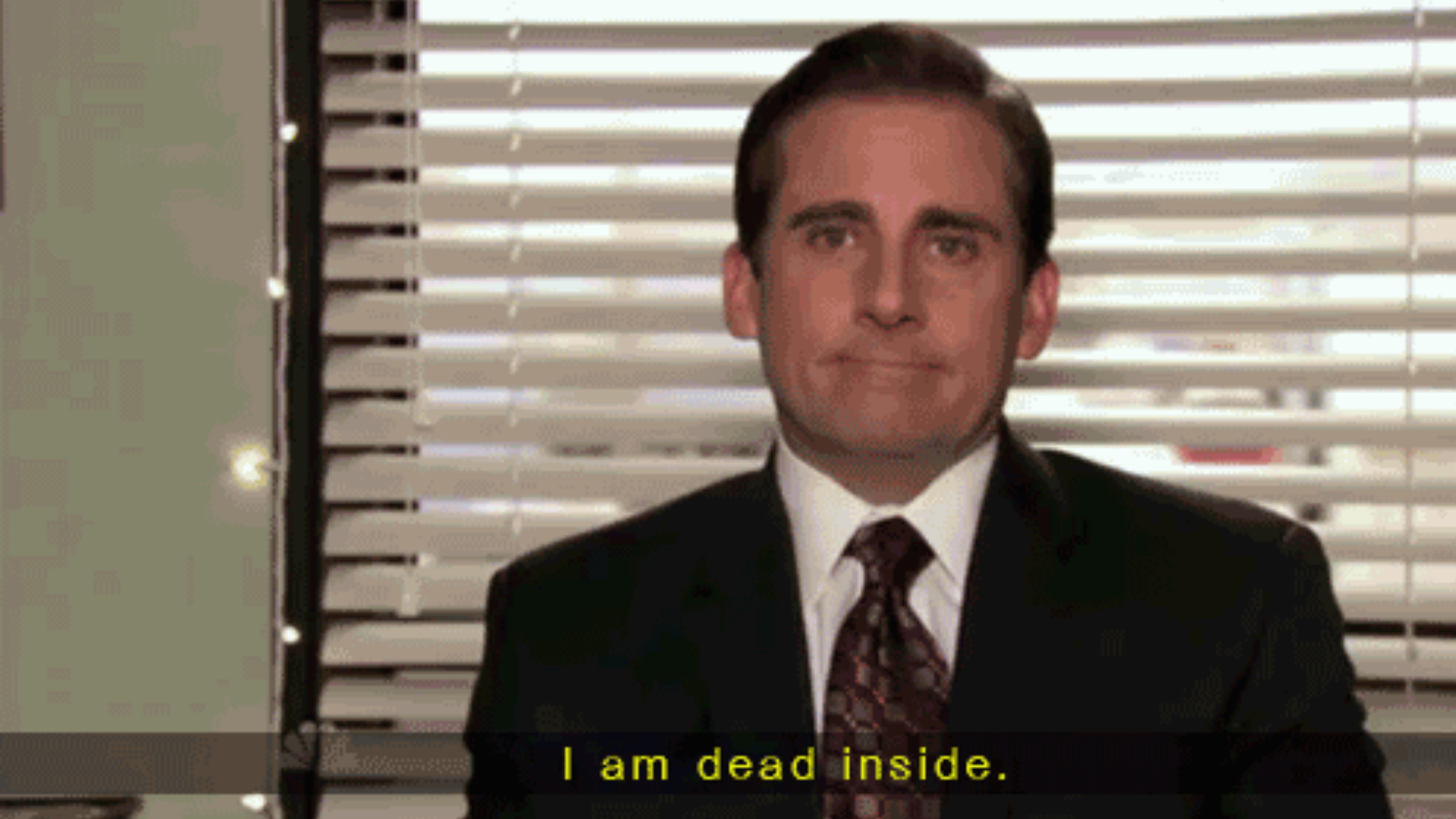


Starting point  
`background-position:0 0;`



Portion of image  
to display

`background-position:0 -200px;`



I am dead inside.

SVG sprites are  
**NOTHING** like this.

---

```
<svg width="0" height="0" style="display: none;">
```

```
</svg>
```

```
<svg width="0" height="0" style="display: none;">
```

```
  <symbol id="svg-facebook" viewBox="0 0 50 50">
```

```
</symbol>
```

```
  <symbol id="svg-twitter" viewBox="0 0 50 50">
```

```
</symbol>
```

```
</svg>
```

```
<svg width="0" height="0" style="display: none;">
```

```
  <symbol id="svg-facebook" viewBox="0 0 50 50">
```

```
    <title>Facebook</title>
```

```
    <!-- svg code goes here -->
```

```
  </symbol>
```

```
  <symbol id="svg-twitter" viewBox="0 0 50 50">
```

```
    <title>Twitter</title>
```

```
    <!-- svg code goes here -->
```

```
  </symbol>
```

```
</svg>
```







## JUHA JAAKKOLA, M.D.

Foot & Ankle

★★★★★ 5/5

REQUEST AN APPOINTMENT

Bio

Philosophy

Accepted Insurance

Conditions

Treatments

### Medical School

Medical College of Georgia (Augusta, GA)

### Residency

Georgia Baptist/Atlanta Medical Center (Atlanta, GA)

### Fellowship

```
<div class="social-icons">  
  
  <svg>  
    <use xlink:href="#svg-facebook"></use>  
  </svg>  
  
  <svg>  
    <use xlink:href="#svg-twitter"></use>  
  </svg>  
  
</div>
```

```
1 <svg width="0" height="0" style="display: none;">
2   <!-- We are using an SVG sprite for our vectors. Paste them here and they'll be usable anywhere throughout the site! -->
3
4   <symbol id="modea-logo" viewBox="0 0 605.34 88.43">
5     <title>Modea Logo</title>
6     <path class="triangle triangle-sm" d="M87.21,25.8134,58.83H53.24Zm0-19.43-50.8,88H138Z" transform="translate(-2.68 -6.36)" />
7     <path class="triangle triangle-lg" d="M47.12,36.81,74.74,84.62H19.51Zm0-19.43-44.45,77H91.57Z" transform="translate(-2.68 -6.36)" />
8     <polygon class="modea-m" points="219.4 88.28 219.4 57.07 205.63 77.49 205.32 77.49 191.71 57.3 191.71 88.28 181.07 88.28
205.63 60.74 218.48 40.47 230.11 40.47 230.11 88.28 219.4 88.28" />
9     <path class="modea-o" d="M305.62,94.8c-14.69,0-25.24-10.71-25.24-23.94V70.7c0-13.23,10.71-24.1,25.4-24.1S331,57.31,331,70.7
15c0,13.31-10.71,24.1-25.4,24.1m14.46-24a14.29,14.29,0,0,0,0-14.46-14.61c-8.42,0-14.31,6.5-14.31,14.54v.
15a14.29,14.29,0,0,0,14.46,14.61A14.08,14.08,0,0,0,320.08,71Z" transform="translate(-2.68 -6.36)" />
10    <path class="modea-d" d="M397.72,94.72H378.6V46.83h19.13c15.38,0,26,10.33,26,23.79v.
15c0,13.46-10.63,23.94-26,23.94m14.76-23.94c0-8.49-6-14.38-14.77-14.38h-8.34V85.16h8.34c8.8,0,14.77-5.81,14.77-14.31Z" transfo
-6.36" />
11    <polygon class="modea-e" points="468.64 88.28 468.64 40.47 505.59 40.47 505.59 49.88 479.35 49.88 479.35 59.52 502.45 59.52
68.93 479.35 78.95 505.97 78.95 505.97 88.28 468.64 88.28" />
12    <path class="modea-a" d="M596.93,94.65l-4.51-10.71H571.68l-4.51,10.71h-11l21-48.2h9.94l21,48.2Zm-14.84-35.5-6.5,15.53h13Z"
transform="translate(-2.68 -6.36)" />
13  </symbol>
14
15  <symbol id="hamburger-menu" viewBox="0 0 103.77 76.4">
16    <title>Hamburger Menu</title>
17    <line class="hamburger" x1="8.15" y1="8.32" x2="95.5" y2="8.15" />
18    <line class="hamburger" x1="8.18" y1="38.28" x2="95.52" y2="38.12" />
19    <line class="hamburger" x1="8.27" y1="68.25" x2="95.61" y2="68.08" />
20  </symbol>
21
22  <symbol id="fa-minus-circle" viewBox="0 0 1792 1792">
23    <path d="M1344 960v-128q0-26-19-45t-45-19h-768q-26 0-45 19t-19 45v128q0 26 19 45t45 19h768q26 0 45-19t19-45zm320-64q0 209
279.5-385.5 103-385.5-103-279.5-279.5-103-385.5 103-385.5 279.5-279.5 385.5-103 385.5 103 279.5 279.5 103 385.5z" />
24  </symbol>
25
26  <symbol id="fa-plus-circle" viewBox="0 0 1792 1792">
27    <path d="M1344 960v-128q0-26-19-45t-45-19h-256v-256q0-26-19-45t-45-19h-128q-26 0-45 19t-19 45v256h-256q-26 0-45 19t-19 45
19h256v256q0 26 19 45t45 19h128q26 0 45-19t19-45v-256h256q26 0 45-19t19-45zm320-64q0 209-103 385.5t-279.5 279.5-385.5
```

**1. Image Tag**

**2. CSS Backgrounds**

**3. SVG Right In Your HTML**

**4. SVG Sprite**

Include the **SVGInjector** script on your page.

```
<script src="svg-injector.min.js"></script>
```

Add some SVG `img` tags.

```
  

```







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```

Add some SVG `img` tags.

```
  

```



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	<img>	CSS	HTML	Sprite
Smaller file sizes	✓	✓	?	✓
DOM Manipulation	✗	✗	✓	✓
Caching	✓	✓	✗	✓
Clean HTML	✓	✓	✗	✓
Repeating the same SVG	✓	✓	✗	✓
Implementation speed	✓	✓	✓	?
Animation	?	?	✓	✓
Icon sets	✗	✗	✗	✓
HDPI & any width/height	✓	✓	✓	✓

**97%**

---

Global Usage - Inline SVG

	<img>	CSS	HTML	Sprite
Smaller file sizes	✓	✓	?	✓
DOM Manipulation	✗	✗	✓	✓
Caching	✓	✓	✗	✓
Clean HTML	✓	✓	✗	✓
Repeating the same SVG	✓	✓	✗	✓
Implementation speed	✓	✓	✓	?
Animation	?	?	✓	✓
Icon sets	✗	✗	✗	✓
HDPI & any width/height	✓	✓	✓	✓

# ■ Why are SVGs awesome?

- Smaller files
- Fully supported in all modern browsers
- Easy to animate
- Manipulate with CSS and JavaScript
- Always optimized for HDPI screens
- Perfect for responsive sites

■ Why are SVGs **awesome**?

They save you time!

# THANKS!

Let's chat.

---

Slides

Twitter

Email

Codepen

[bit.ly/wcraleigh-svg](https://bit.ly/wcraleigh-svg)

[@colinlord](https://twitter.com/colinlord)

[hello@colinlord.com](mailto:hello@colinlord.com)

[codepen.io/colinlord](https://codepen.io/colinlord)

