

UX**MOBILE**IMMERSION \*

**Wednesday, April 15 8:30 am–5:30 pm**

# Adaptive Designs Across Devices

Aaron Gustafson and  
Jenn Lukas

# BEYOND RESPONSIVE

Aaron Gustafson  
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[slideshare.net/AaronGustafson](http://slideshare.net/AaronGustafson)

Jenn Lukas  
@JennLukas  
[slideshare.net/JennLukas](http://slideshare.net/JennLukas)



THIS IS NOT  
THE WEB.

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1

**“ [In 2008] the majority of our visitors saw our website in Internet Explorer on a Windows computer on a minimum 1,024 pixel wide screen. Times have really changed.**

**Jason Samuels  
IT Manager,  
National Council on Family Relations**  
Source



**“ Windows users used to comprise 93.5% of our web visits. Now that percentage is 68.2%.**

**“**The percentage visiting from a mobile device or tablet ... was just 0.2% in 2008. It has since grown exponentially to **14.4%** today.



**“**Four years ago 74.9% of our web visitors used Internet Explorer. That number has fallen to 19.7%. Firefox now comprises 20%, Safari 16.7%, and Chrome 37%.

**“**In the second quarter of 2008 we detected 71 different screen resolutions among our visitors. In the first quarter of 2014 we detected **1062**

**“**In 2008, 27 screen resolutions showed up with more than 10 visits, in 2014 that number was **200**

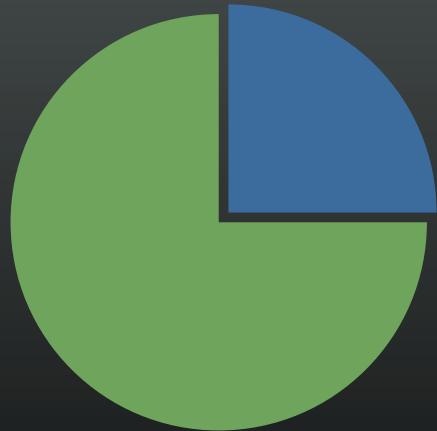


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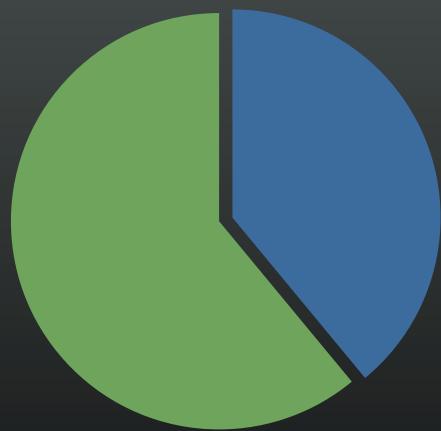
5





“ Smartphones have reached  
**75% penetration** in the US...

[Source](#)

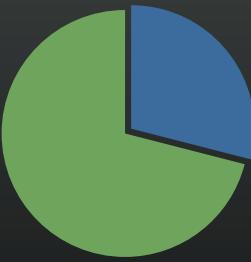


...but that's concentrated in  
**61% of households**

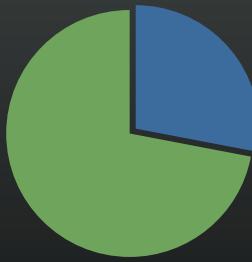
## U.S. Smartphone penetration #'s released in March 2015



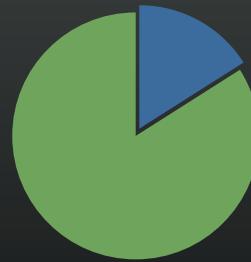
< \$30k  
50%



\$30-50k  
71%



\$50-75k  
72%



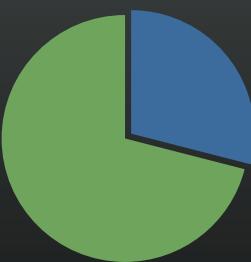
>\$75k  
84%

[Source](#)

## U.S. Smartphone penetration #'s released in March 2015



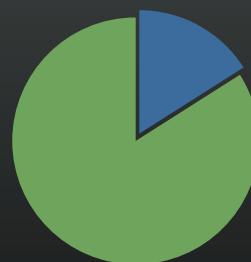
< \$30k  
50%



\$30-50k  
71%



\$50-75k  
72%

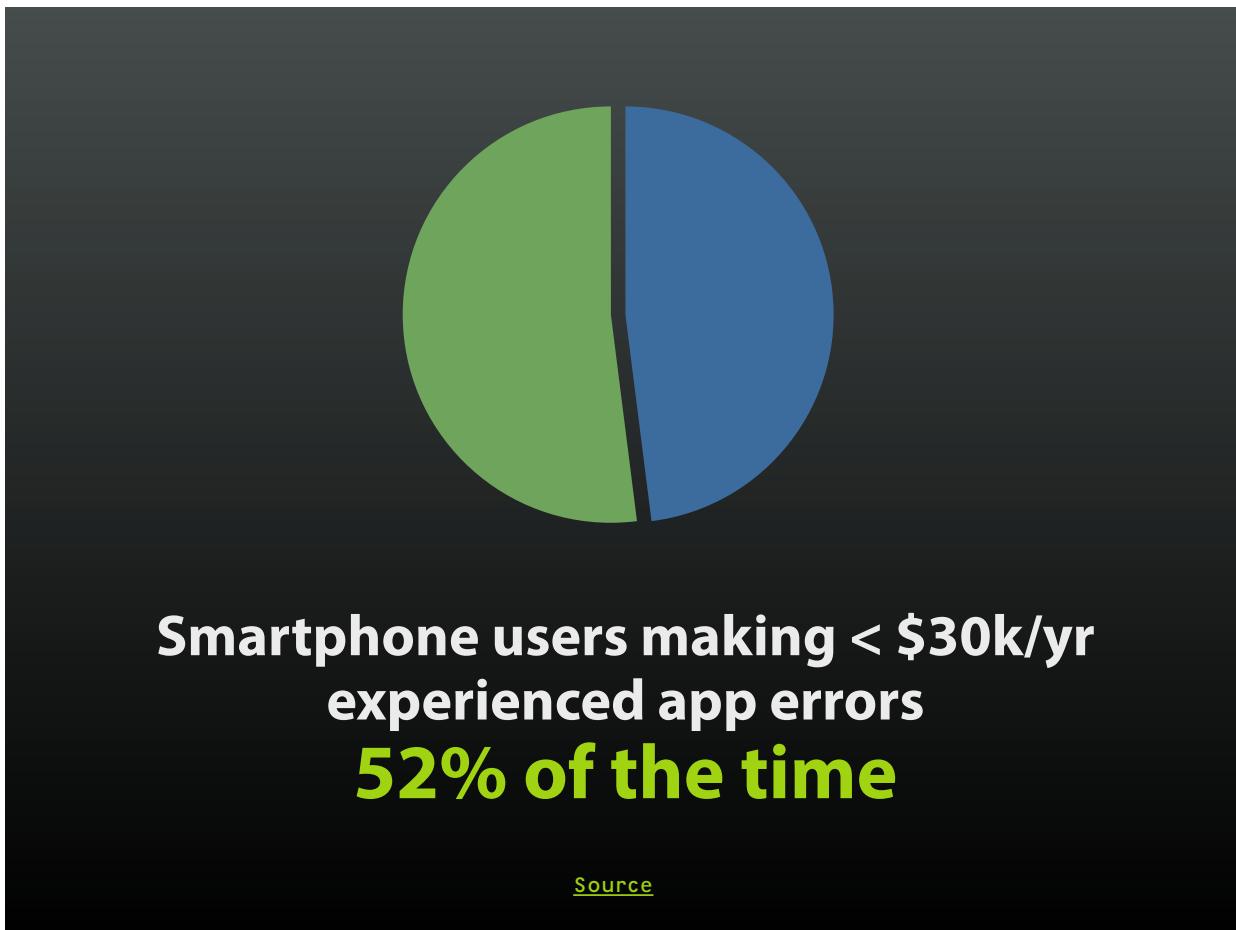
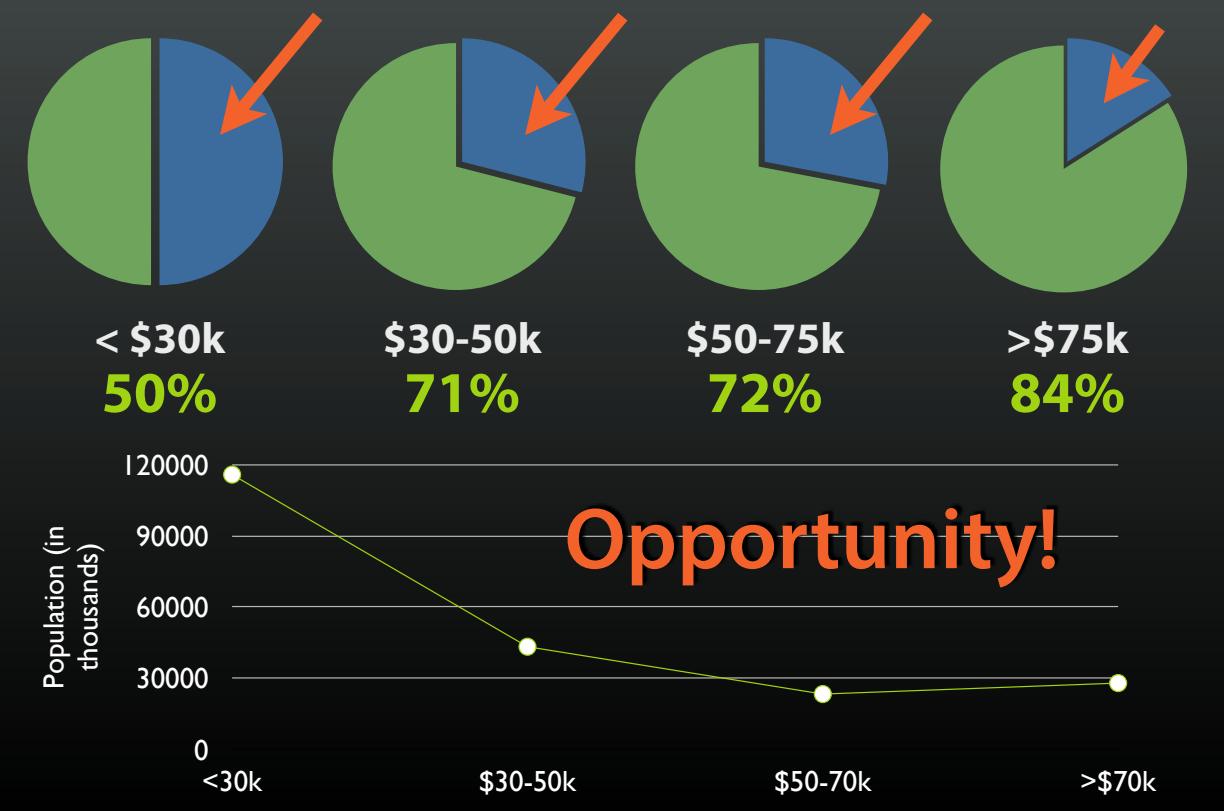


>\$75k  
84%

\$30k = Average US income 2013

[Source](#)

## U.S. Smartphone vs. Income distribution



Source



## Galaxy S5

5.1" (1920 × 1080)

2GB RAM

16GB Storage

16MP Camera

2.5GHz Quad-core

Android 4.4

\$799



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5.1" (1920 × 1080)

2GB RAM

16GB Storage

16MP Camera

2.5GHz Quad-core

Android 4.4

\$799



## Galaxy S5

5.1" (1920 × 1080)  
2GB RAM  
16GB Storage  
16MP Camera  
2.5GHz Quad-core  
Android 4.4  
\$799

## Cloud FX

3.5" (480 × 320)  
128MB RAM  
256MB Storage  
2MP Camera  
1GHz Single-core  
Firefox OS 1.3  
\$35



## Galaxy S5

5.1" (1920 × 1080)  
2GB RAM  
16GB Storage  
16MP Camera  
2.5GHz Quad-core  
Android 4.4  
\$799



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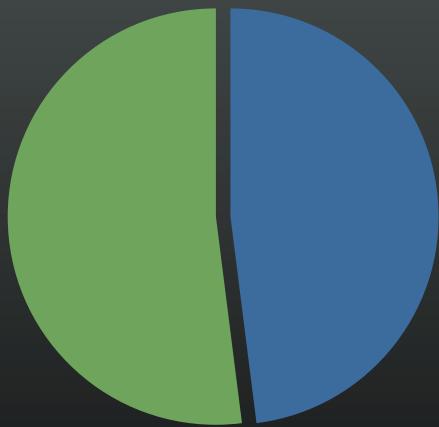
## Galaxy S5

5.1" (1920 × 1080)  
2GB RAM  
16GB Storage  
16MP Camera  
2.5GHz Quad-core  
Android 4.4  
\$799

## Dash JR K

3.5" (480 × 320)  
256 MB RAM  
512MB Memory  
2MP camera  
1.3 GHz Dual-core  
Android 4.4  
\$43

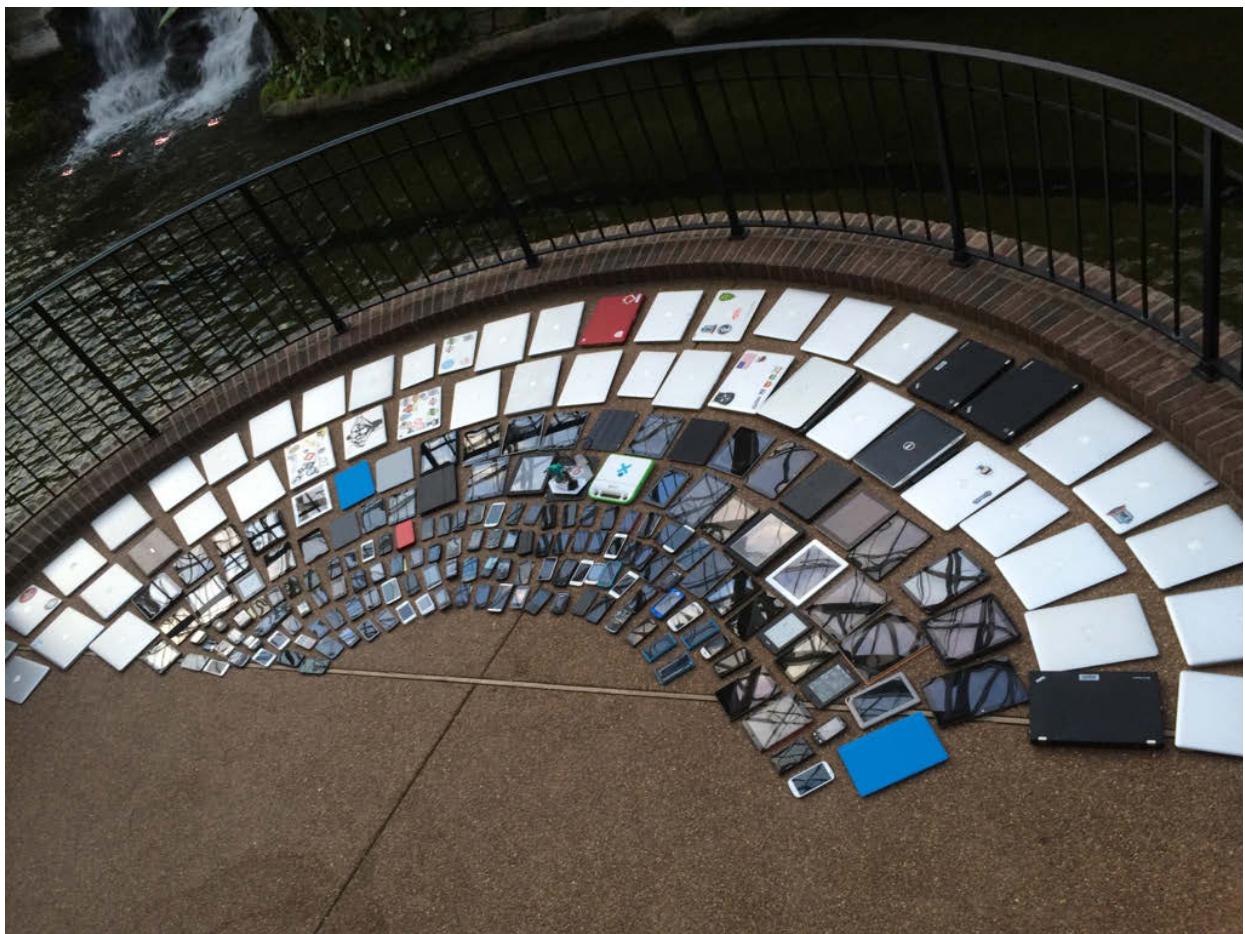


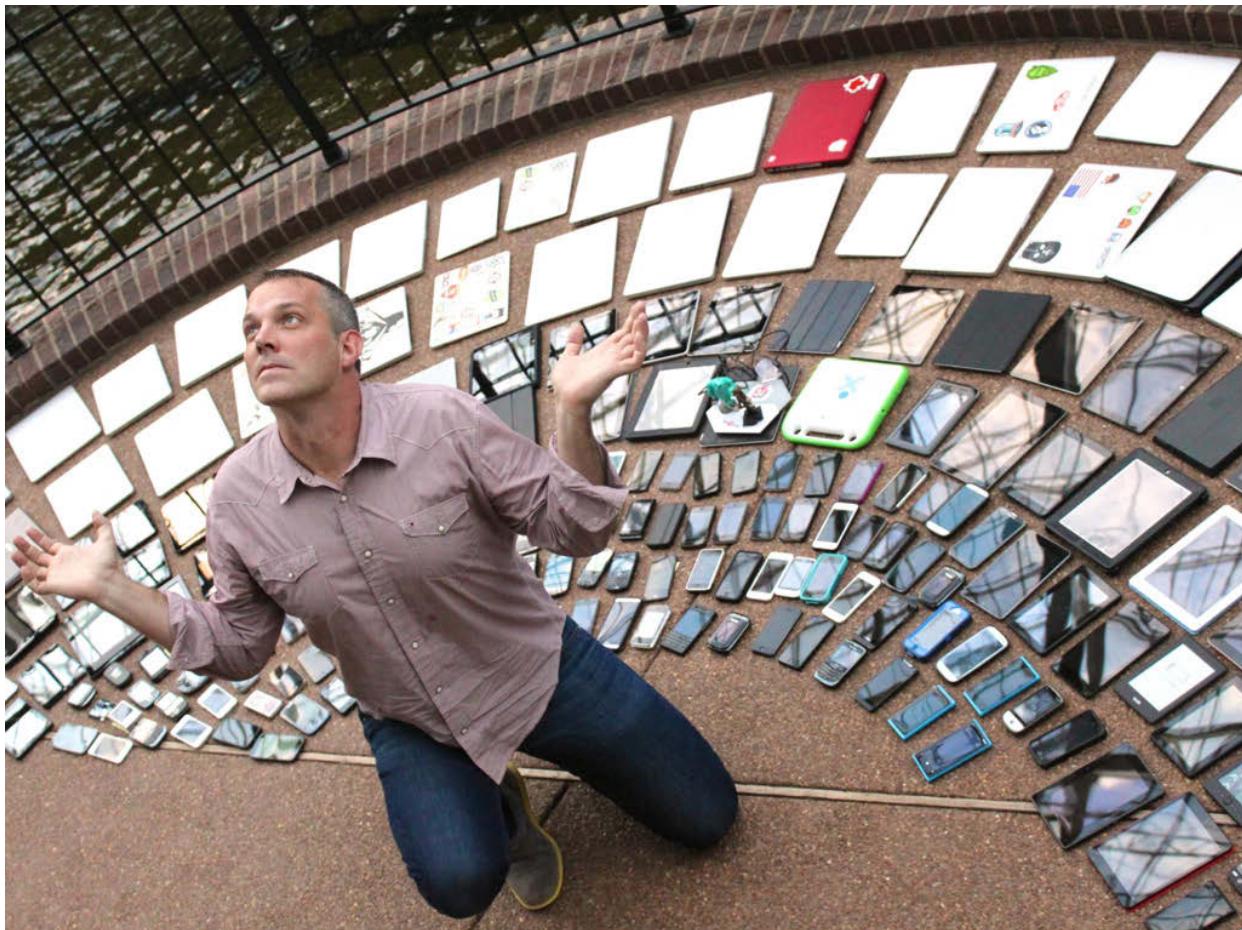
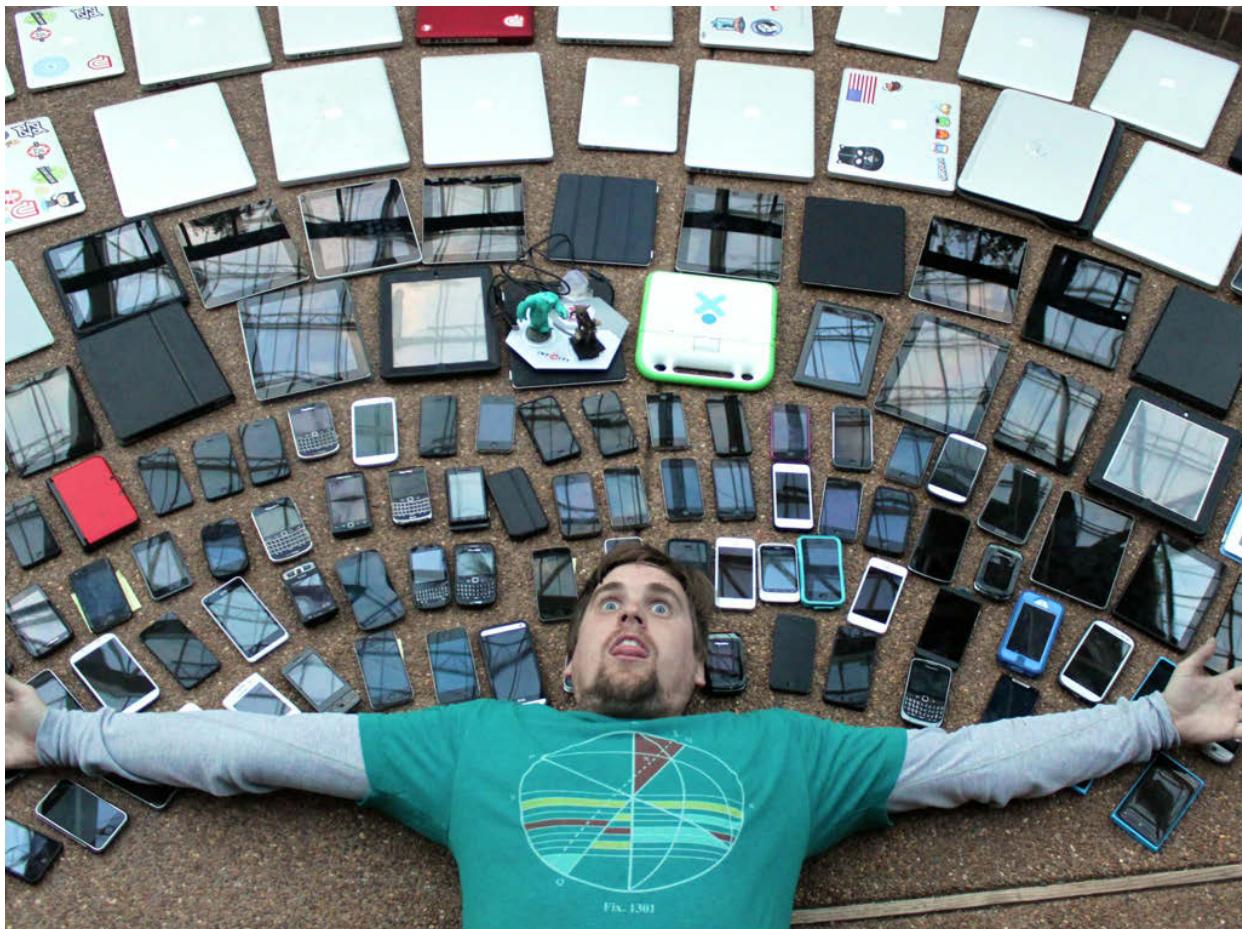


**As of Q4 2014, 62% of new  
non-phone AT&T subscriptions are  
connected cars**

[Source](#)







15

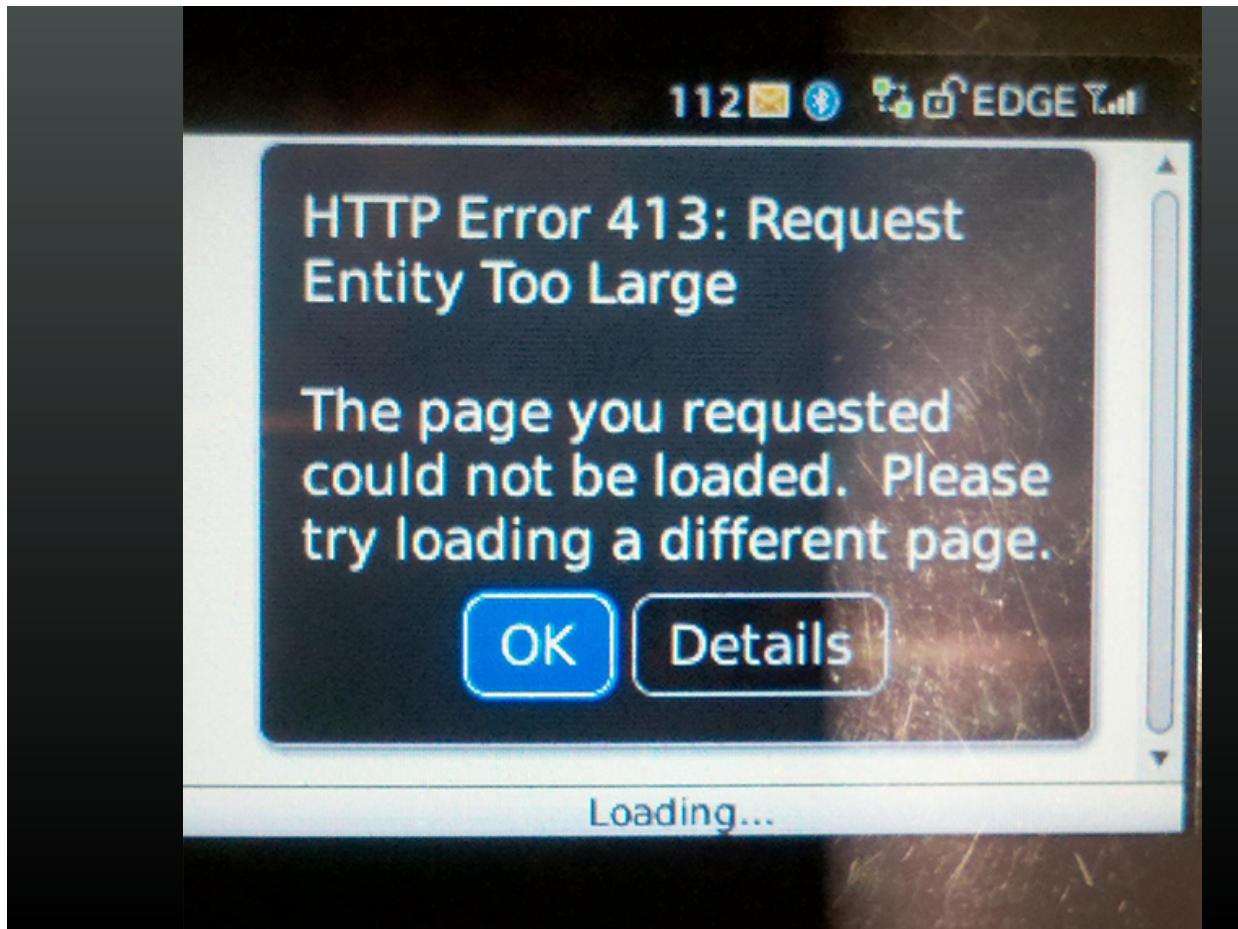


# We DON'T know



We DON'T know

Even when  
we think  
we know,  
**WE ARE  
PROBABLY  
WRONG**



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**the guardian**

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## Sky's internet service mistakenly blocks web-critical plugin

Sky blocked jQuery, a plugin crucial to the operation of many of the internet's biggest websites, after wrongly classifying it as malware on Sunday night

**Alex Hern**  
[Follow @alexhrn](#) [Follow @guardiantech](#)  
theguardian.com, Tuesday 28 January 2014 07.51 EST  
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Parts of the web were broken after a crucial plugin was mistakenly blocked.  
Photograph: Culture/PA/Monster

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BSkyB

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**More on this story**



BSkyB signs new five-year deal for exclusive rights to HBO TV catalogue  
Broadcaster struck



Today's best video  
Japan's Typhoon Vongfong seen from International Space Station - video  
Nasa footage shows the powerful eye of Typhoon Vongfong as it makes its way towards Okinawa, Japan



Ukrainian Darth Vader makes election run  
Who knew Star Wars villain Darth Vader was in fact a Ukrainian Cossack at heart?



Robotic suit helps explore ancient wreck  
New artifacts found in Greek island shipwreck, which sank in first century BC



Isis video shows street battle in Kobani  
Video posted on social

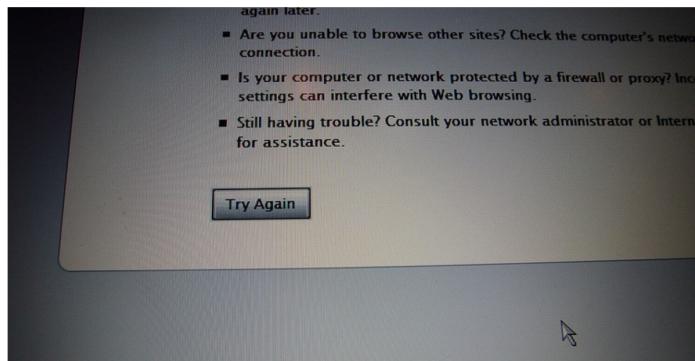
The Switch

## FCC to Marriott: No, you can't force your customers onto terrible hotel WiFi



By Brian Fung October 3 Follow @b\_fung

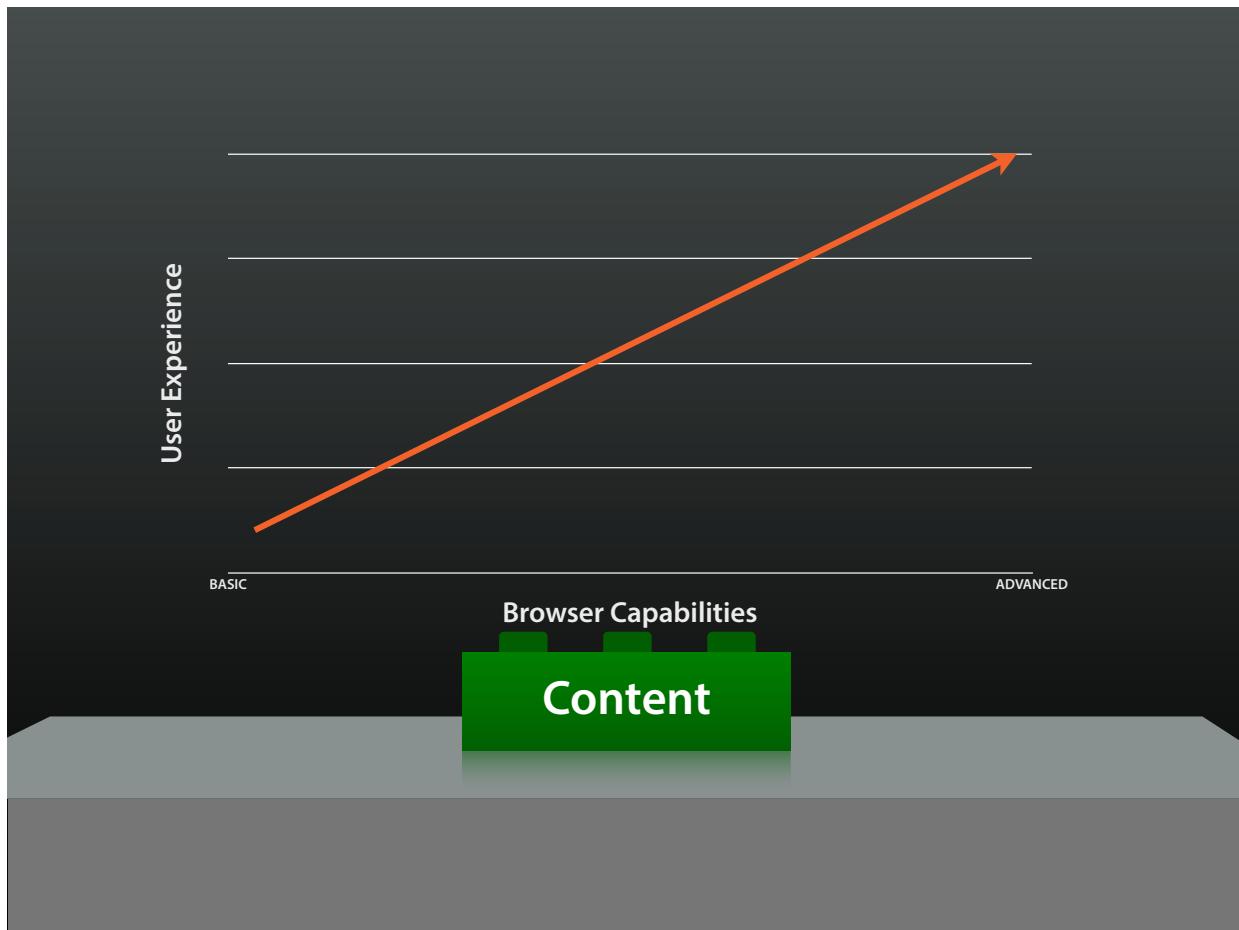
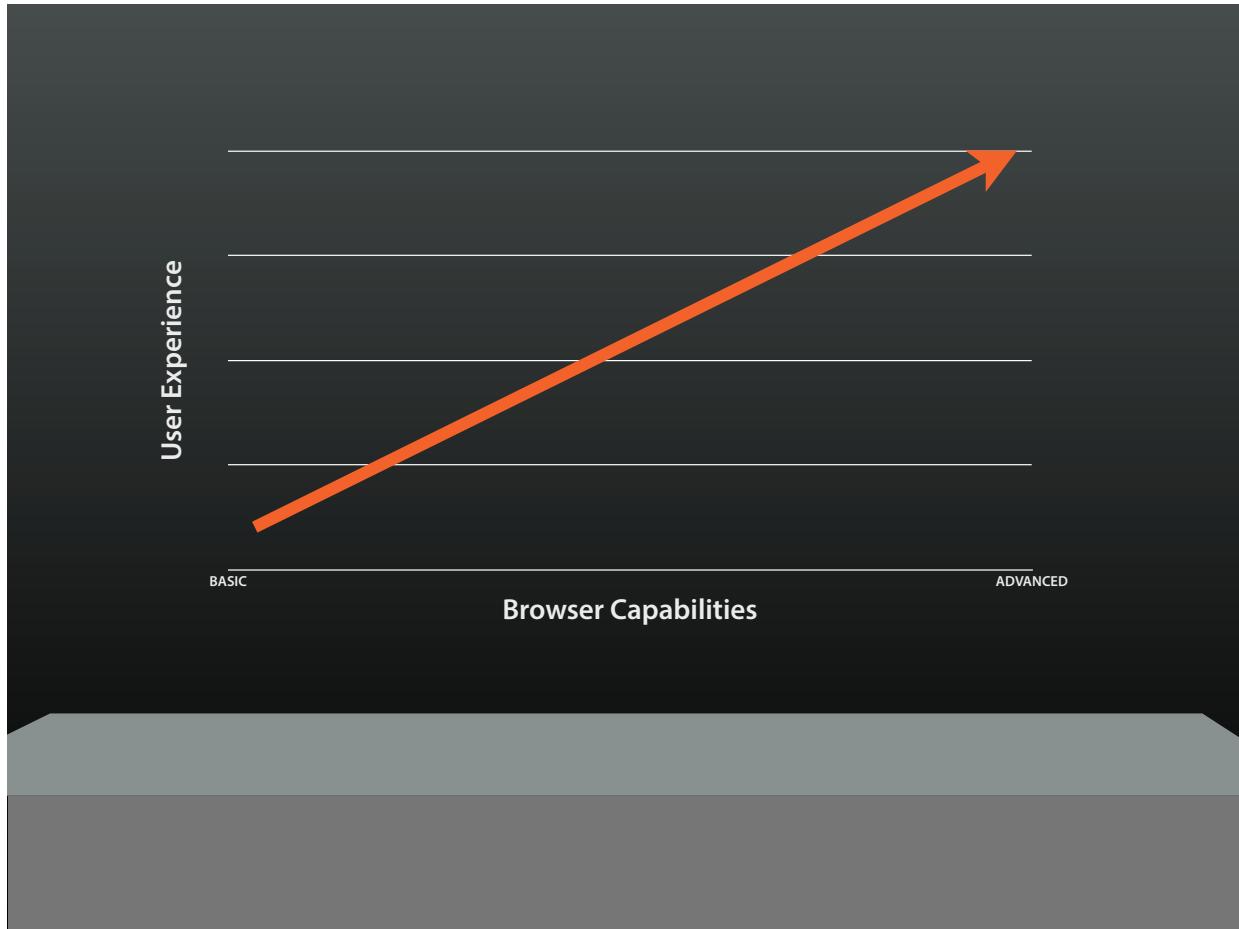
Advertisement

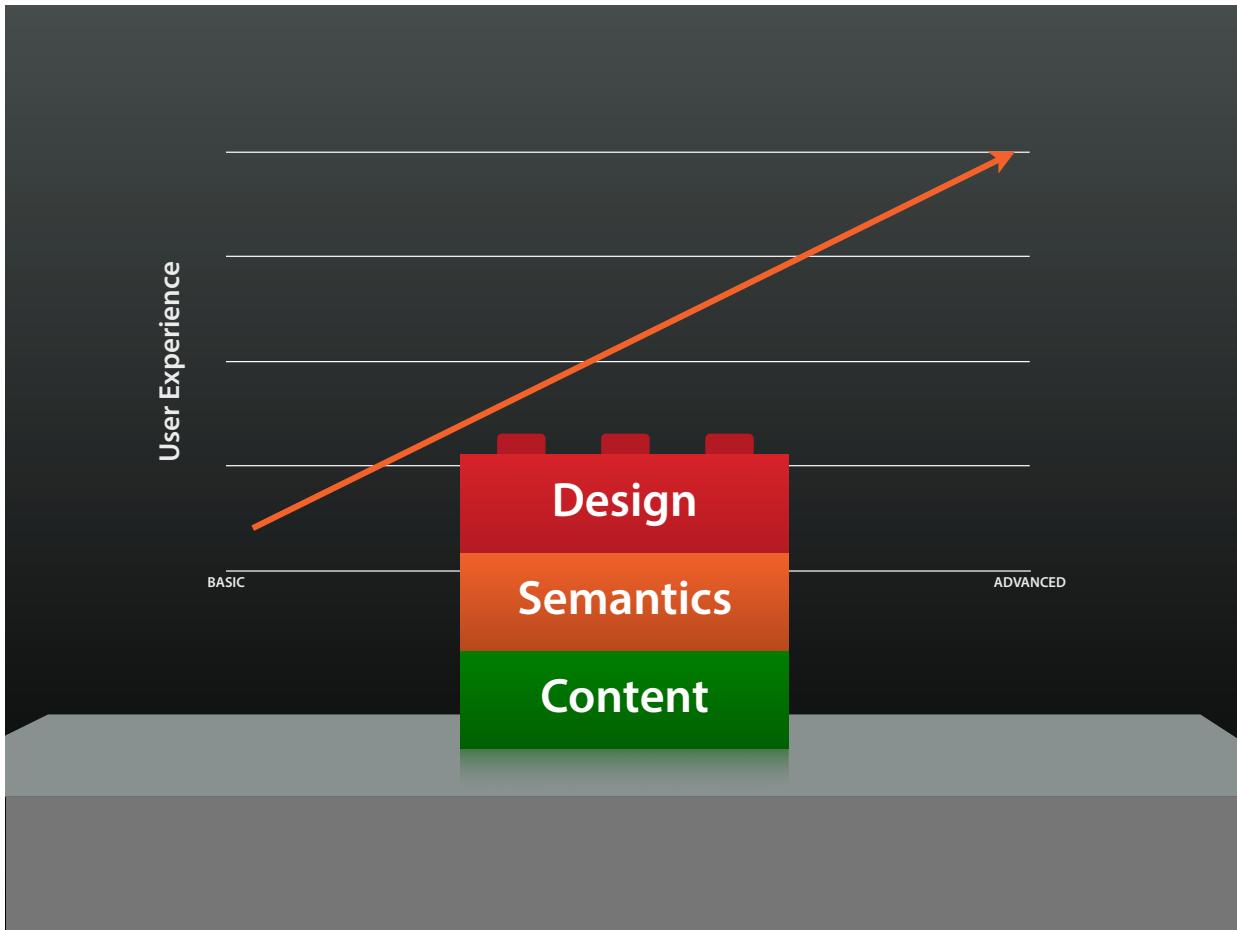
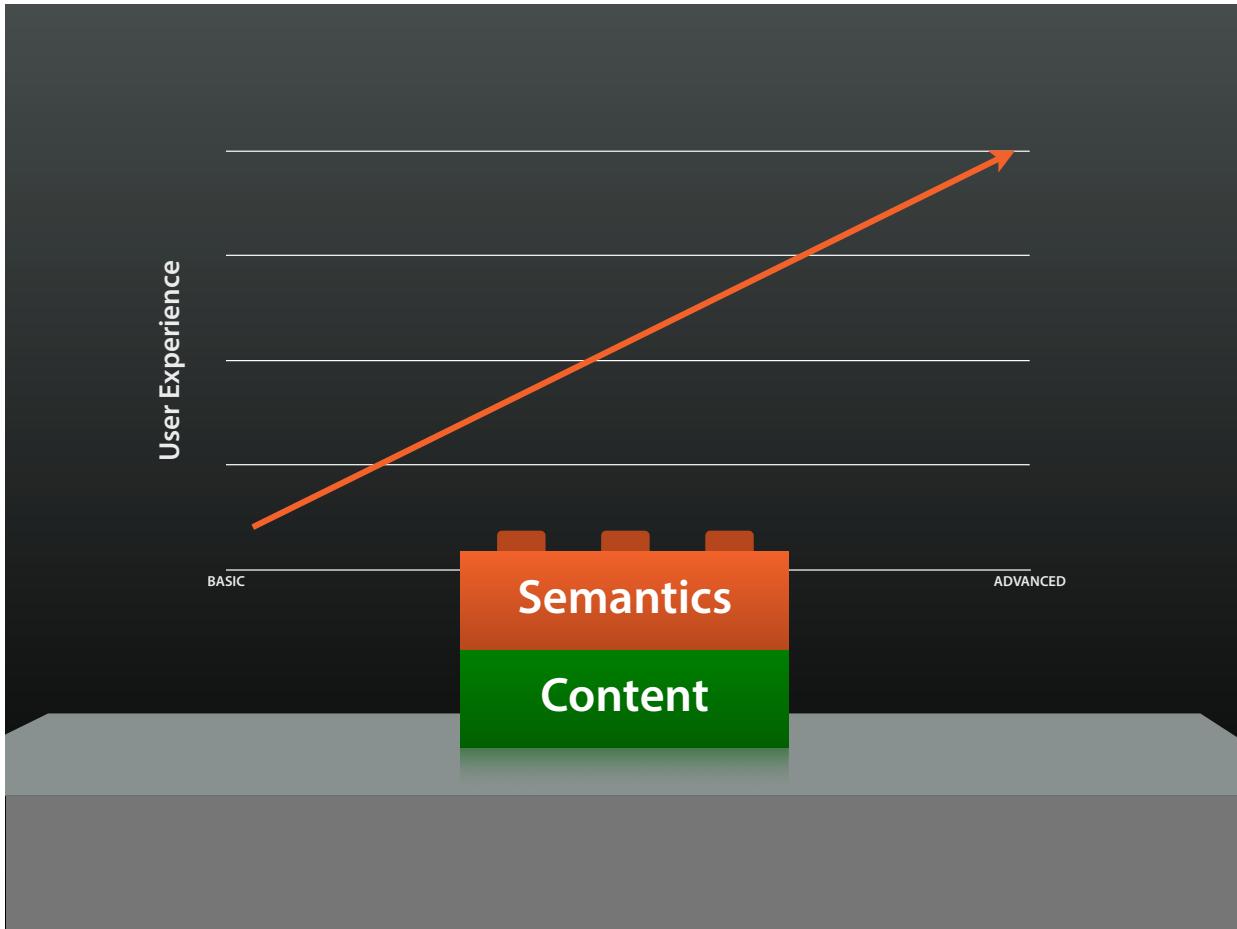


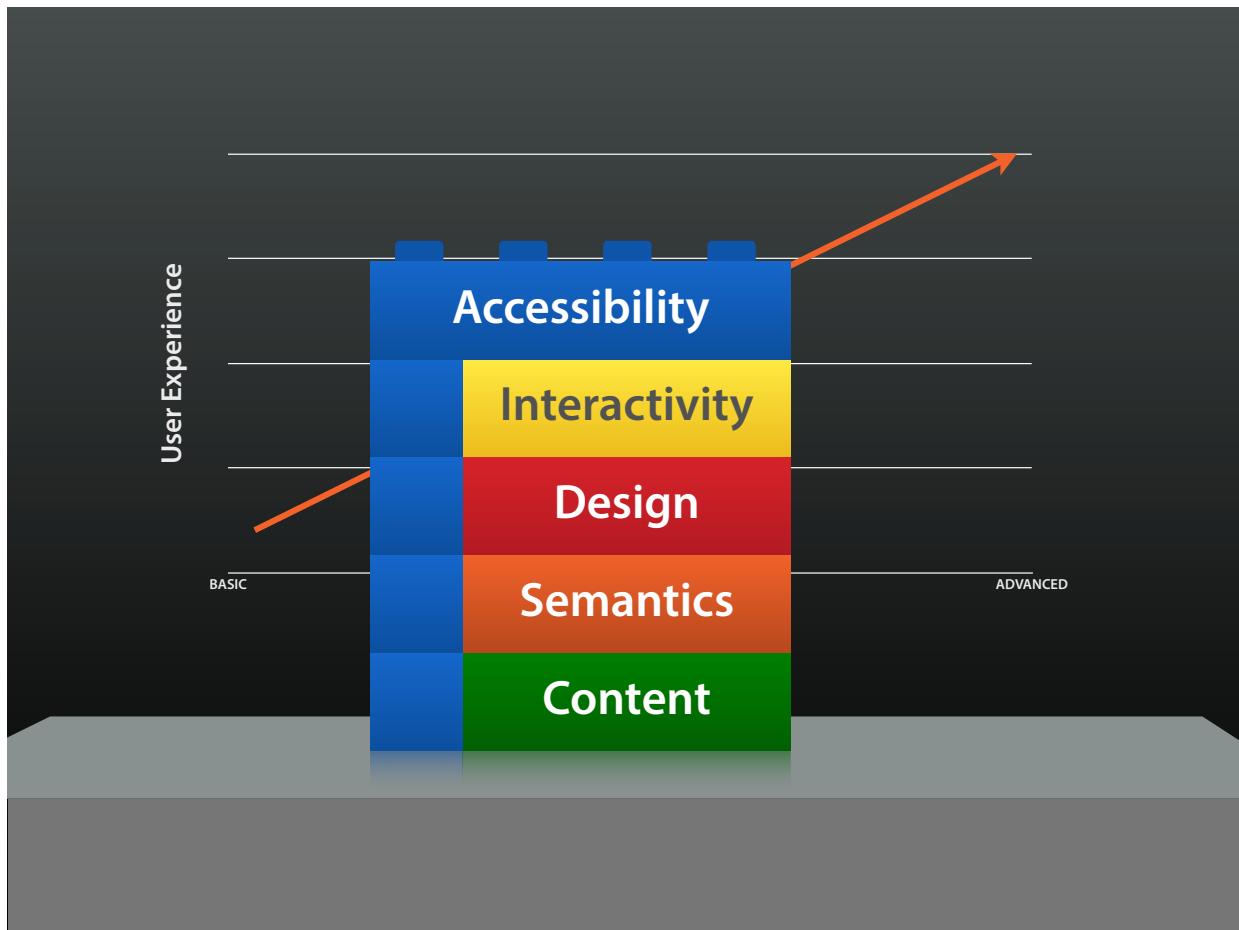
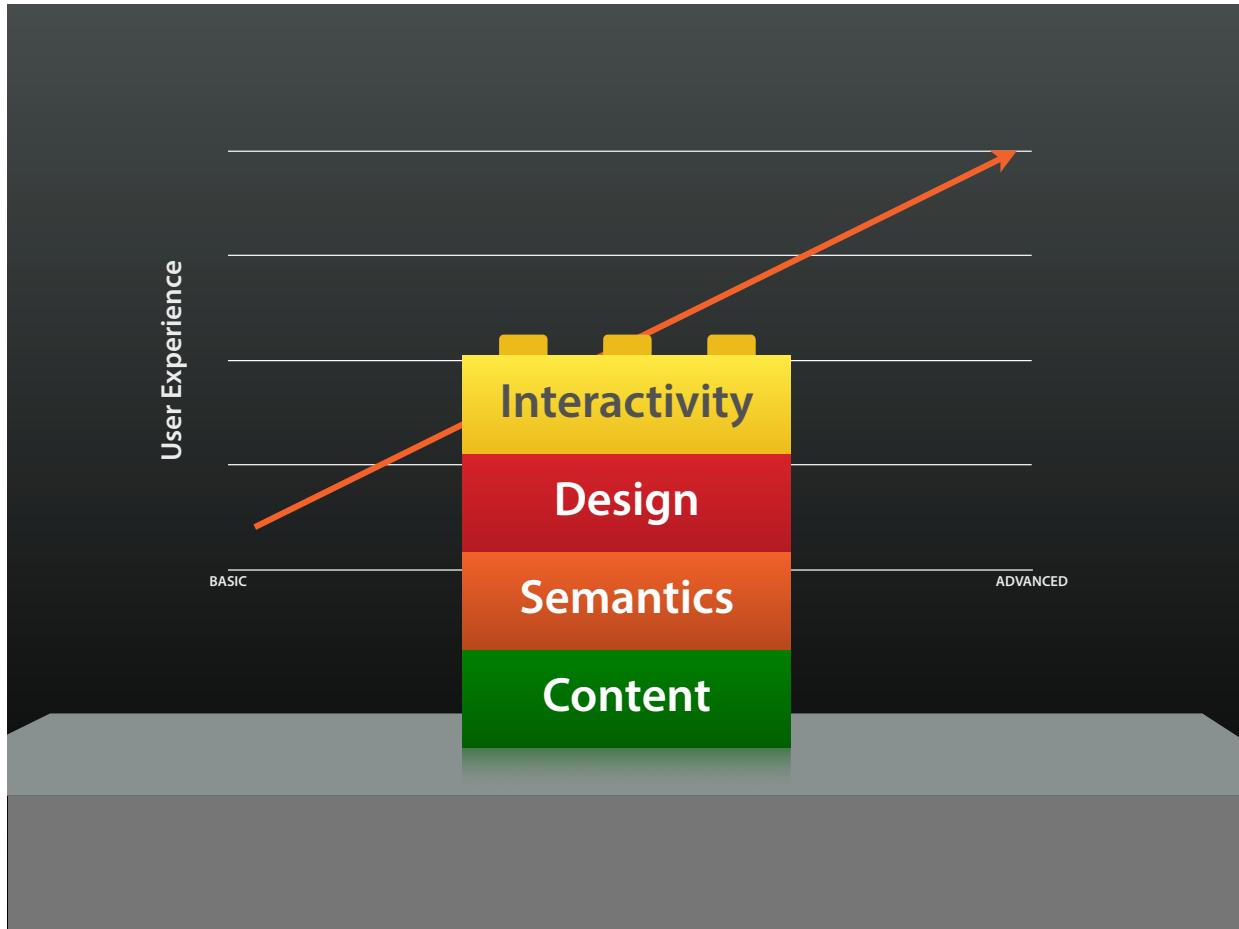
So how  
do we COPE?

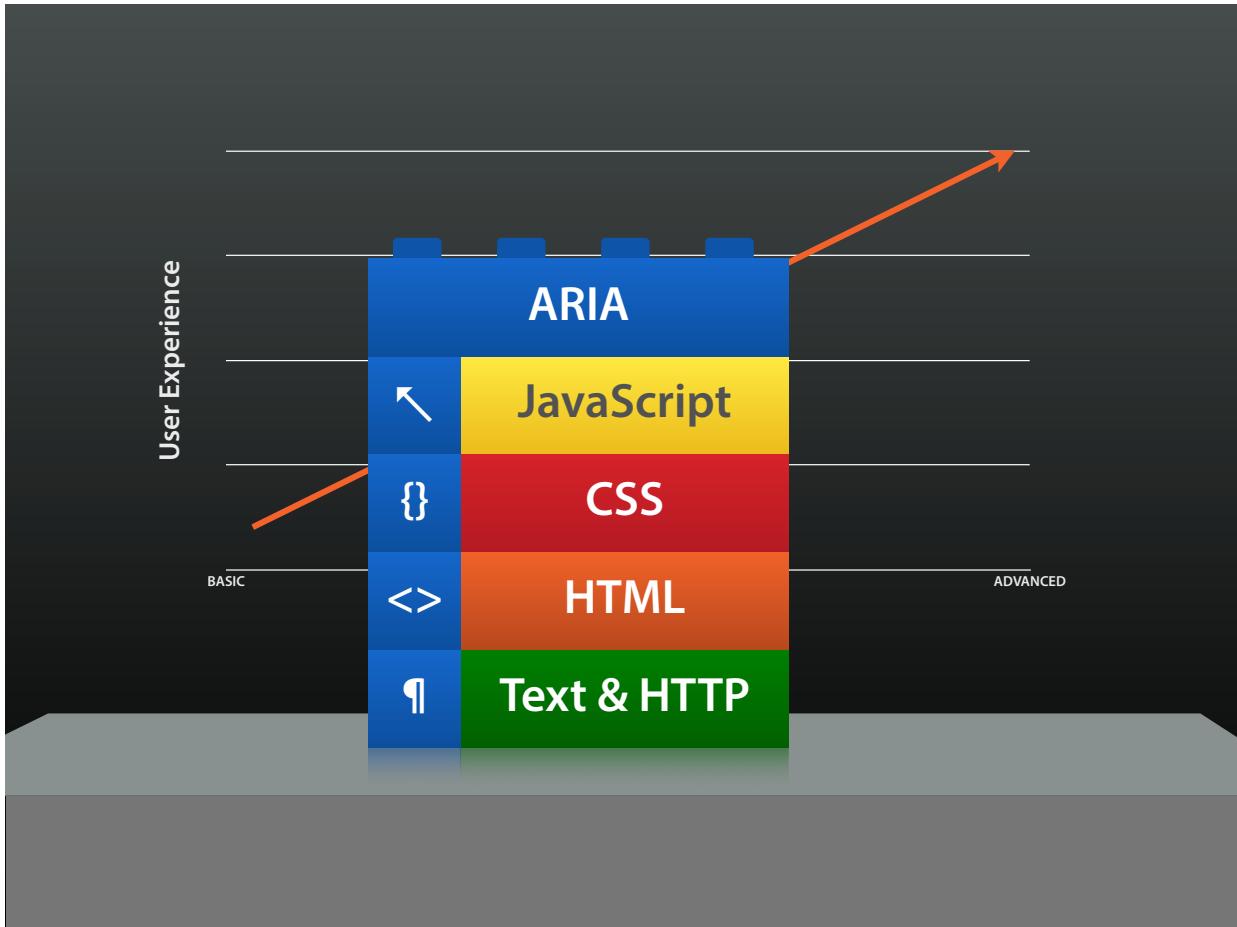
# Progressive Enhancement

**Technological  
restrictions**











**Browsers ignore  
what they don't  
understand**



*I like an escalator because  
an escalator can never break,  
it can only become stairs.*

— Mitch Hedberg



# Graceful Degradation

# Modern Browsers



Older Browsers

# Modern Browsers



Older Browsers



**LIFEHACKER**

**WEEKENDHACKER**

**LATEST STORIES**

SATURDAY, NOV 19, 2011

...you'll find it waiting in your basket online.

£10 OFF your first online shop\* Start saving

[www.tesco.com](http://www.tesco.com)

\*When you spend £50 or more. Excludes delivery charge. Terms here.

**WEEKENDHACKER** 5:00 PM Make the Best of Your Travel Plans This Weekend

**FOR WHAT IT'S WORTH** 4:00 PM Remains of the Day: Ice Cream

**WEEKENDHACKER**

Make the Best of Your Travel Plans This Weekend

The holidays are upon us, and if you're going to spend them you're probably going to be dealing with the stress that is travel tips for making travel as pain-free as possible. [More »](#)

**RELATED STORIES**

- Avoid a Weekend of Boredom
- Discover Some New Music This Weekend
- Find Yourself Some Great Deals This Weekend

**WEB SITES**

**TAXES**

*a dynamic web page can never break, it can only become a web page.*

¶ The Ultimate Black Friday Gadget

**MORE STORIES...**  
App Deals

¶ The Ultimate Black Friday Gadget

TIPS AND DOWNLOADS FOR  
GETTING THINGS DONE

MORE STORIES...





- Bugs
- Browser Add-ons
- Overzealous Firewalls
- Underpowered devices
- Page is still loading



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News &gt; Technology

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Alex Hern

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theguardian.com, Tuesday 28 January 2014 07.51 EST

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Parts of the web were broken after a crucial plugin was mistakenly blocked.

Photograph: Culture DMA/Alamy

[Print](#) [Email](#)**Technology**

Web filtering · Internet · Broadband · Malware

**Media**

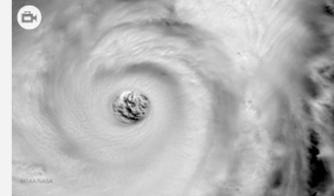
BSkyB

**Business**

BSkyB

**More news****More on this story**

BSkyB signs new five-year deal for exclusive rights to HBO TV catalogue  
Broadcaster struck

**Today's best video****Japan's Typhoon Vongfong seen from International Space Station - video**

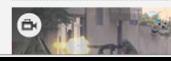
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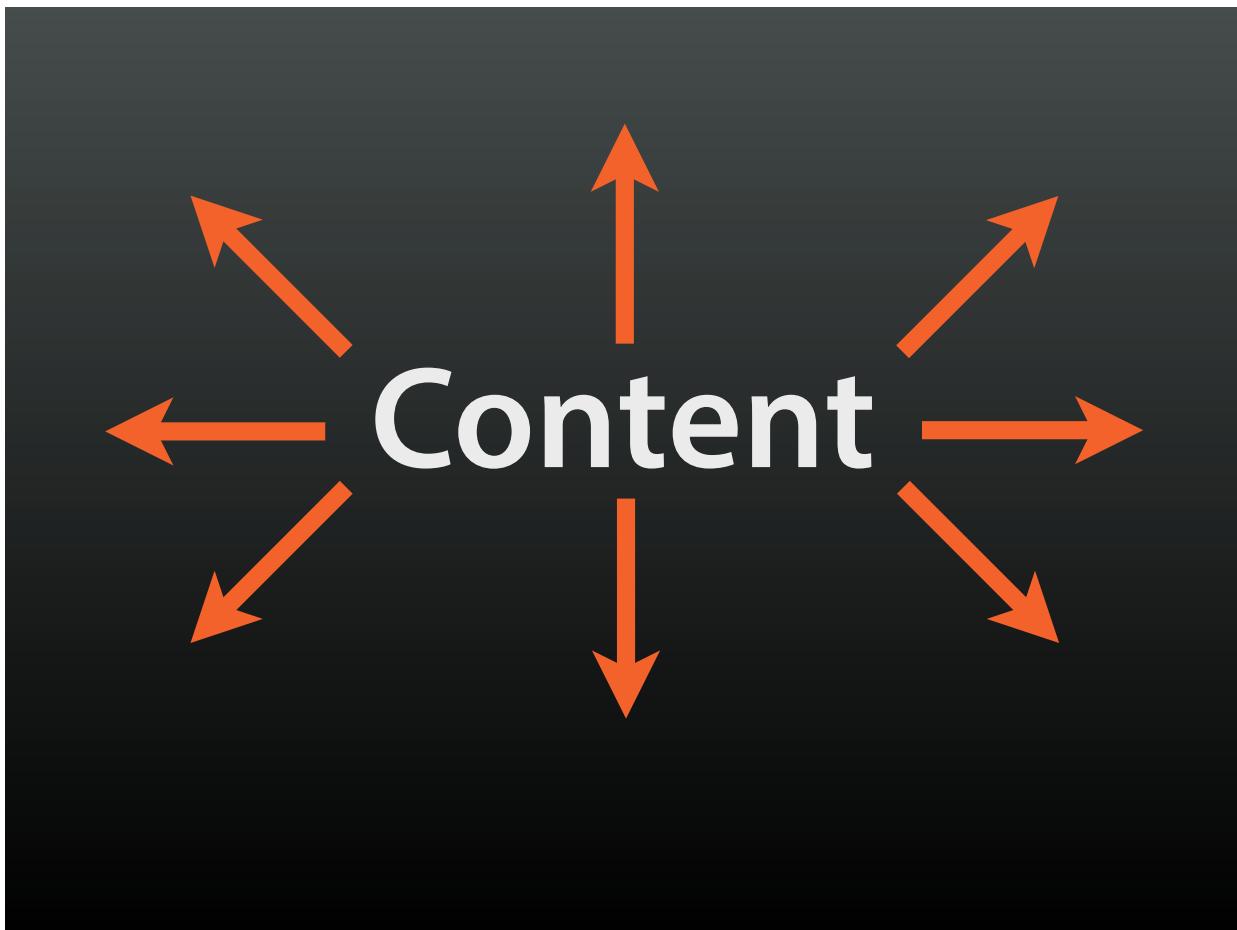
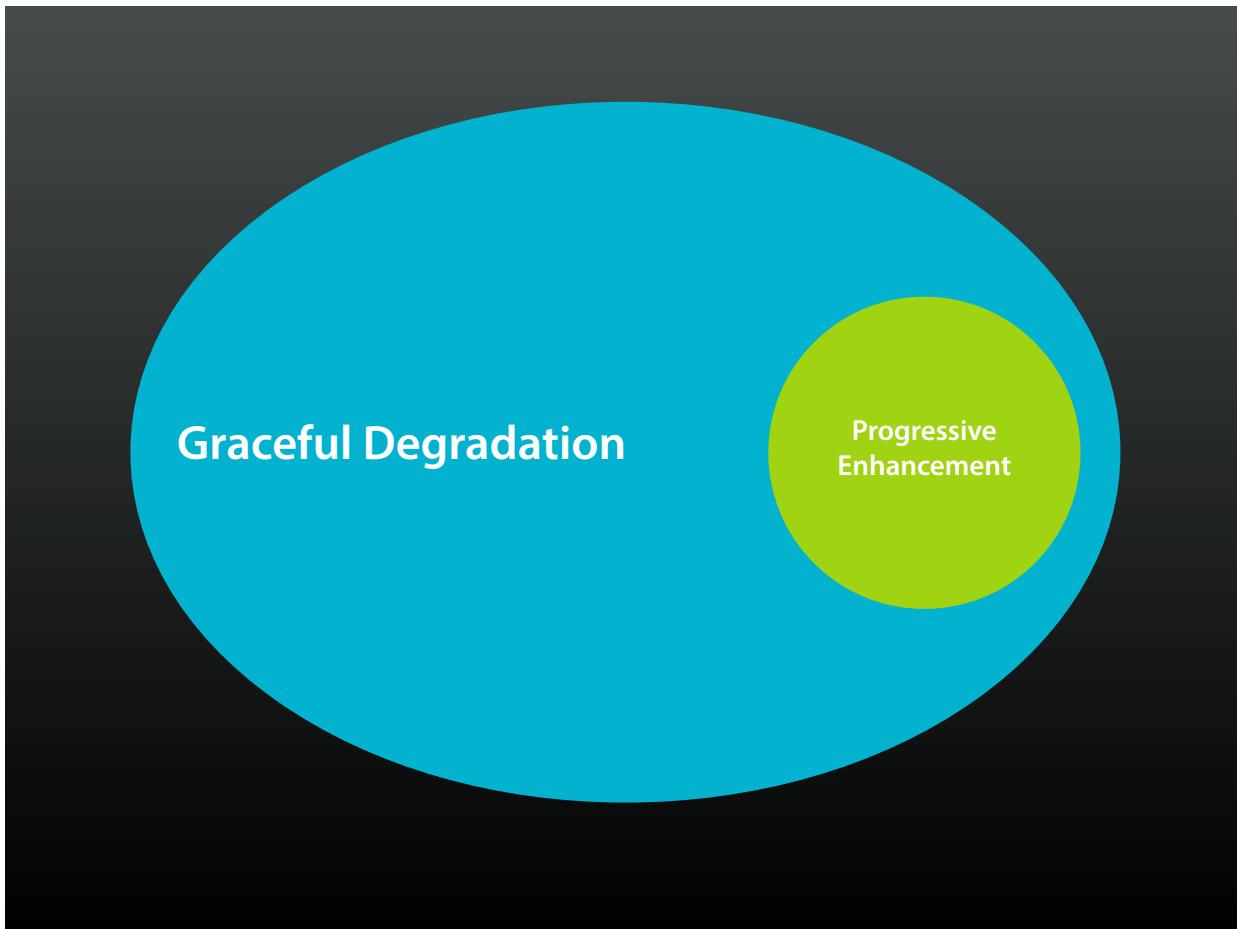
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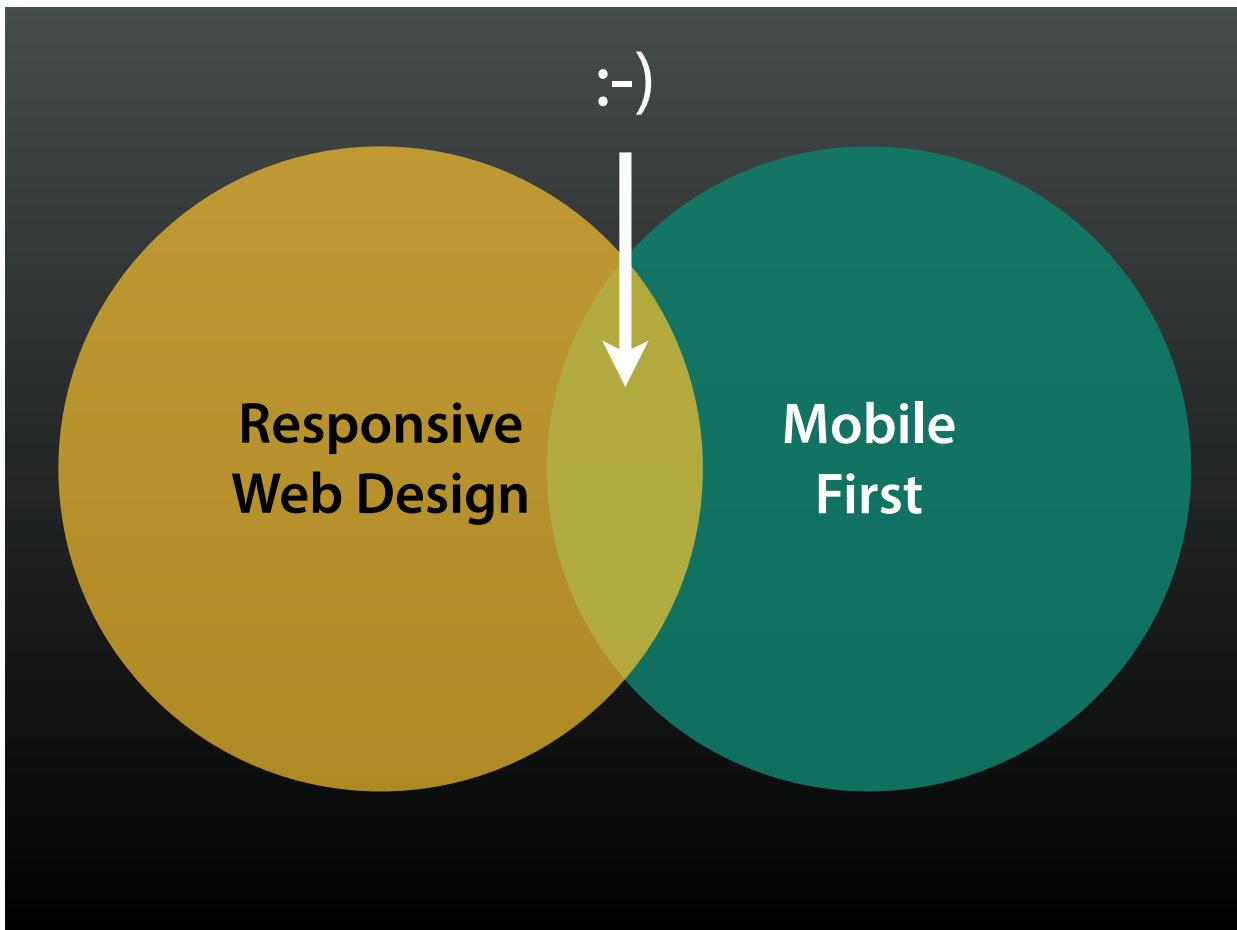
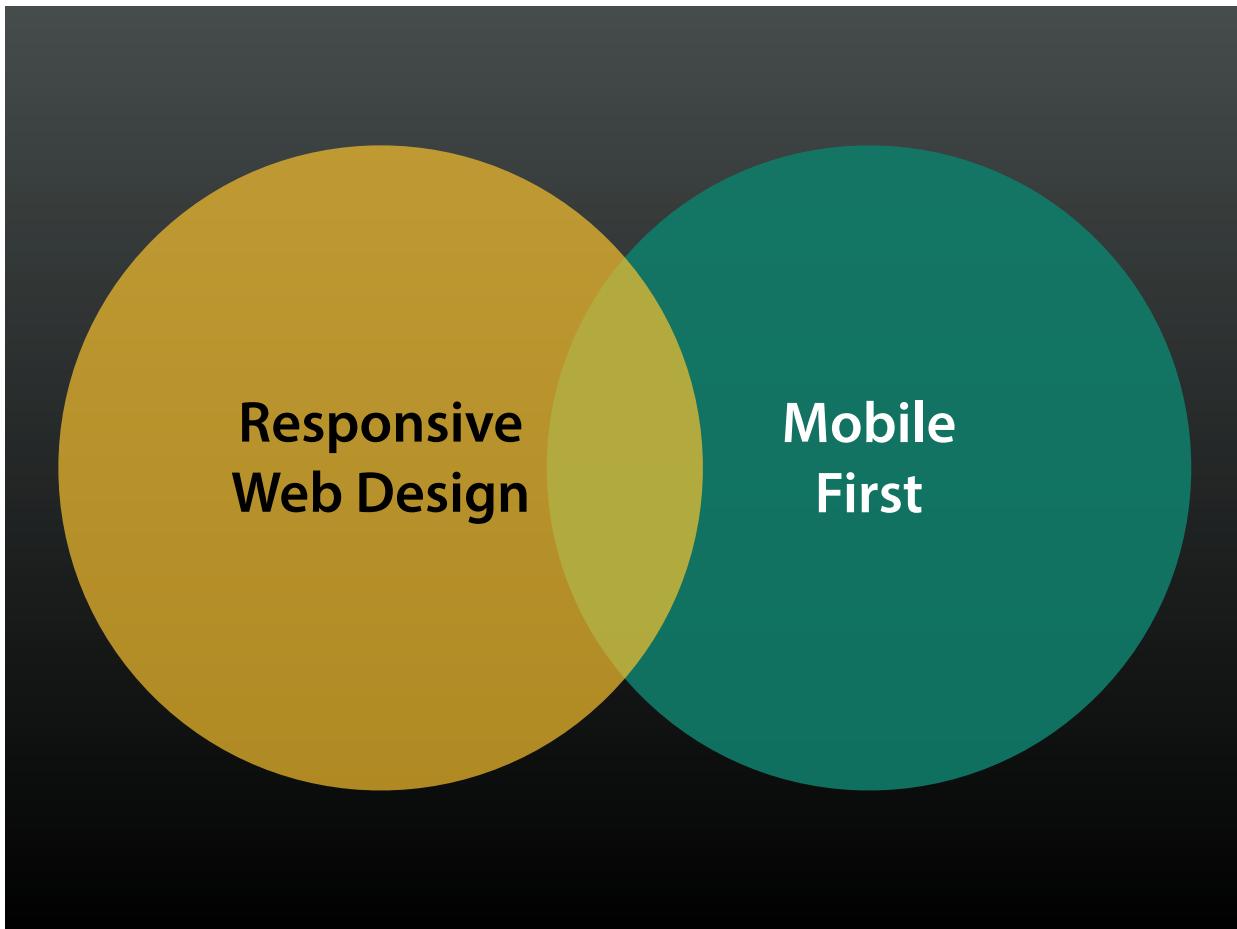
Video posted on social

# SPoF





34



# Lightboxes



[CLICK TO ENLARGE](#)

#### Retreats 4 Geeks

We built this site for our intimate retreat series.

**Our curriculum** is created for today's practitioner, integrating instruction in web standards with new technologies and emerging trends in both design and development.

**Our facilitators** are giants in the field, with years of hands-on experience in the trenches and the classroom.

**Our approach** to teaching is dynamic, like the web, and at the heart of it all is our love for sharing best practices.

# Lightboxes



[CLICK TO ENLARGE](#)

#### Retreats 4 Geeks

We built this site for our intimate retreat series.

**Our cur**  
instruction  
trends in

**Our fac**  
experien

**Our app**  
of it all is



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# IxMap



# IxMap

Load



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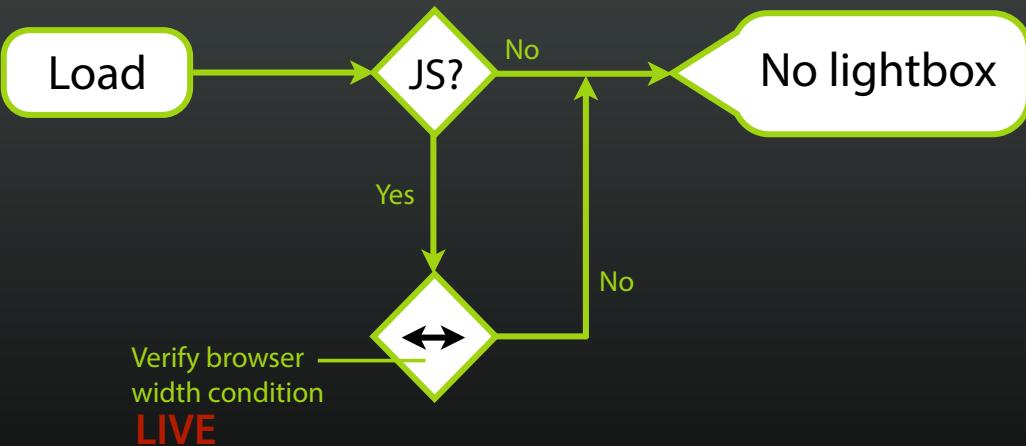
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ightbox

# IxMap



# IxMap

Load

Verify  
browser  
width co  
**LIVE**



**Retreats 4 Geeks**  
We built this site for our intimate retreat series.

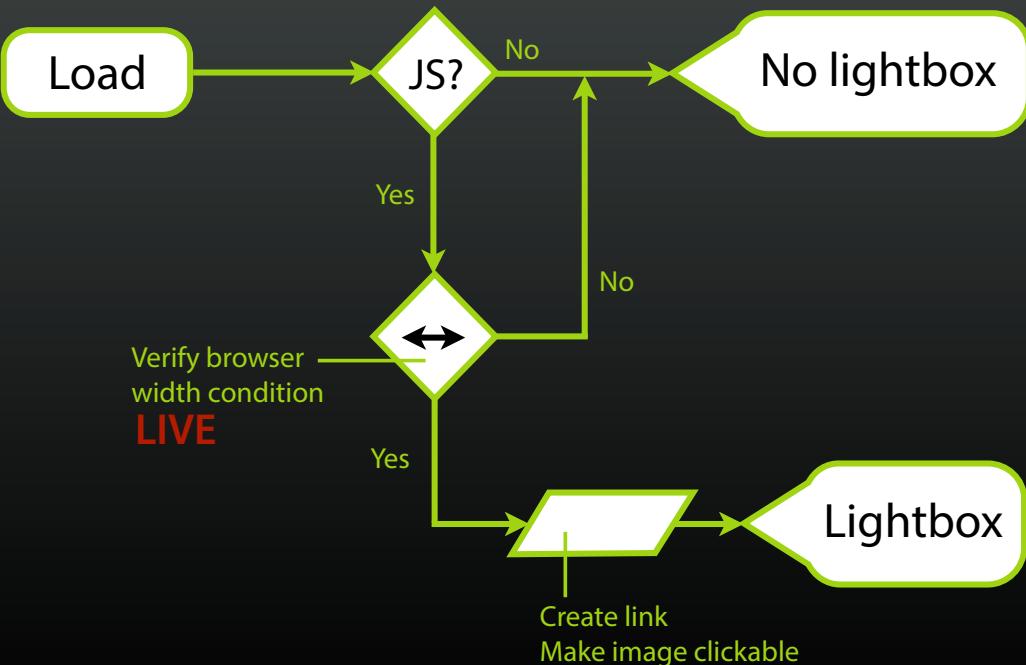
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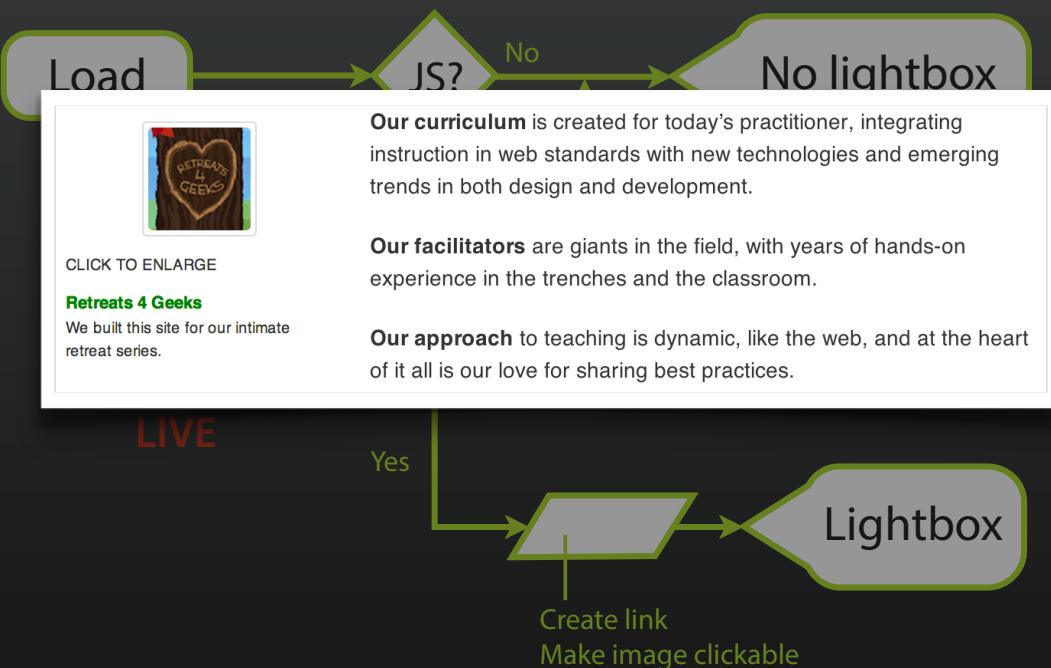
**Our approach** to teaching is dynamic, like the web, and at the heart of it all is our love for sharing best practices.

ightbox

# IxMap



# IxMap



# No need to link

```
<figure id="fig-1">
  
    <h6>Retreats 4 Geeks</h6>
    <p>We built this site for our intimate retreat series.</p>
  </figcaption>
</figure>
```

# Make the connection

```
<figure id="fig-1">
  
  <p class="enlarge"><a href="#enlarge">Click to
    Enlarge</a></p>
  <figcaption>
    <h6>Retreats 4 Geeks</h6>
    <p>We built this site for our intimate retreat series.</p>
  </figcaption>
</figure>
```

# Lightboxes



**CLICK TO ENLARGE**

**Retreats 4 Geeks**  
We built this site for our intimate retreat series.

**Our curriculum**  
instructional trends in

**Our facilitators**  
experience

**Our approach**  
of it all is



## Retreats 4 Geeks

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# Thumbnails

**Latest News**

**view as:** [List](#) [Category](#)

  
**SPORTS > VOLS**  
**Martin excited about Vols' summer progress**  
Some Vols are working out in Knoxville while others are competing across the globe, but Cuonzo Martin likes how his team is progressing this summer ...

  
**SPORTS > MOCS**  
**ESPN3 to broadcast three UTC football games in 2013**  
The Southern Conference revealed its eight-game football package with ESPN3 for the 2013 season on Monday, and Chattanooga will have three of its games broadcast over the online network. ...

  
**SPORTS > OUTDOORS**  
**Trucks and Ducks fundraiser is June 27**  
The Chattanooga chapter of Ducks Unlimited will host Trucks and Ducks 2013 at Mountain View Ford on

By Daniel Lewis  
2 hours ago

[Like](#) 2

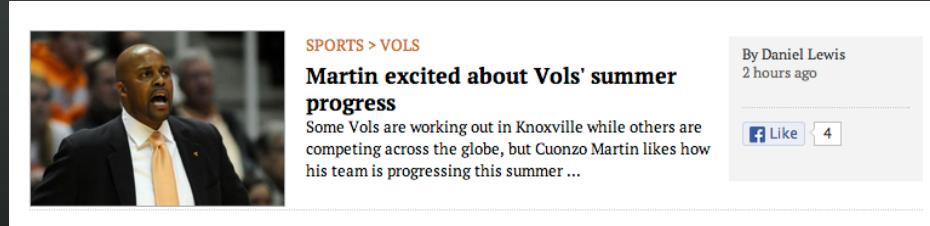
By Staff Report  
3 hours ago

[Like](#) 6

By Richard Simms  
5 hours ago

[Like](#) 1

# Thumbnails



# IxMap



# IxMap



SPORTS &gt; VOLS

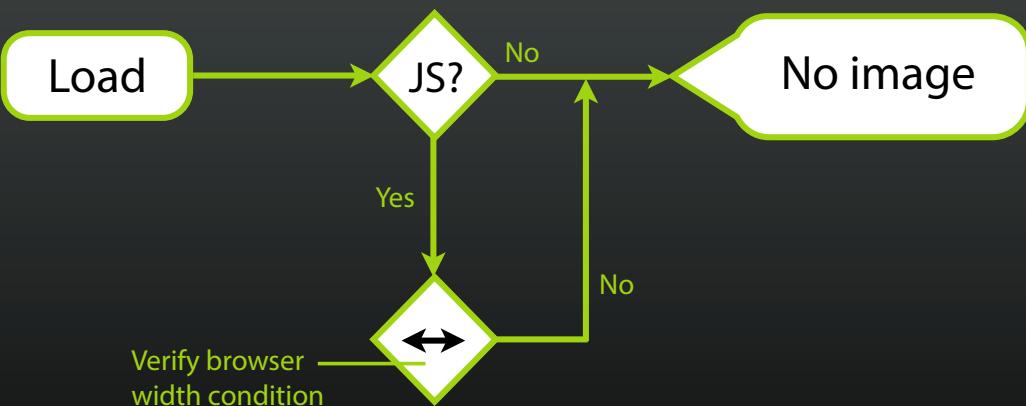
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Some Vols are working out in Knoxville while others are competing across the globe, but Cuonzo Martin likes how his team is progressing this summer ...

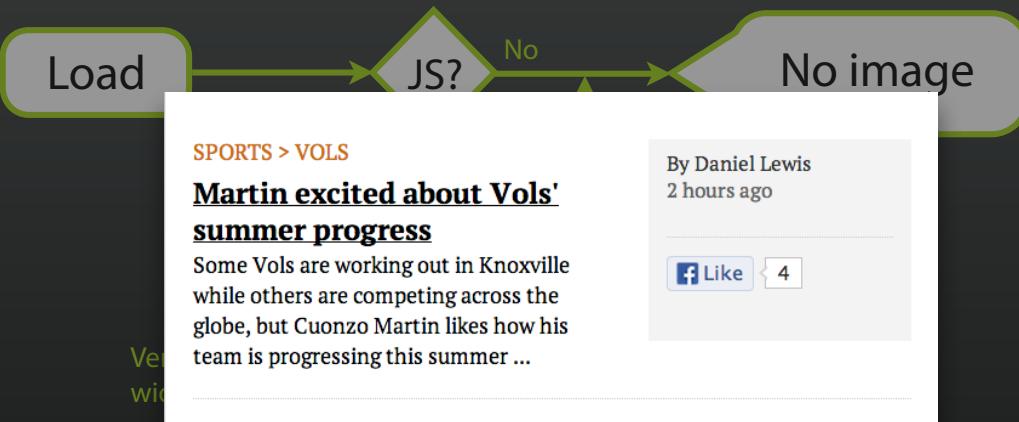
By Daniel Lewis  
2 hours ago

Like 4

# IxMap



# IxMap



SPORTS &gt; VOLS

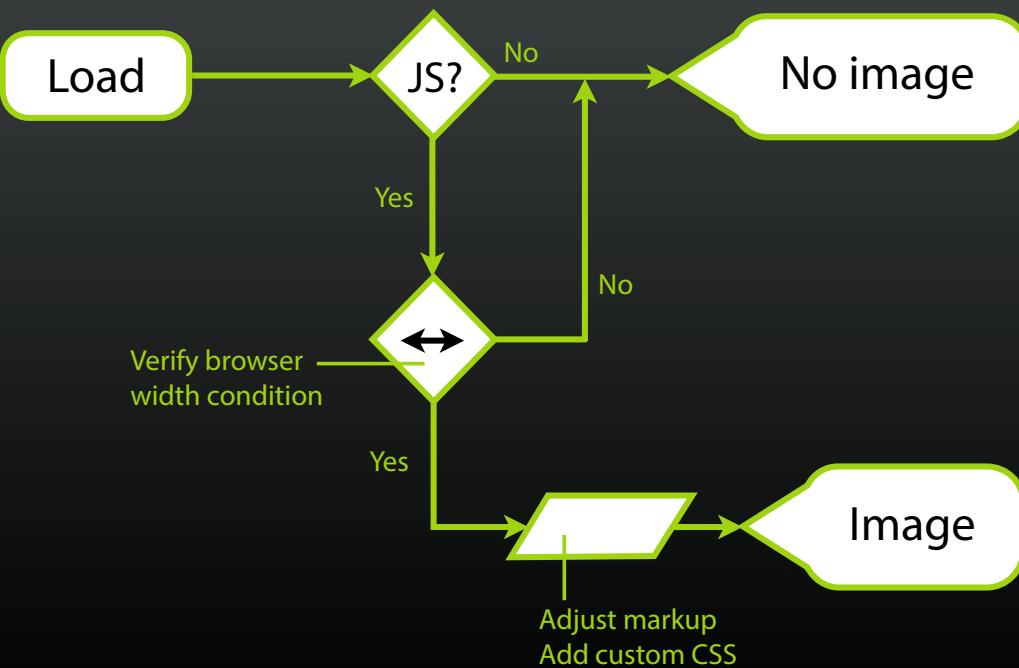
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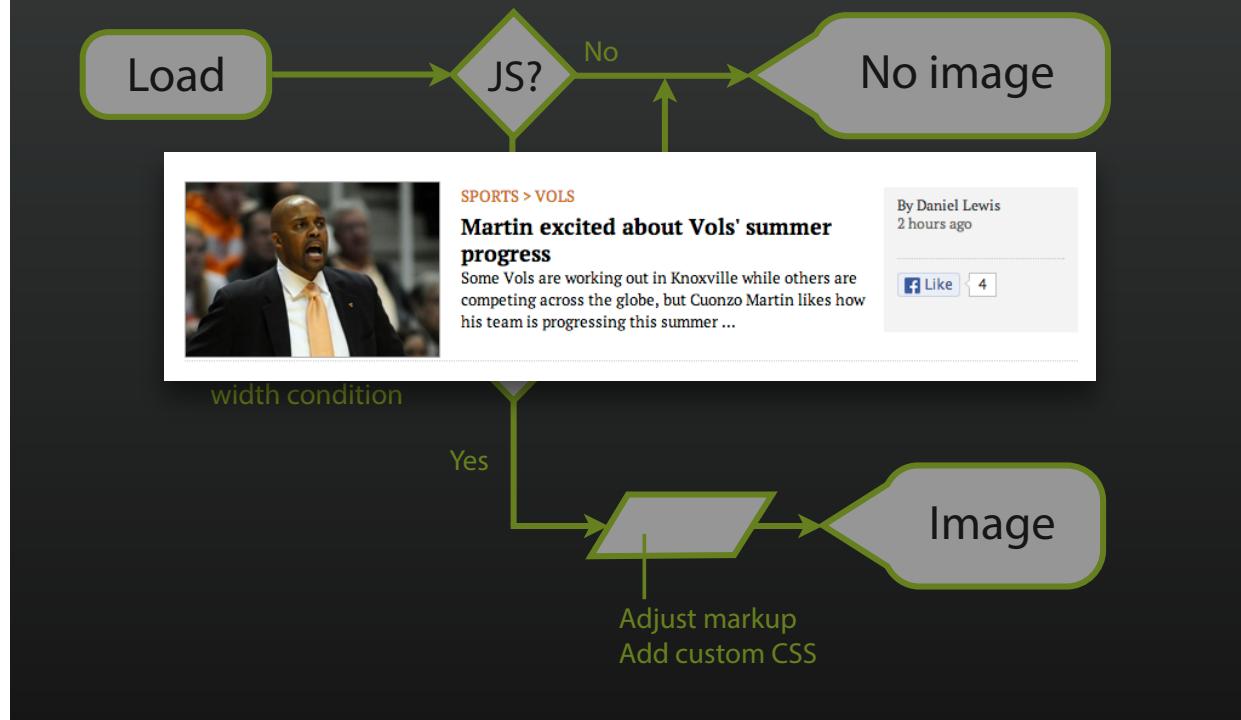
By Daniel Lewis  
2 hours ago

Like { 4 }

# IxMap



# IxMap



The screenshot shows a mobile news application interface. At the top, there's a header with 'Latest News' and 'view as: List Category'. Below the header, there are three news items:

- Martin excited about Vols' summer progress** (Category: SPORTS > VOLS) - An image of Cuonzo Martin, a text excerpt, and social sharing options (2 likes).
- ESPN3 to broadcast three UTC football games in 2013** (Category: SPORTS > MOCS) - An image of a large yellow 'C', a text excerpt, and social sharing options (6 likes).
- Trucks and Ducks fundraiser is June 27** (Category: SPORTS > OUTDOORS) - An image of a white Yeti cooler, a text excerpt, and social sharing options (1 like).
- Riverwalk Bird of the Week: Canada goose** (Category: SPORTS > OUTDOORS) - An image of several Canada geese, a text excerpt, and social sharing options (0 likes).

# There is no image...

```
<p class="entry-image"  
    data-image-src="/i/sample.jpg"></p>
```

# Until there is

```
<p class="entry-image"  
    data-image-src="/i/sample.jpg"></p>
```



```
<p class="entry-image"  
    data-image-src="/i/sample.jpg"  
    data-has-image="true">  
      
</p>
```

# CSS at rest

```
[data-image-src] {  
    display: none;  
}
```

# CSS at play

```
[data-image-src][data-image-loaded] {  
    display: block;  
}
```

# JS Watcher

```
window.watchResize = function(callback)
{
    var resizing;
    function done() {
        clearTimeout( resizing );
        resizing = null;
        callback();
    }
    window.onresize = function(){
        if ( resizing ) {
            clearTimeout( resizing );
            resizing = null;
        }
        resizing = setTimeout( done, 50 );
    };
    callback();
};
```

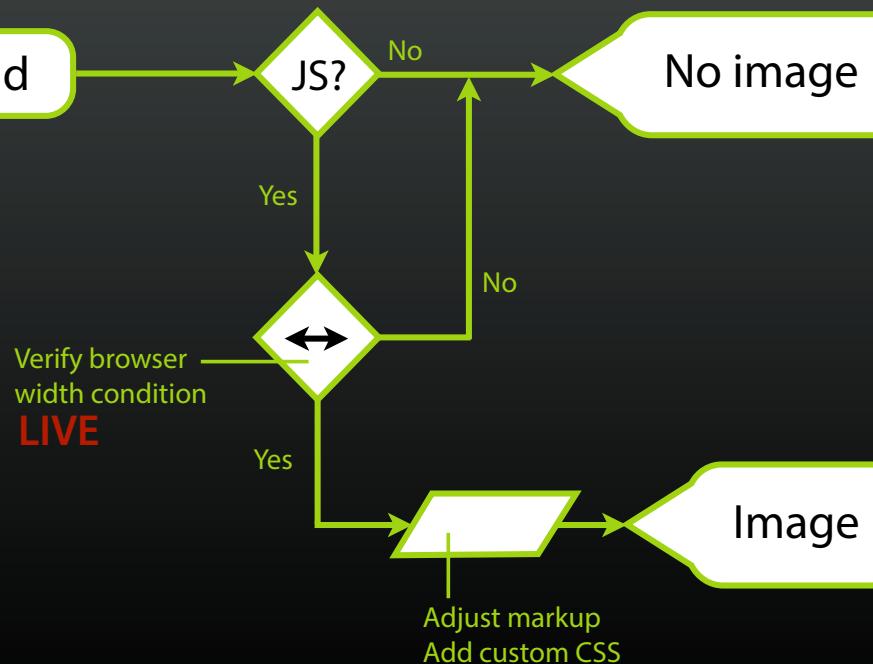
# JS Watcher

```
var browser_width = 0;
window.watchResize(function(){
    browser_width = window.innerWidth ||
                    document.body.offsetWidth;
});
```

# JS Watcher

```
window.watchResize(function(){
    var threshold = 400,
        image = document.createElement('img'),
        paragraphs = document.getElementsByTagName('p'),
        i = paragraphs.length,
        p, loaded, src, img;
    if ( browser_width >= threshold ) {
        image.setAttribute('alt','');
        while ( i-- ) {
            p = paragraphs[i];
            src = p.getAttribute('data-image-src');
            loaded = p.getAttribute('data-image-loaded');
            if ( src != null && loaded == null ) {
                img = image.cloneNode(true);
                img.setAttribute('src',src);
                p.appendChild( img );
                p.setAttribute('data-image-loaded','');
            }
        }
        image = paragraphs = p = img = null;
    }
});
```

# IxMap



# Smart CSS

```
[data-image-src][data-image-loaded] {  
    display: block;  
}
```

# Smart CSS

```
[data-image-src][data-image-loaded] {  
    display: block;  
}
```



```
@media only screen and (min-width:400px) {  
    [data-image-src][data-image-loaded] {  
        display: block;  
    }  
}
```

# Thumbnails



[http://is.gd/lazyloading\\_demo](http://is.gd/lazyloading_demo)

**Super Ffly T-shirt**

\$23 ★★★★☆ 8 Reviews

QTY 1 SIZE S ▾

ADD TO CART

SHARE FIND NEARBY

Behold, your new favorite shirt! This built-to-last tee adapts to your size and capabilities, starting off XS then stretches and scales to keep you comfortable as you grow taller and wider. The future is here, so look sharp.

Similar T-shirts

[http://is.gd/lazyloading\\_demo](http://is.gd/lazyloading_demo)

**Super Ffly T-shirt**

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Similar T-shirts

8 Reviews ★★★★☆

T-SHIRTS HOODIES PANTS

[http://is.gd/lazyloading\\_demo](http://is.gd/lazyloading_demo)

Similar T-shirts

8 Reviews ★★★★☆

---

 ★★★★☆  
Awesome shirt!  
11/12/2011 By Bruce Bosco

This shirt looks awesome and is really comfortable to wear. It did shrink quite a lot when washed, but that could have just been how I ran it. All in all, it's my favourite shirt, and I love wearing it.

---

 ★★★★☆  
Nice shirt  
11/12/2011 By Nick McKinsey

This shirt is a great addition to any simple wardrobe. Can be worn by itself or complimented with accessories. Nice and soft to the touch!

[http://is.gd/lazyloading\\_demo](http://is.gd/lazyloading_demo)

BEYOND RESPONSIVE

# NO!!!!

```
#reviews {
  display: none;
}

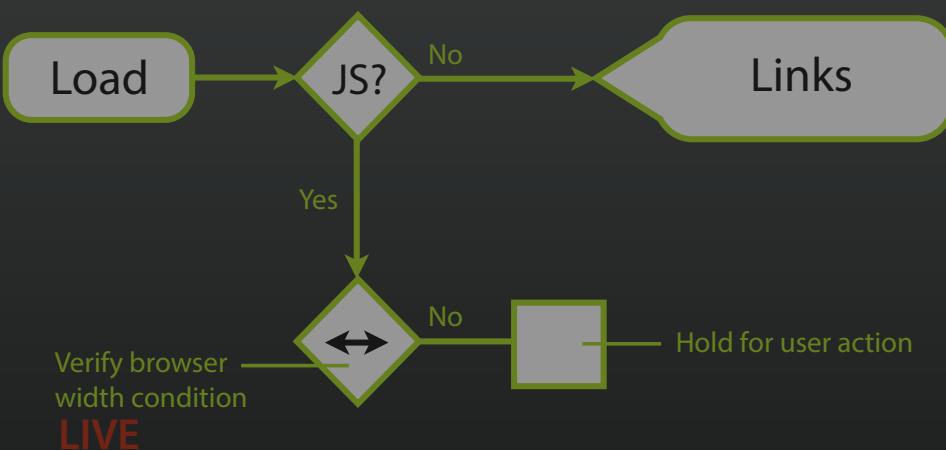
@media only screen and (min-width:50em) {
  #reviews {
    display: block;
  }
}
```

# IxMap

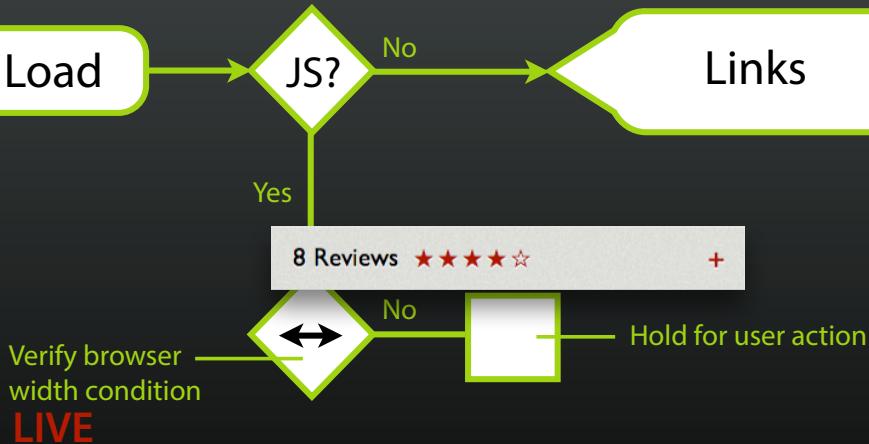


8 Reviews ★★★★☆ +

# IxMap

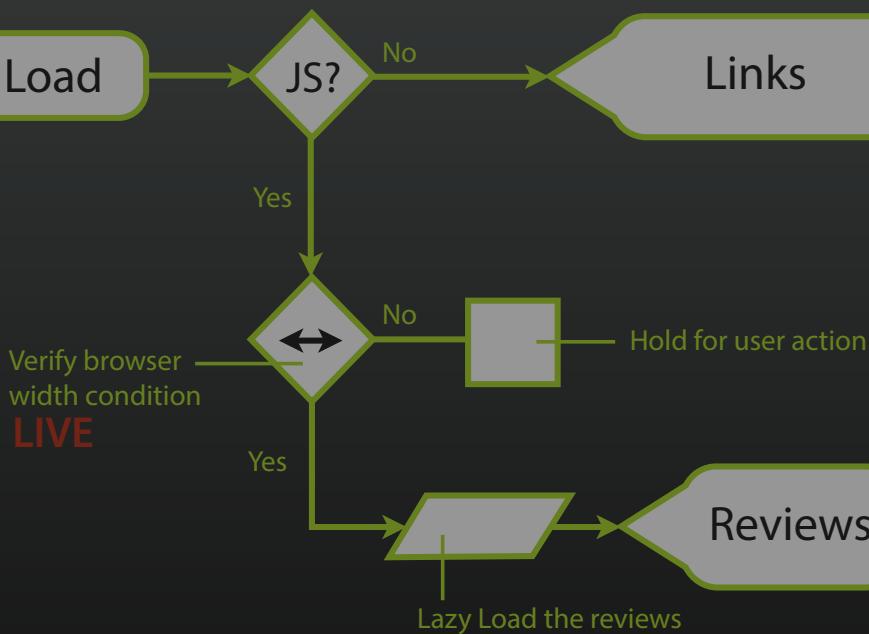


# IxMap



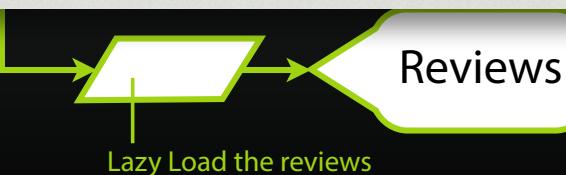
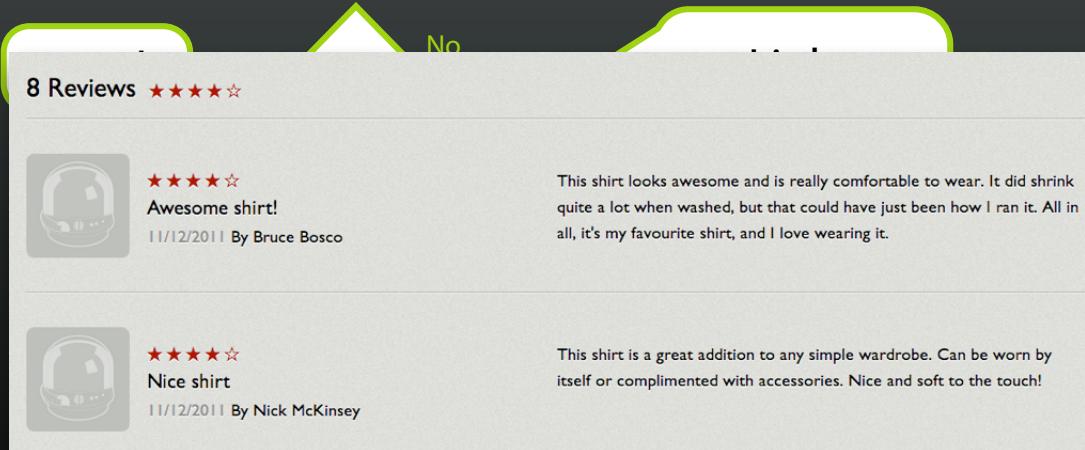
LIVE

# IxMap

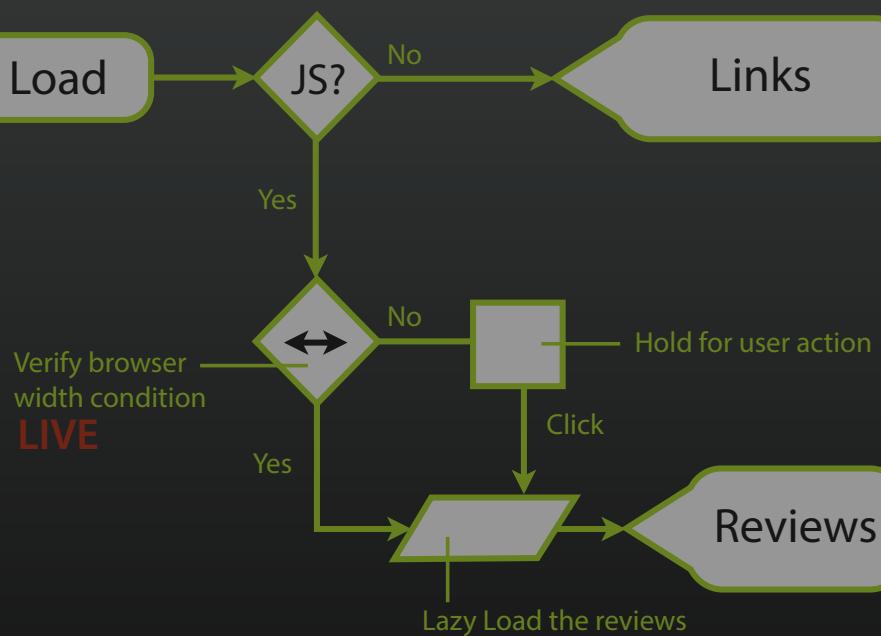


LIVE

# IxMap



# IxMap



# IxMap

Load

Verify browser  
width condition  
**LIVE**



links

user action

reviews

# Lazy Loading

```
<section class="aux reviews" id="reviews">
  <header id="tab-reviews">
    <a href="reviews.html" class="disabled">...</a>
  </header>
</section>
```

# Lazy Loading

```
<section class="aux reviews loaded" id="reviews">
  <header id="tab-reviews">
    <a href="reviews.html" class="disabled open">...</a>
  </header>
  <div role="tabpanel">
    <div id="p-reviews" aria-labeledby="tab-reviews">
      <ol class="reviews-list">
        <li>
          
          <div class="review-meta">
            <h3>Awesome shirt!</h3>
            <a href="#"><time datetime="2010-01-20" pubdate="">11/12/2011</time></a>
            By Bruce Bosco
          </div>
          <div class="review-content">
            <p>This shirt looks awesome and is really comfortable to wear. It did shrink quite a lot when washed, but that could have just been how I ran it. All in all, it's my favourite shirt, and I love wearing it.</p>
          </div>
        </li>
        <!-- ... -->
      </ol>
    </div>
  </div>
</section>
```

The screenshot displays a mobile application interface for a t-shirt product. At the top, there is a navigation bar with the brand logo 'FFLY', a 'Menu' button, and a 'Search' button. Below the navigation bar, the product details are shown: the item is a 'Super Ffly T-shirt' priced at \$23, with a rating of 4 stars from 8 reviews. A large main image of the t-shirt is displayed, featuring a graphic of a white space helmet on the chest. Below the main image are three smaller thumbnail images of the same t-shirt. At the bottom of the product card, there are input fields for 'QTY' (set to 1) and 'SIZE' (set to S), followed by a red 'ADD TO CART' button. At the very bottom of the screen, there is a footer bar with links for 'SHARE' and 'FIND NEARBY'.

[http://is.gd/lazyloading\\_demo](http://is.gd/lazyloading_demo)

# Tabbed Interface

## Pumpkin Pie

[OVERVIEW](#) [INGREDIENTS](#) [DIRECTIONS](#) [NUTRITION](#)

Whether you're hosting a festive party or a casual get-together with friends, our Pumpkin Pie will make entertaining easy!

**Original recipe yield:** 1 × 9-inch deep dish pie

**Prep Time:** 10min  
**Cook Time:** 1hr  
**Ready In:** 1hr 10min



# Traditional approach

```

<h1>Pumpkin Pie</h1>
<div class="container">
  <ul class="tabs">
    <li><a href="#">Overview</a></li>
    <li><a href="#">Ingredients</a></li>
    <li><a href="#">Directions</a></li>
    <li><a href="#">Nutrition</a></li>
  </ul>
  <div class="section">
    <h2>Overview</h2>
    
    <p>Whether you're hosting a festive party or a casual
    get-together with friends, our Pumpkin Pie will make
    entertaining easy!</p>
    <!-- ... -->
  </div>
  <!-- ... -->
</div>

```

# Cleaner approach

```

<h1>Pumpkin Pie</h1>
<div class="tabbed-interface">
  <h2>Overview</h2>
  
  <p>Whether you're hosting a festive party or a casual
  get-together with friends, our Pumpkin Pie will make
  entertaining easy!</p>
  <!-- ... -->
  <h2>Ingredients</h2>
  <ul>
    <li>1 (9<abbr title="inch">in</abbr>) unbaked deep
        dish pie crust</li>
    <li>12 cup white sugar</li>
    <!-- ... -->
  </ul>
  <h2>Directions</h2>
  <!-- ... -->
</div>

```

# Cleaner approach

```

<h1>Pumpkin Pie</h1>
<div class="tabbed-interface">
  <h2>Overview</h2>
  
  <p>Whether you're hosting a festive party or a casual
  get-together with friends, our Pumpkin Pie will make
  entertaining easy!</p>
  <!-- ... -->
  <h2>Ingredients</h2>
  <ul>
    <li>1 (9<abbr title="inch">in</abbr>) unbaked deep
        dish pie crust</li>
    <li>12 cup white sugar</li>
    <!-- ... -->
  </ul>
  <h2>Directions</h2>
  <!-- ... -->
</div>

```

# No JS, basic CSS

## Pumpkin Pie

### OVERVIEW

Whether you're hosting a festive party or a casual get-together with friends, our Pumpkin Pie will make entertaining easy!

**Original recipe yield:** 1 x 9-inch deep dish pie

**Prep Time:** 10min

**Cook Time:** 1hr

**Ready In:** 1hr 10min



### INGREDIENTS

- 1 (9in) unbaked deep dish pie crust
- ½ cup white sugar
- 1 tsp ground cinnamon
- ½ tsp salt
- ½ tsp ground ginger
- ¼ tsp ground cloves
- 2 eggs
- 1 can (15oz) pumpkin puree
- 1 can (12fl oz) evaporated milk

### DIRECTIONS

1. Preheat oven to 425°F
2. Combine sugar, salt, cinnamon, ginger and cloves in small bowl.
3. Beat eggs lightly in large bowl.
4. Stir in pumpkin and sugar-spice mixture.

# IxMap



# IxMap

Load

## Pumpkin Pie

### OVERVIEW

Whether you're hosting a festive party or a casual get-together with friends, our Pumpkin Pie will make entertaining easy!

**Original recipe yield:** 1 × 9-inch deep dish pie

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### INGREDIENTS

1 (9in) unbaked deep dish pie crust  
 ½ cup white sugar  
 1 tsp ground cinnamon  
 ½ tsp salt  
 ½ tsp ground ginger  
 ¼ tsp ground cloves  
 2 eggs  
 1 can (15oz) pumpkin puree  
 1 can (12fl oz) evaporated milk

### DIRECTIONS

1. Preheat oven to 425°F.
2. Combine sugar, salt, cinnamon, ginger and cloves in small bowl.
3. Beat eggs lightly in large bowl.
4. Stir in pumpkin and sugar-spice mixture.
5. Gradually stir in evaporated milk.
6. Pour into pie shell.
7. Bake for 15 minutes.
8. Reduce temperature to 350°F; bake for 40 to 50 minutes or until knife inserted near center comes out clean.
9. Cool on wire rack for 2 hours.
10. Serve immediately or refrigerate.

### NUTRITION

**Servings Per Recipe:** 8

**Amount Per Serving**

Linear

# IxMap

Load

JS?

No

Linear

Yes

Tabs

Split content into sections  
 Make tabs  
 Assign event handlers (mouse & keyboard)

# IxMap

Load

## Pumpkin Pie

OVERVIEW    INGREDIENTS    DIRECTIONS    NUTRITION

Whether you're hosting a festive party or a casual get-together with friends, our Pumpkin Pie will make entertaining easy!

**Original recipe yield:** 1 x 9-inch deep dish pie

**Prep Time:** 10min

**Cook Time:** 1hr

**Ready In:** 1hr 10min



# Linear HTML

```

<h1>Pumpkin Pie</h1>
<div class="tabbed-interface">
  <h2>Overview</h2>
  
  <p>Whether you're hosting a festive party or a casual get-together with friends, our Pumpkin Pie will make entertaining easy!</p>
  <!-- ... -->
  <h2>Ingredients</h2>
  <ul>
    <li>1 (9<abbr title="inch">in</abbr>) unbaked deep dish pie crust</li>
    <li>1 $\frac{1}{2}$  cup white sugar</li>
    <!-- ... -->
  </ul>
  <h2>Directions</h2>
  <!-- ... -->
</div>
```

# Tabbed

```

<h1>Pumpkin Pie</h1>
<div class="tabbed-interface TabInterface-enabled">
  <ul class="tabs">
    <li><a href="#folder-1">Overview</a></li>
    <li><a href="#folder-2">Ingredients</a></li>
    <li><a href="#folder-3">Directions</a></li>
    <li><a href="#folder-4">Nutrition</a></li>
  </ul>
  <section id="folder-1">
    <h2>Overview</h2>
    
    <p>Whether you're hosting a festive party or a casual
       get-together with friends, our Pumpkin Pie will make
       entertaining easy!</p>
    <!-- ... -->
  </section>
  <!-- ... -->
</div>

```

# Tabbed

```

<h1>Pumpkin Pie</h1>
<div class="tabbed-interface TabInterface-enabled">
  <ul class="tabs">
    <li><a href="#folder-1">Overview</a></li>
    <li><a href="#folder-2">Ingredients</a></li>
    <li><a href="#folder-3">Directions</a></li>
    <li><a href="#folder-4">Nutrition</a></li>
  </ul>
  <section id="folder-1">
    <h2>Overview</h2>
    
    <p>Whether you're hosting a festive party or a casual
       get-together with friends, our Pumpkin Pie will make
       entertaining easy!</p>
    <!-- ... -->
  </section>
  <!-- ... -->
</div>

```



# IxMap

Load

JS?

No

Linear

# IxMap

Load

JS?

No

Linear



Verify space  
for tabs

LIVE

# IxMap

Load

JS?

No

Linear

Yes

Verify space  
for tabs  
**LIVE**

No

Accordion

Build accordion

# IxMap

Load

JS?

No

Linear

Yes

Verify space  
for tabs  
**LIVE**

No

Accordion

Build accordion

Yes

Tabs

Split content into sections  
Make tabs  
Assign event handlers (mouse & keyboard)

# IxMap

Load



Verify space  
for tabs  
**LIVE**

Yes



Tabs

# IxMap

Load



Verify space  
for tabs  
**LIVE**

Yes



Linear

No

Build accordion

Accordion

Tabs

# IxMap

Load

No

Linear

Yes

JS?

Verify space  
for tabs  
**LIVE**

Yes

&lt;=&gt;

Insert details  
& summary

Native

Yes

&lt;?&gt;

Support details &amp; summary?

No

Build accordion

Accordion

Tabs

## Adding ARIA

role="tablist"

### Pumpkin Pie

[OVERVIEW](#) [INGREDIENTS](#) [DIRECTIONS](#) [NUTRITION](#)

Whether you're hosting a festive party or a casual get-together with friends, our Pumpkin Pie will make entertaining easy!

Original recipe yield: 1 x 9-inch deep dish pie

Prep Time: 10min  
 Cook Time: 1hr  
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# Adding ARIA

## Pumpkin Pie

[OVERVIEW](#) [INGREDIENTS](#) [DIRECTIONS](#) [NUTRITION](#)

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**Cook Time:** 1hr  
**Ready In:** 1hr 10min



```
role="tab"
aria-selected="true"
aria-controls="folder-1"
```

# Adding ARIA

```
role="tab"
aria-selected="false"
aria-controls="folder-4"
```

## Pumpkin Pie

[OVERVIEW](#) [INGREDIENTS](#) [DIRECTIONS](#) [NUTRITION](#)

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**Cook Time:** 1hr  
**Ready In:** 1hr 10min



# Adding ARIA

## Pumpkin Pie

[OVERVIEW](#) [INGREDIENTS](#) [DIRECTIONS](#) [NUTRITION](#)

Whether you're hosting a festive party or a casual get-together with friends, our Pumpkin Pie will make entertaining easy!

**Original recipe yield:** 1 × 9-inch deep dish pie

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**Cook Time:** 1hr

**Ready In:** 1hr 10min



```
role="tabpanel"
aria-hidden="false"
aria-labelledby="folder-1-tab"
```

# Result!

## Pumpkin Pie

[OVERVIEW](#) [INGREDIENTS](#) [DIRECTIONS](#) [NUTRITION](#)

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**Pumpkin pie Mozilla Firefox**

Photo by [Paul Covette](#), licensed under [Creative Commons](#).

# Tabbed Interface

## Pumpkin Pie

OVERVIEW   INGREDIENTS   DIRECTIONS   NUTRITION

Whether you're hosting a festive party or a casual get-together with friends, our Pumpkin Pie will make entertaining easy!

**Original recipe yield:** 1 × 9-inch deep dish pie

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**Cook Time:** 1hr  
**Ready In:** 1hr 10min



Now it's time  
for YOU  
to do  
some work