HOORAY
ICON FONTS

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ARTIFACT
CONFERENCE

Hello.

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Let’s talk about icons

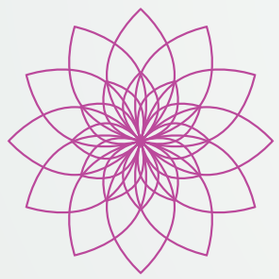
“Icons are little miracle workers. They circumvent language obstacles, give concise warnings and directions, convey our moods and show which buttons to press.”

-John Hicks

Icons give us a shared language

This is extremely valuable in the mobile/responsive context

As screen real estate shrinks, icons give us a way to clearly communicate ideas, actions, and instructions to our users with a minimal footprint.



How do we display icons?

Images
High overhead, painful to maintain, resolution dependent

CSS Sprites
Lower overhead, difficult to create, resolution dependent

SVG
Scalable, style-able, good support, higher overhead

We need more responsive solutions

Responsive icon needs

We need icons that scale independently of resolution

We need icons that can be styled through CSS

We need icons that are small in file size

We need icons that can be downloaded in a single file to reduce server requests

ICON FONTS allow us to do all those things!

(Actually, this is not exactly a new idea)

Using fonts for icons in our UI

Pros:

Scalable

Single file request

Styles with CSS

Well-supported

Cons:

Monochromatic

Tricky to make

Accessibility issues

Can be tricky to control

Icon font options

Go grab one of the dozens of high-quality, open-source icon fonts available online

Purchase a commercial icon font

Use an icon-font hosting service like Pictos

Build your own

Using existing icon fonts

Plenty of high-quality, open-source icons available

Many include @font-face kits and code samples

You may not be able to find every icon you need

Dependent upon the icon's style

Must be careful to avoid bloat

Building your own

Services like the Icomoon, Fontello, & Pictos allow you to build custom icon fonts

Some allow you to choose the icons you want while others allow you to upload your own artwork

For greater control, you can use programs like Illustrator, Inkscape, Glyphs, FontForge, and FontLab to build your own icon font

Using icon fonts

There are multiple ways to display icon fonts based on coding standards, font construction, and accessibility considerations

Despite the differences in implementations, best practices are starting to emerge regarding icon font syntax...

Icons mapped to Basic Latin

HTML

```
<p><span class=“icon”>q</span> Brad Frost
loves QR Codes!</p>
```

CSS*

```
.icon {
    font-family: “Your Icon Font”;
}
```

Result: Brad Frost loves QR Codes!

** @font-face is assumed*

Icons mapped to Basic Latin

Pros:

Easy to use

No complex CSS

Single rule drives all icons

Cons:

Accessibility

Confuses the robots

Falls back to a letter that has no business being there

PUA and common symbol encoding

Unicode includes several Private Use values that are not reserved for specific languages or characters

The Basic Multilingual Plane includes 6,400 code points and is widely used for icon font encoding

PUA encoded glyphs will fallback to an empty glyph if the font fails or if @font-face is not supported

BMP encoding runs from E000 - F8FF

You can also use Unicode values that map to common symbols as a fallback

Unicode mapping & generated content

HTML

```
<p class=“icon-heart”>I love icons!</p>
```

CSS*

```
.icon-heart:before {
    font-family: “Your Icon Font”;
    content: “\2661”;
    display: inline-block;
}
```

Result: ♥ I love icons!

** @font-face is assumed*

Demo

Using generated content

Unicode mapping & generated content

Pros:

Leaves content untouched

You can use common unicode values for symbols as fallbacks

PUA unicode values will fallback to an empty glyph

Cons:

Unicode mapping can be hard to remember

Unless you create your own, unicode mapping might not meet your requirements

Making it class-based bloats CSS

Using the data-icon attribute

HTML

```
<p data-icon="&#x2661;">I love icons!</p>
```

CSS*

```
*[data-icon]:before {
    font-family: "Your Icon Font";
    content: attr(data-icon);
    display: inline-block;
}
```

Result: ♥ I love icons!

** @font-face is assumed*

Demo

Using the data-icon attribute

Using the data-icon attribute

Pros:

Nice and semantic

No need to use extra classes

Cons:

Not as human readable

...hold up though!

Using generated content with data-icon still leaves us with accessibility issues.

Generated content will still be read by screen readers.

Which could be awkward.

Using the aria-hidden attribute

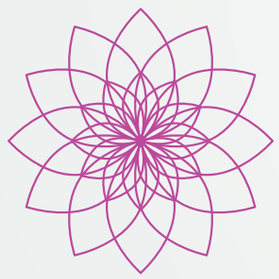
HTML

```
<p><span data-icon="&#xE001;" aria-hidden="true">
</span>I love icons!</p>
```

CSS*

```
*[data-icon]:before {
    font-family: "Your Icon Font";
    content: attr(data-icon);
    display: inline-block;
    speak: none;
}
```

Result: ♥ I love icons!



** @font-face is assumed*

Demo

The still even-more awesome way to accessibly use generated content & data-icon

Using the aria-hidden attribute

Pros:

Semantically clean

Well supported

Creates purely visual content

Cons:

Requires extra markup

OK, none really...

Using ligatures for icon fonts

HTML

```
<p><span class=“icon”>twitter</span> Tweet
that!</p>
```

CSS*

```
.icon {
    font-family: “ligature icons”;
    text-rendering:  optimizeLegibility;
}
```

Result: twitter Tweet that!

** @font-face is assumed*

Using ligatures for icon fonts

Pros:

Easy to use

Falls back to meaningful text

If the font is mapped correctly you can combine techniques

Cons:

Must use a ligature-mapped icon font

Extra text in content can be weird

Ligature support is uneven

Multicolor Icon Fonts

HTML

```
<p><span data-icon="&#xF100;" class="maps
multi"><span data-icon="&#xF101;"></span></p>
```

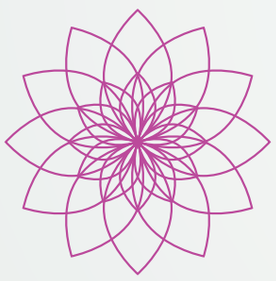
CSS*

```
span.multi {
   position: relative;
}
span.multi span {
   position: absolute;
   top:0;
   left:0;
}
```

Result: 

** @font-face is assumed*

Demo



Taking icon fonts further with multicolor icons

Using multicolor icon fonts

Pros:

Versatile

Confuses people that say you can't do it

Cons:

Icon font must be built with multicolor pieces included

Requires extra markup

Tips for displaying icon fonts

Normalize them

font-weight, font-style, font-variant, text-transform…

Using inline-block gives you more control

also ensures ‘click-ability’

Although scalable, not every size displays great

try to scale along the font’s design grid

Base64 encode your fonts

avoids cross-domain Firefox issues

Tips for displaying icon fonts

Use text-rendering: optimizeLegibility for ligatures

also enables kerning pairs

Use -webkit-font-smoothing: antialiased &
-moz-osx-font-smoothing: grayscale;

makes icons crisper in webkit/gecko browsers

Use vertical-align to control baselines on inline icons

not all icon fonts will align to the baseline the same

Wait a minute...

I heard that we shouldn't use Icon Fonts!

Filament Group suggests you use SVG

Lonely Planet & Chis Coyier just switched to SVG!

SVG *is* pretty awesome

Native vector artwork

Built-in support for multiple colors

Accessible through the DOM

Can do cool things like animating separate parts

More styling options through CSS

...but it's not all roses

No support IE8>, Android 2.3 & earlier

Inline SVG eliminates extra requests, but bloats code and must be dynamically inserted to be efficient

Complex assembly without build processes like Grunticon

Likewise for fallbacks

Higher overhead than Icon Fonts

What about icon font support?

No Opera Mini

No Windows Phone 7 - 7.8

No Android 2.1

No BlackBerry 4&5 stock browser

Edge cases in most cases, but worthy of having fallback strategies in place

So wait, which is better?

Icon Fonts are not right for every project.

Before using icon fonts or an icon font service, make sure you have a strategy in place that matches your code aesthetics.

Icon Font Resources

Chris Coyier's Big List of Icon Fonts

http://css-tricks.com/flat-icons-icon-fonts/

Interactive Unicode Table

http://unicode-table.com

Icomoon

http://icomoon.io

Github: Building Octicons

https://github.com/blog/1135-the-making-of-octicons

Filament Group's Icon Font Compatibility Table

https://docs.google.com/spreadsheet/ccc?key=0Ag5_yGvxpINRdHFYeUJPNnZMWUZKR2ItMEpRTXZPdUE#gid=0

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Want these slides?

http://www.slideshare.net/jameswillweb

Want the icon font used in the demos?

http://jameswillweb.github.io/chunky-mobile