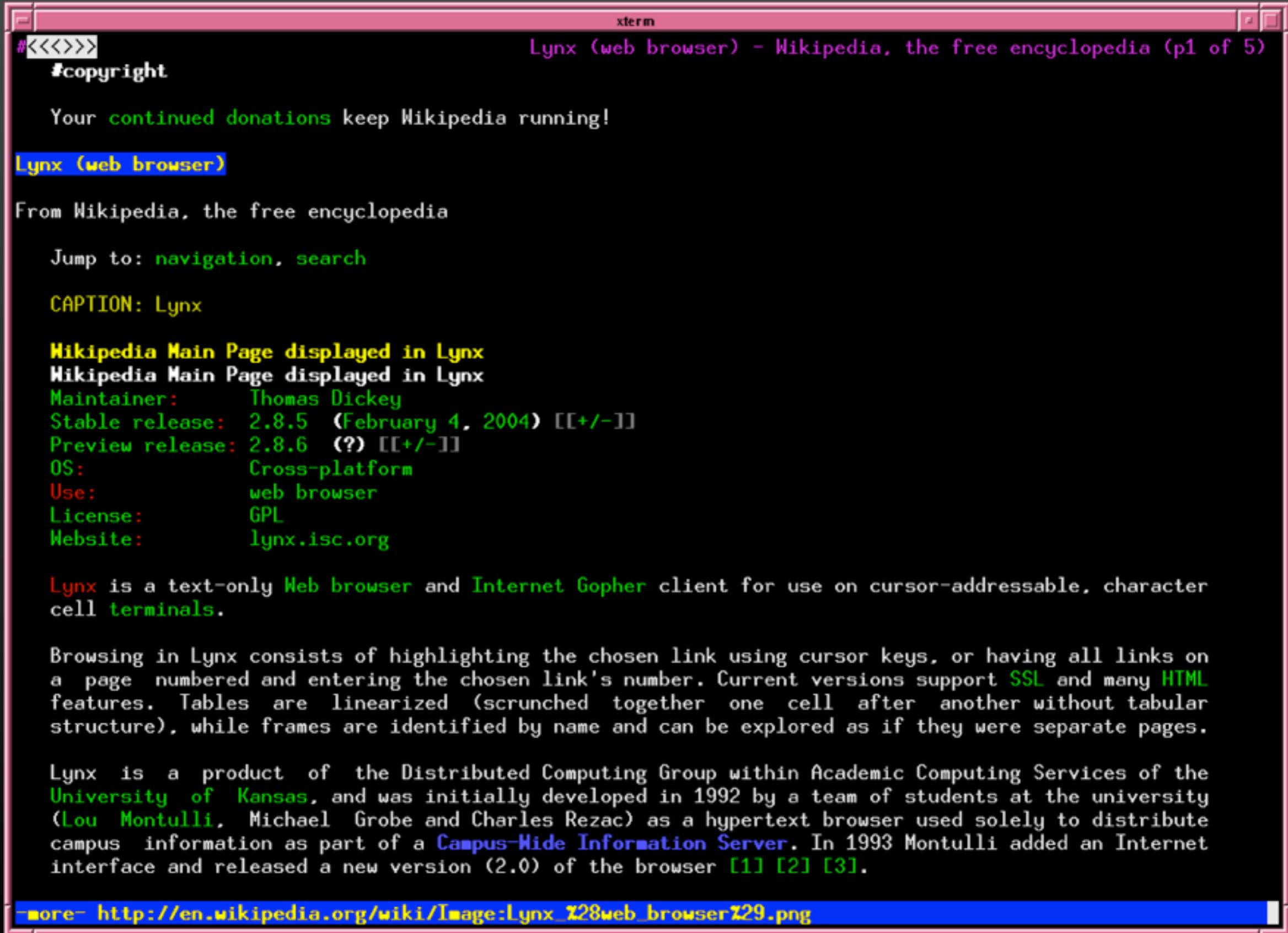


PROGRESSIVE ENHANCEMENT & MOBILE

Aaron Gustafson
[@aarongustafson](https://twitter.com/aarongustafson)
slideshare.net/AaronGustafson

**BROWSERS ARE A
PAIN IN THE ASS**







N



O











THIS IS NOT
THE WEB.

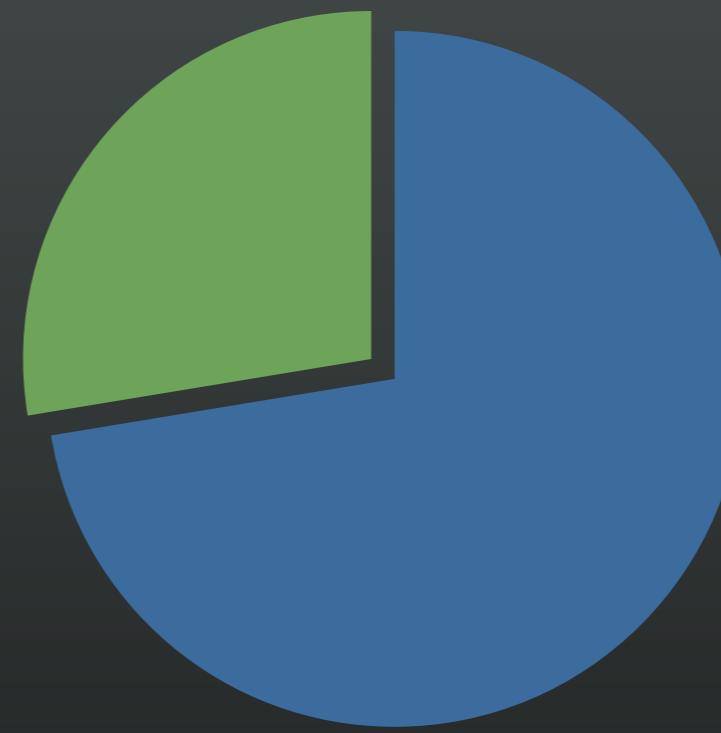


THIS IS THE WEB.



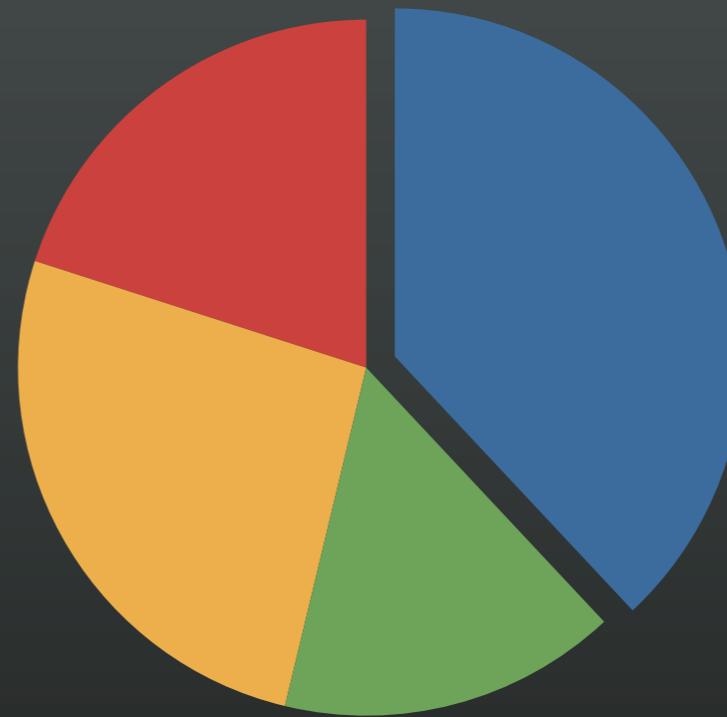
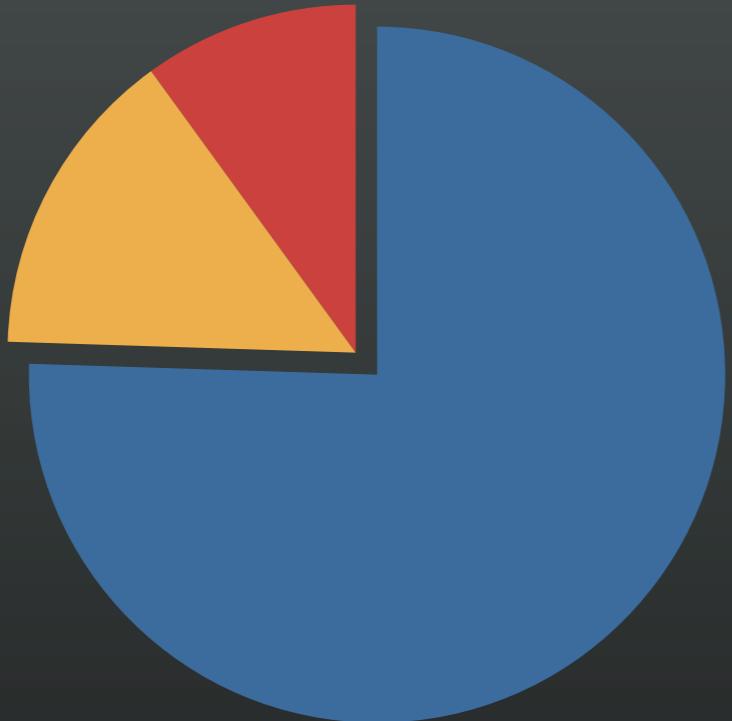
“Just four years ago the majority of our visitors saw our website in Internet Explorer on a Windows computer on a minimum 1,024 pixel wide screen. Times have really changed.

**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 72.4%. Visitors using a Mac have more than tripled.

“The percentage visiting from a mobile device or tablet ... was just 0.1% in 2008. It has since grown exponentially,
200-400% per year, to 6.2% today.

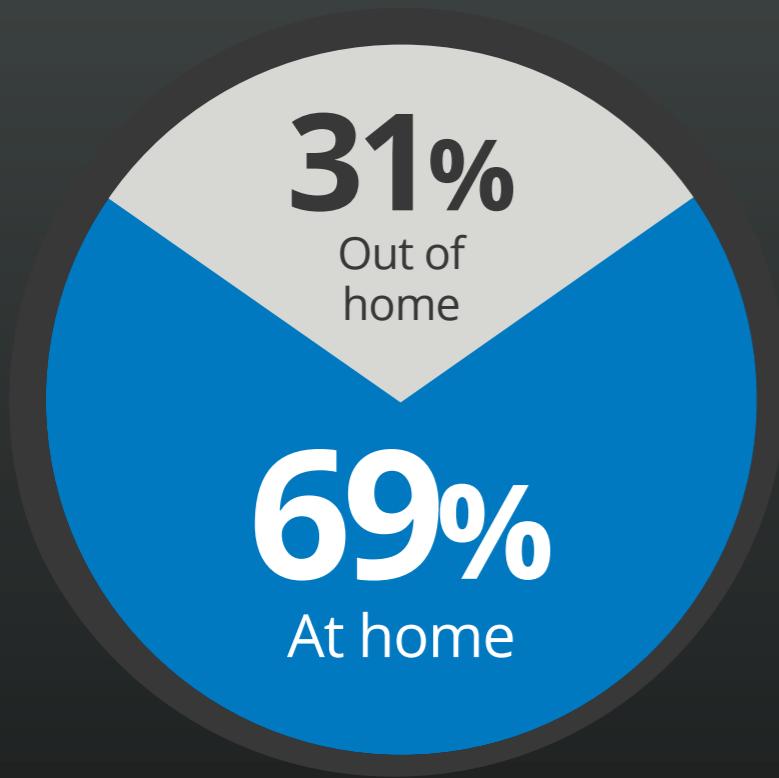


“ Four years ago 75.5% of our web visitors used Internet Explorer. That number has fallen to 37%. Firefox now comprises 25.5%, Safari 19.5%, and Chrome 15.3%.

“ In the second quarter of 2008
we detected 71 different
screen resolutions among our
visitors. In the first quarter of
2012 we detected **830**

**LET'S TALK
MOBILE**

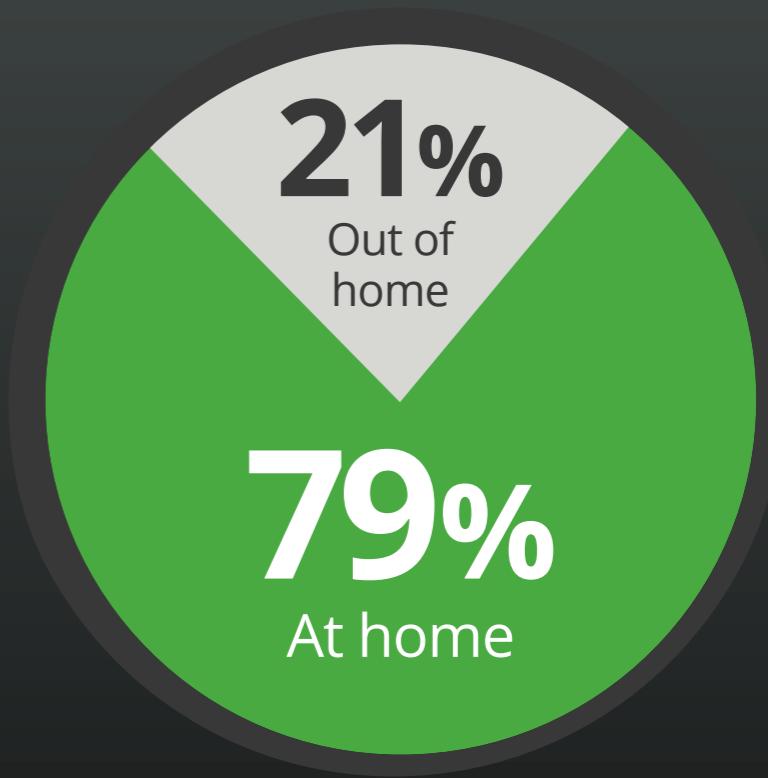
FIRST OFF
MOBILE
IS NOT THE
BEST WORD



Computer

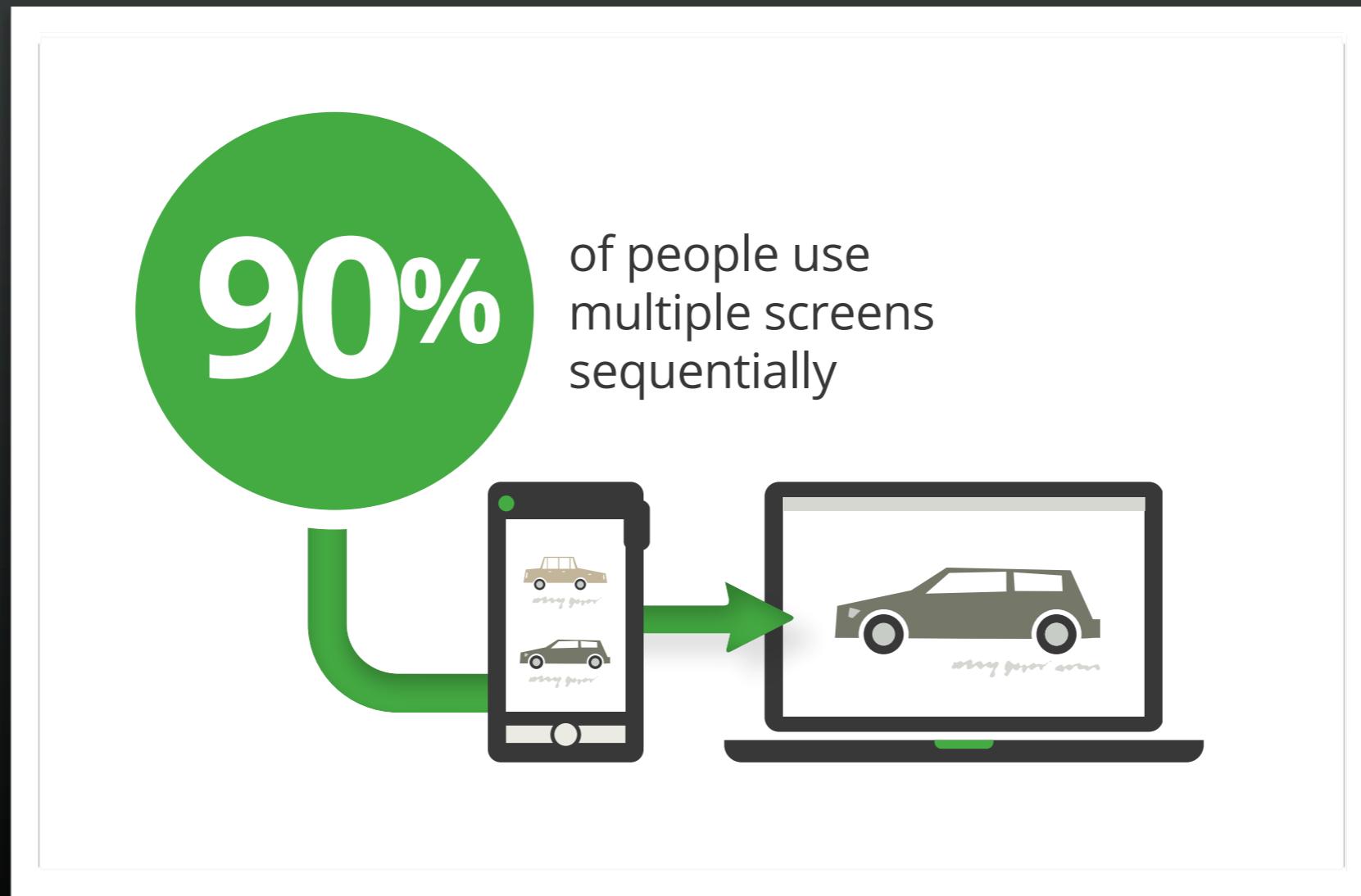


Smartphone



Tablet

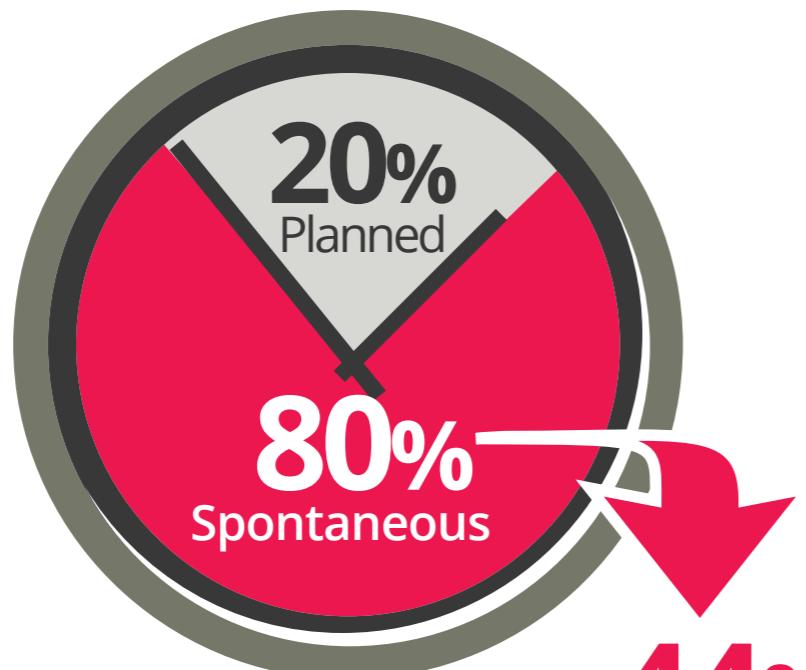
MOBILE IS NOT ISOLATED





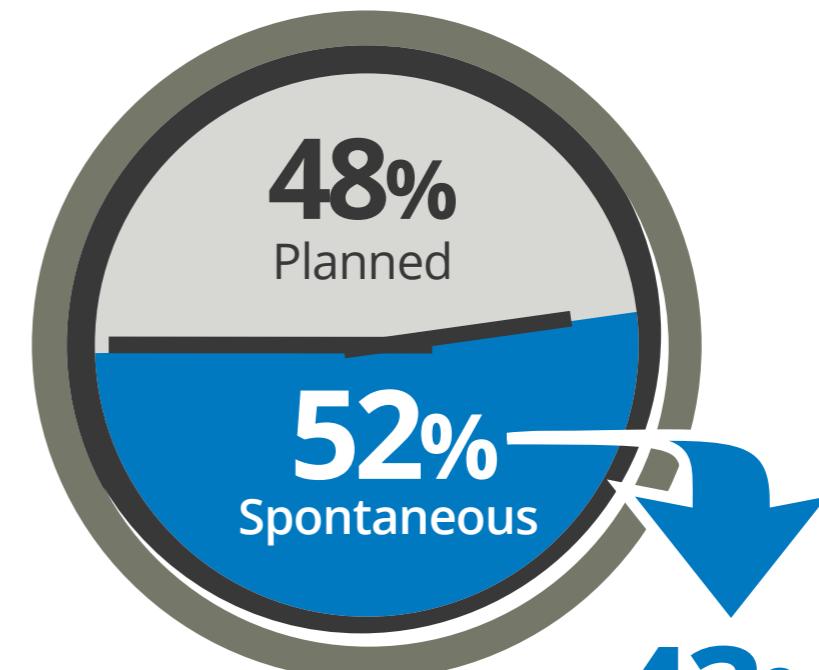
MOBILE = OPPORTUNITY

Smartphone



44%
of all **spontaneous** searches
on smartphones were to
accomplish a goal

PC/Laptop

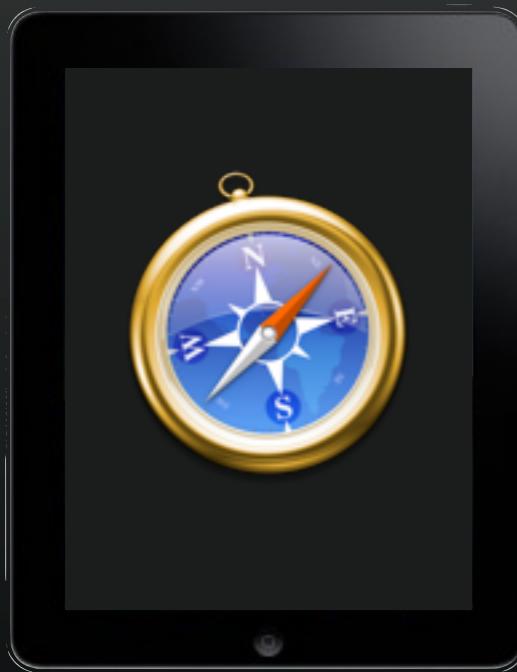
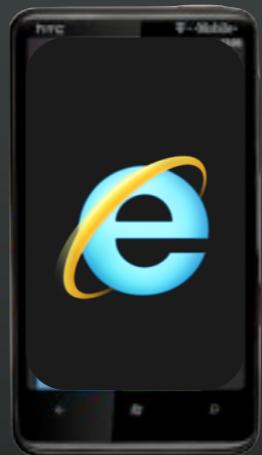


43%
of all **spontaneous** searches
on PCs were to
accomplish a goal

WHAT IS MOBILE?



WHAT IS MOBILE?



“There is no WebKit
on Mobile

— Peter-Paul Koch

WebKit *vs.* Acid3

| Test | Symb 1 | Symb 2 | Symb 3 | S40 | iOS 2.2 | iOS 3.1 | iOS 4.2 | And 1.0 | And 1.6 | And 2 | And 3 | Dolphin | BB 6 | BB PB | Phantom | Palm 2.0 | Palm 2.1 | Bolt 1.5 | Ozone 0.9 | Obigo 10 | WeTab |
|------------|--------|--------|--------|-----|---------|---------|---------|---------|---------|-------|-------|---------|------|-------|---------|----------|----------|----------|-----------|----------|-------|
| Acid3 Test | fail | 47 | fail | 74 | 100 | 72 | 92 | 93 | 100 | 98 | 100 | 91 | 69 | 92 | 76 | 93 | 93 | 100 | | | |

Score in the [Acid3 test](#)
90 points

Android 1.6 scores 93 points instead of 92.

1. 100 : Yes
2. 91-99 : Almost
3. 71-90 : Alternative
4. 51-70 : Incomplete
5. 31-50 : Incorrect
6. 11-30 : Minimal
7. 0-10 : No

- Obigo WK encounters an unsupported media type after getting 69 points. Remove the error message, wait for a few seconds, and it will resume the test and end up at 93 points.
- Palm 2.1 does something similar, although you don't have to remove the error message.

http://www.quirksmode.org/webkit_mobile.html

“Surely there’s
platform
consistency!?!
— Any sane individual

“There is no Android
— Stephanie Rieger

| | | | | | | | |
|-----|---------|----------|-----|-------|----------|---------|---------|
| 17. | Android | 993x1688 | 6 | 1.50 | 00:00:46 | 100.00% | 50.00% |
| 18. | Android | 480x679 | 2 | 1.50 | 00:00:15 | 100.00% | 50.00% |
| 19. | Android | 993x1574 | 4 | 2.00 | 00:01:20 | 100.00% | 50.00% |
| 20. | Android | 993x1537 | 1 | 1.00 | 00:00:00 | 100.00% | 100.00% |
| 21. | Android | 320x201 | 3 | 1.33 | 00:00:04 | 100.00% | 66.67% |
| 22. | Android | 993x663 | 1 | 2.00 | 00:00:33 | 100.00% | 0.00% |
| 23. | Android | 600x937 | 1 | 3.00 | 00:03:23 | 100.00% | 0.00% |
| 24. | Android | 800x1125 | 21 | 1.19 | 00:00:20 | 80.95% | 85.71% |
| 25. | Android | 480x369 | 1 | 1.00 | 00:00:00 | 100.00% | 100.00% |
| 26. | Android | 320x473 | 45 | 2.09 | 00:00:30 | 64.44% | 66.67% |
| 27. | Android | 369x628 | 2 | 5.50 | 00:02:34 | 100.00% | 0.00% |
| 28. | Android | 800x447 | 1 | 6.00 | 00:03:14 | 100.00% | 0.00% |
| 29. | Android | 993x514 | 9 | 1.44 | 00:00:53 | 88.89% | 88.89% |
| 30. | Android | 993x616 | 1 | 1.00 | 00:00:00 | 100.00% | 100.00% |
| 31. | Android | 1025x508 | 1 | 2.00 | 00:00:28 | 100.00% | 0.00% |
| 32. | Android | 993x444 | 4 | 2.00 | 00:00:36 | 100.00% | 75.00% |
| 33. | Android | 480x762 | 525 | 4.53 | 00:02:47 | 87.81% | 6.86% |
| 34. | Android | 320x320 | 1 | 1.00 | 00:00:00 | 100.00% | 100.00% |
| 35. | Android | 470x725 | 1 | 1.00 | 00:00:00 | 100.00% | 100.00% |
| 36. | Android | 993x1149 | 2 | 1.50 | 00:00:15 | 100.00% | 50.00% |
| 37. | Android | 600x1024 | 2 | 13.00 | 00:18:31 | 100.00% | 0.00% |
| 38. | Android | 480x700 | 1 | 8.00 | 00:01:34 | 100.00% | 0.00% |

<http://yfrog.com/z/ob5kndj>

BUT ANDROID
IS NOT UNIQUE
IN THIS

THE CULPRITS? **SCREEN SIZE**

THE CULPRITS? EMBEDDED VIEWS

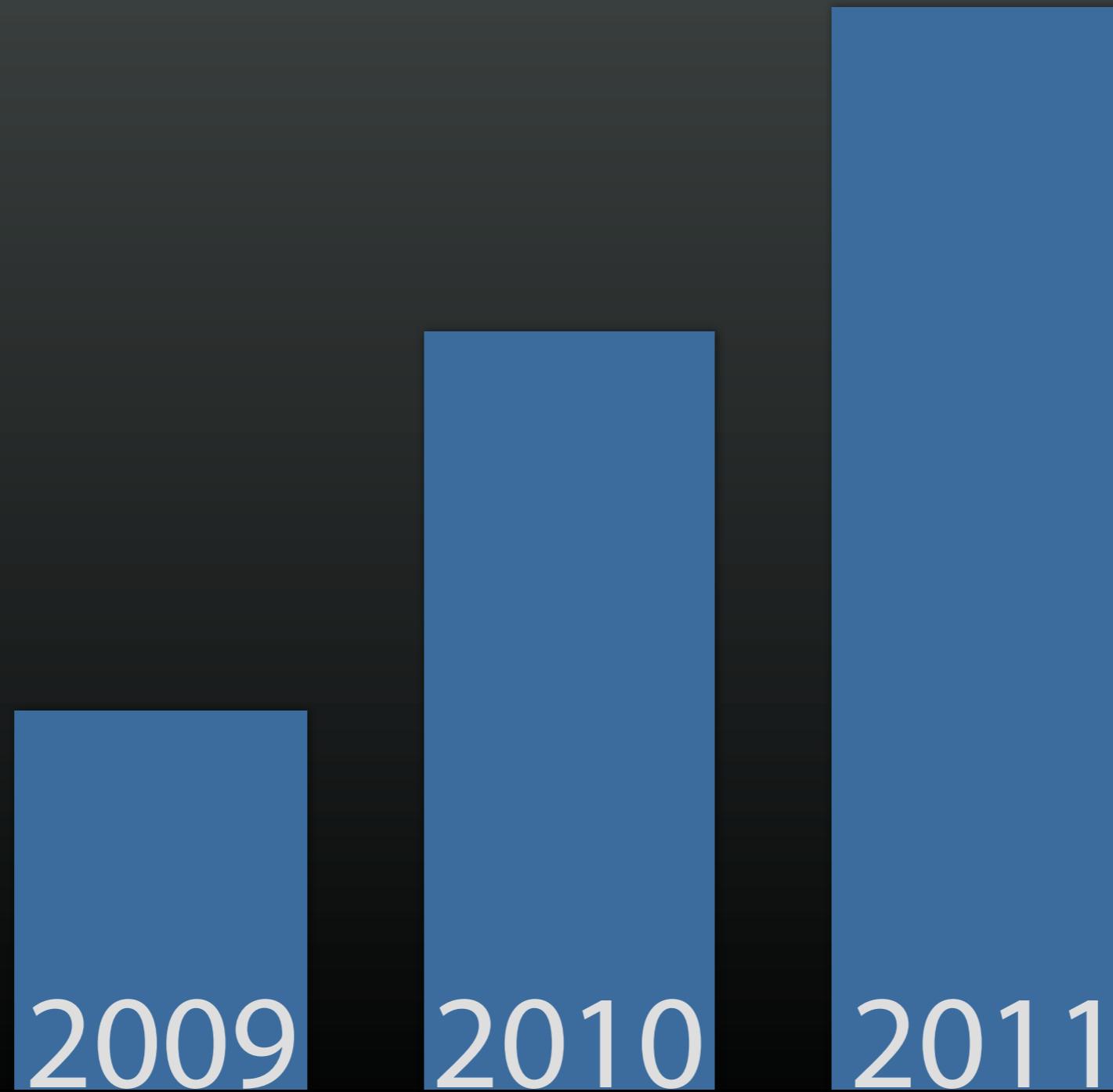
THE CULPRITS? BROWSER CHROME

THE CULPRITS? ZOOM LEVEL

THE CULPRITS? ZOOM LEVEL

(Ok, this one's on Android)

6 Billion



2009 2010 2011

<http://mobithinking.com/mobile-marketing-tools/latest-mobile-stats/a#subscribers>

OVER 80%
OF THESE ARE
FEATURE PHONES,
NOT SMARTPHONES

ESPECIALLY TRUE IN
DEVELOPING
COUNTRIES

**INTERNET IN KENYA
MOBILE = 90%**

THE REALITY





A photograph of a zombie walk or costume event on a city street. Numerous people are dressed in zombie makeup, including fake blood and pale skin. They are walking in a group, some carrying bags. In the background, there are palm trees, buildings, and a red double-decker bus. A "NO SKATEBOARDING" sign is visible on a pole. The scene is set during the day.

"The commoditization of smartphone hardware is just the beginning ... of a huge new wave of cheap devices about to invade our lives—a zombie apocalypse of electronics, if you will.

— Scott Jenson

Um... I think I'll just
build an iPhone app.
kthxbye.

NATIVE *v.s.* WEB



THIS IS THE WEB.



THIS WILL BE THE WEB.



WE DON'T KNOW



WE DON'T KNOW

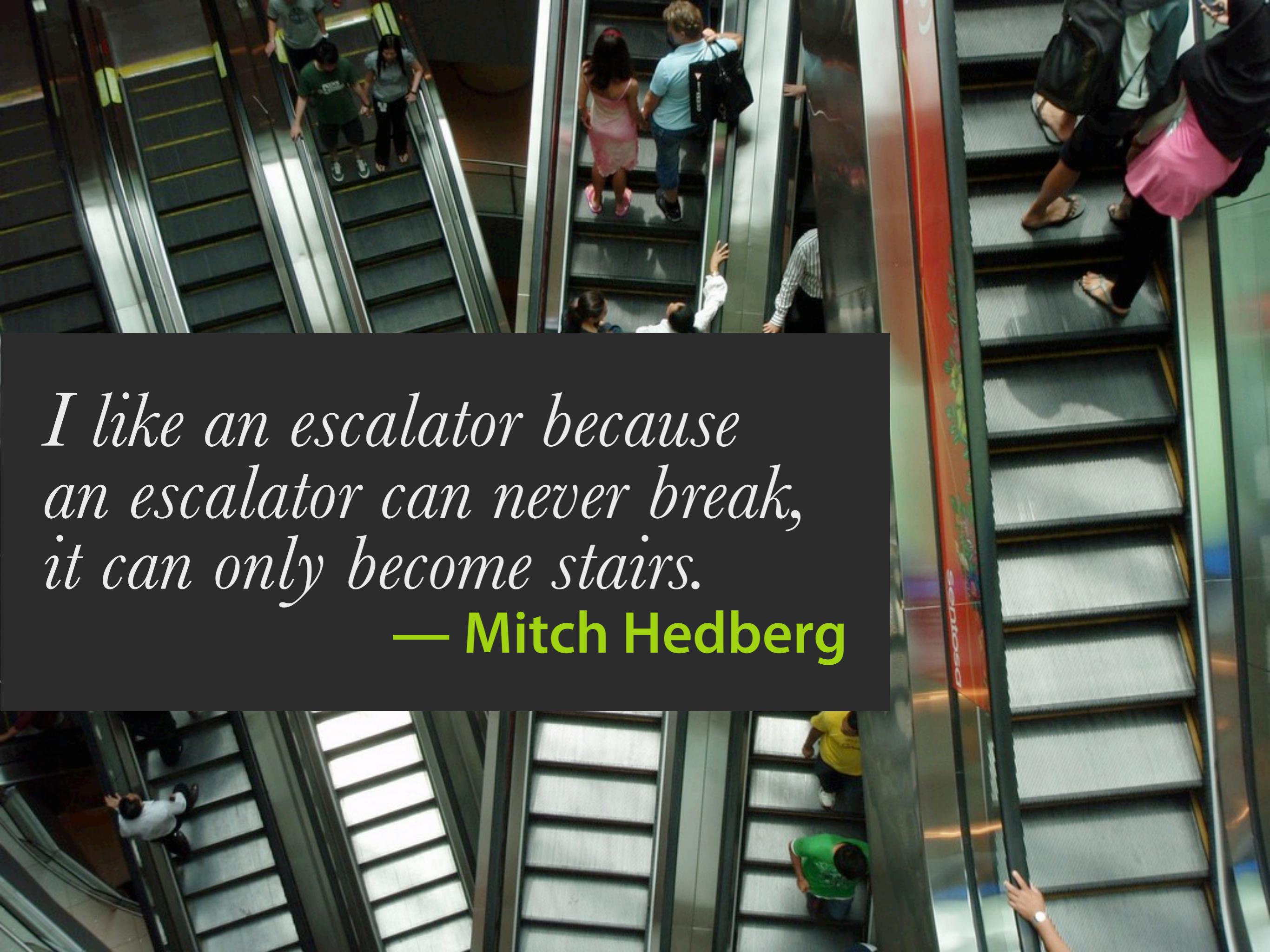
EVEN WHEN
WE THINK
WE KNOW,
WE ARE
PROBABLY
WRONG

**SO HOW DO WE
COPE?**

PROGRESSIVE ENHANCEMENT

**TECHNOLOGICAL
RESTRICTIONS**





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

— Mitch Hedberg



Andrew Wight
@AndrewUX

Progressive enhancement is an escalator that becomes stairs.
Graceful degradation is building a lift then having to add
stairs.

14 May 12



Reply



Retweet



Favorite

GRACEFUL DEGRADATION

MODERN BROWSERS



OLDER BROWSERS

MODERN BROWSERS



OLD R BROWSERS



WEEKENDHACKER

WEEKENDHACKER

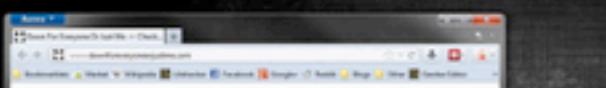
Make the Best of Your Travel Plans This Weekend

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



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



£10 OFF
your first
online shop*

Start saving

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

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

[» The Ultimate Black Friday Gadget](#)

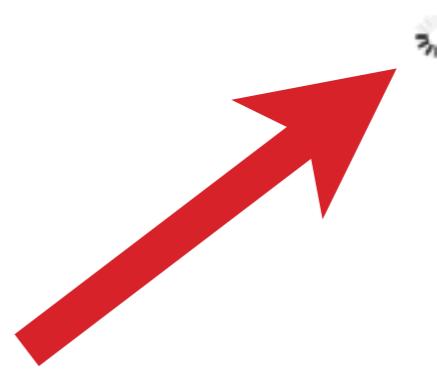
MORE STORIES...

[App Deals](#)

[» The Ultimate Black Friday Gadget](#)

TIPS AND DOWNLOADS FOR
GETTING THINGS DONE

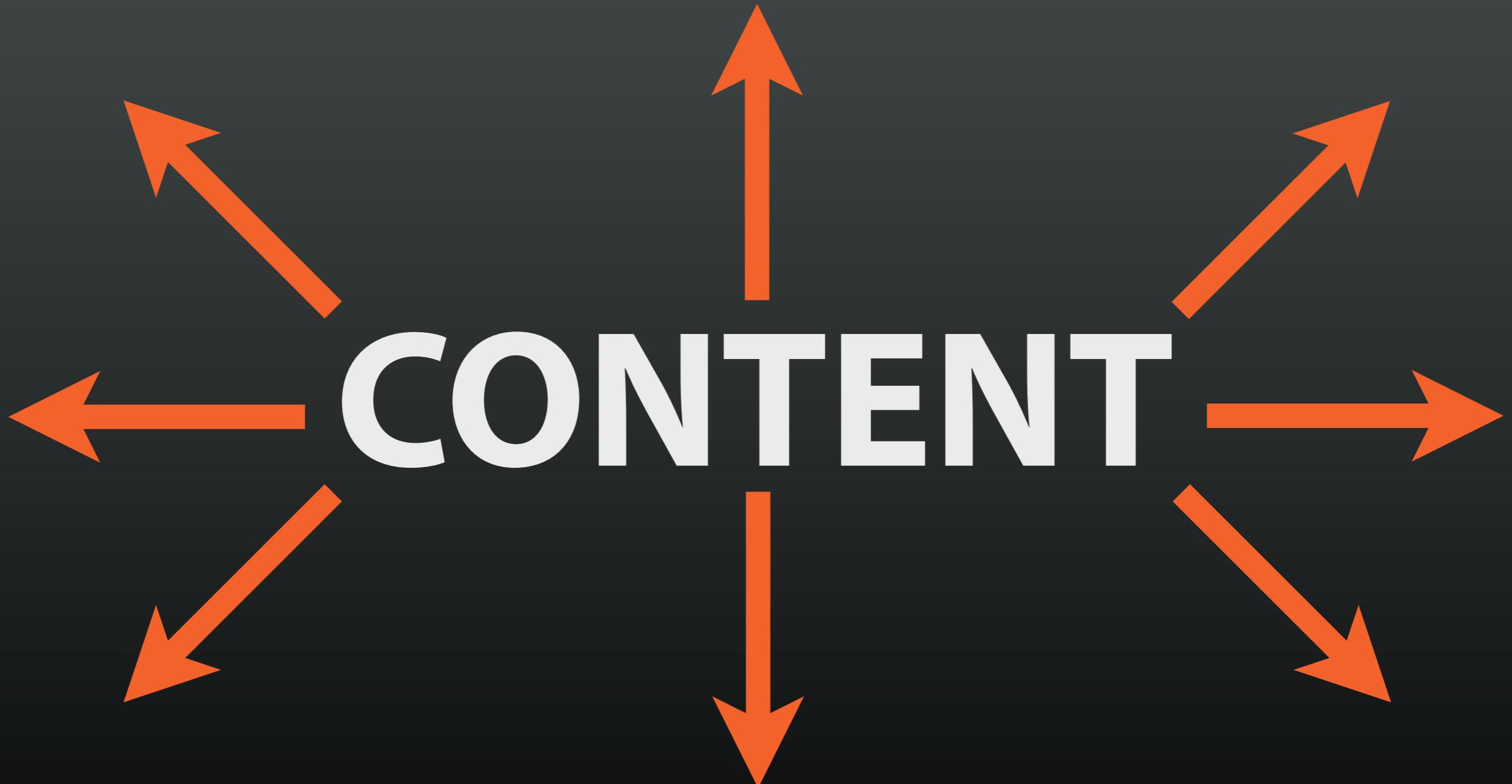
[MORE STORIES...](#)

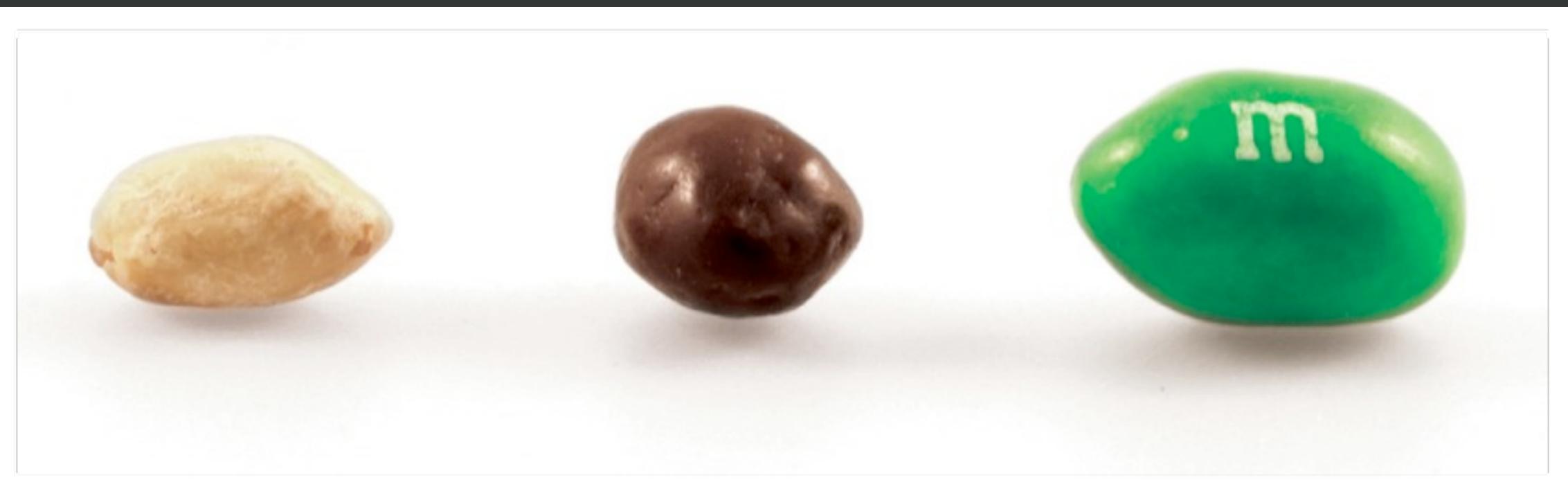




PROGRESSIVE ENHANCEMENT

CONTENT





ACCESSIBILITY

“SPECIAL NEEDS”

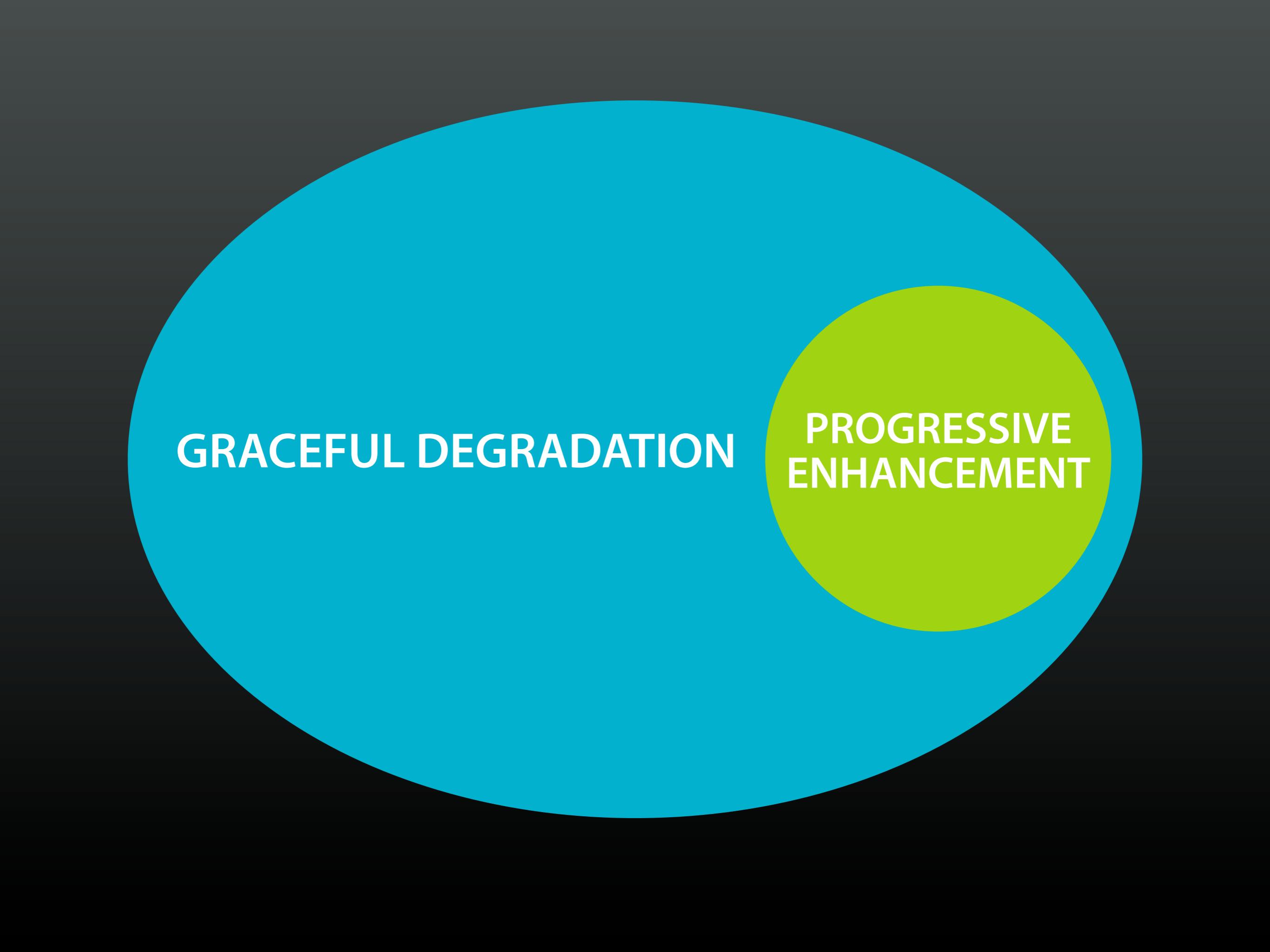
“SPECIAL NEEDS”

**“SPECIAL NEEDS”
CAN BE
CONTEXTUAL.**



**YOU MUST BE THIS TALL
TO RIDE WITH AN ADULT**





GRACEFUL DEGRADATION

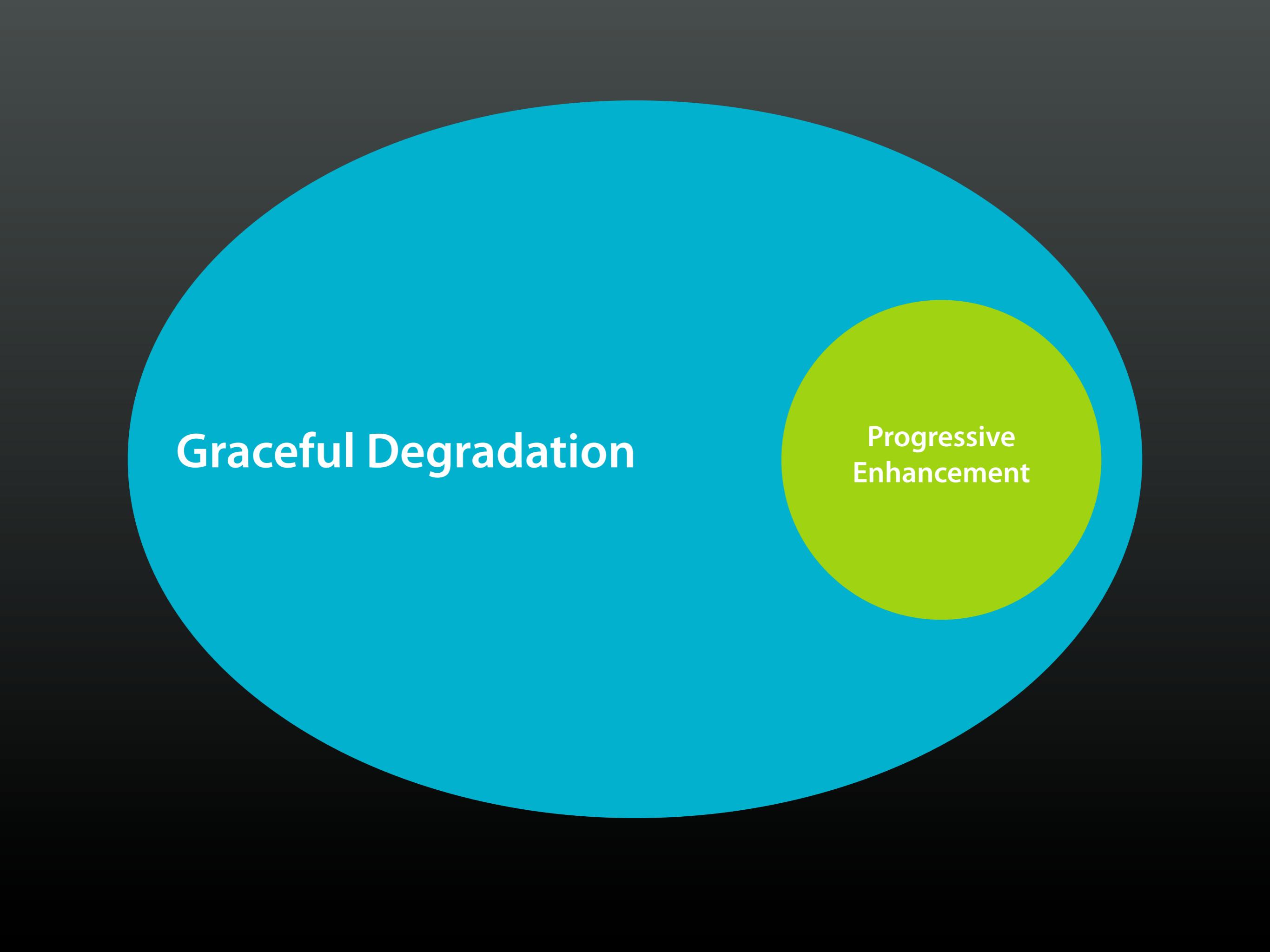
**PROGRESSIVE
ENHANCEMENT**

OOOH, SHINY!

PROGRESSIVE
ENHANCEMENT
ISN'T ABOUT
BROWSERS

**BROWSERS AND
TECHNOLOGIES
COME AND GO**

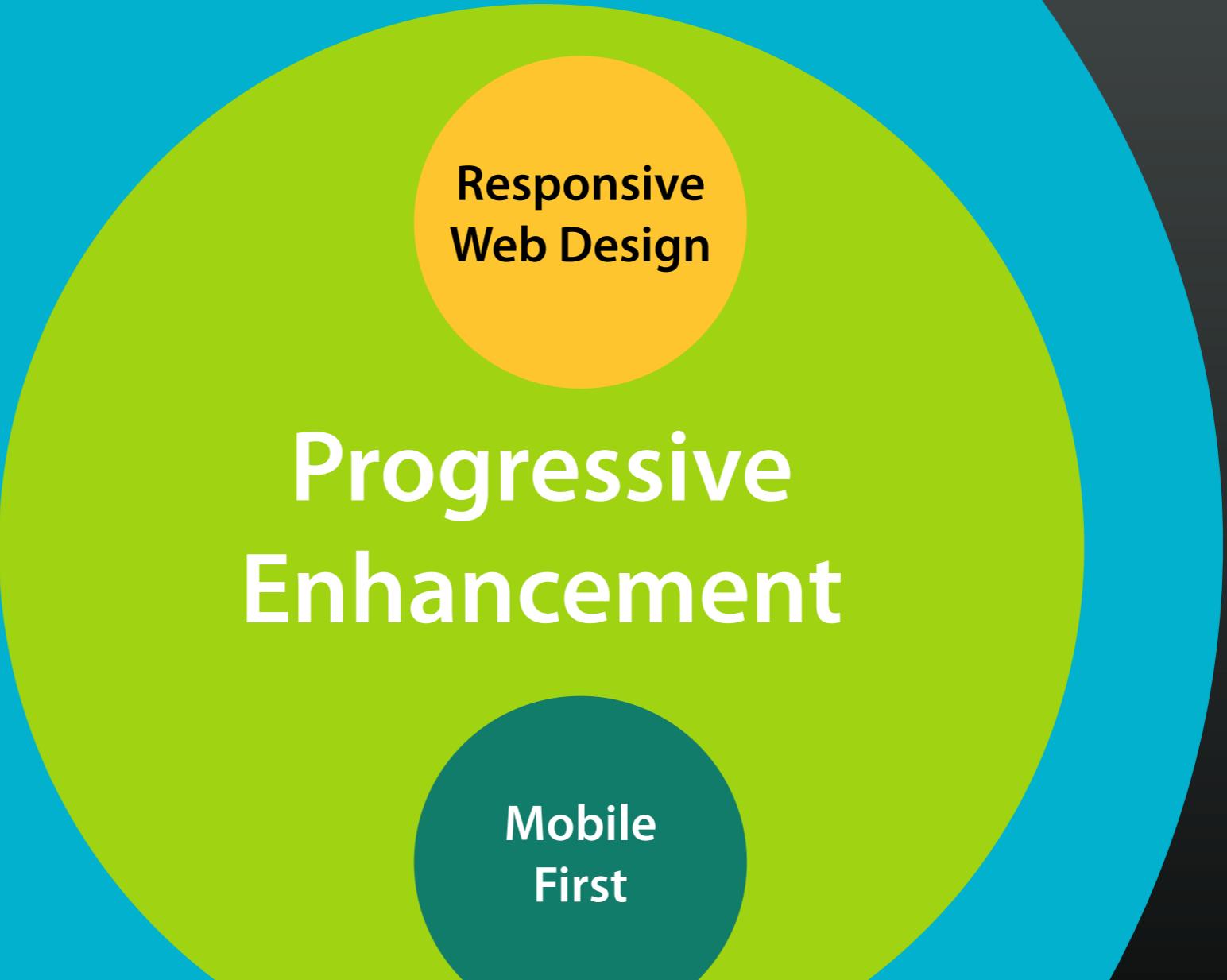
DON'T LOSE SIGHT
OF YOUR USERS

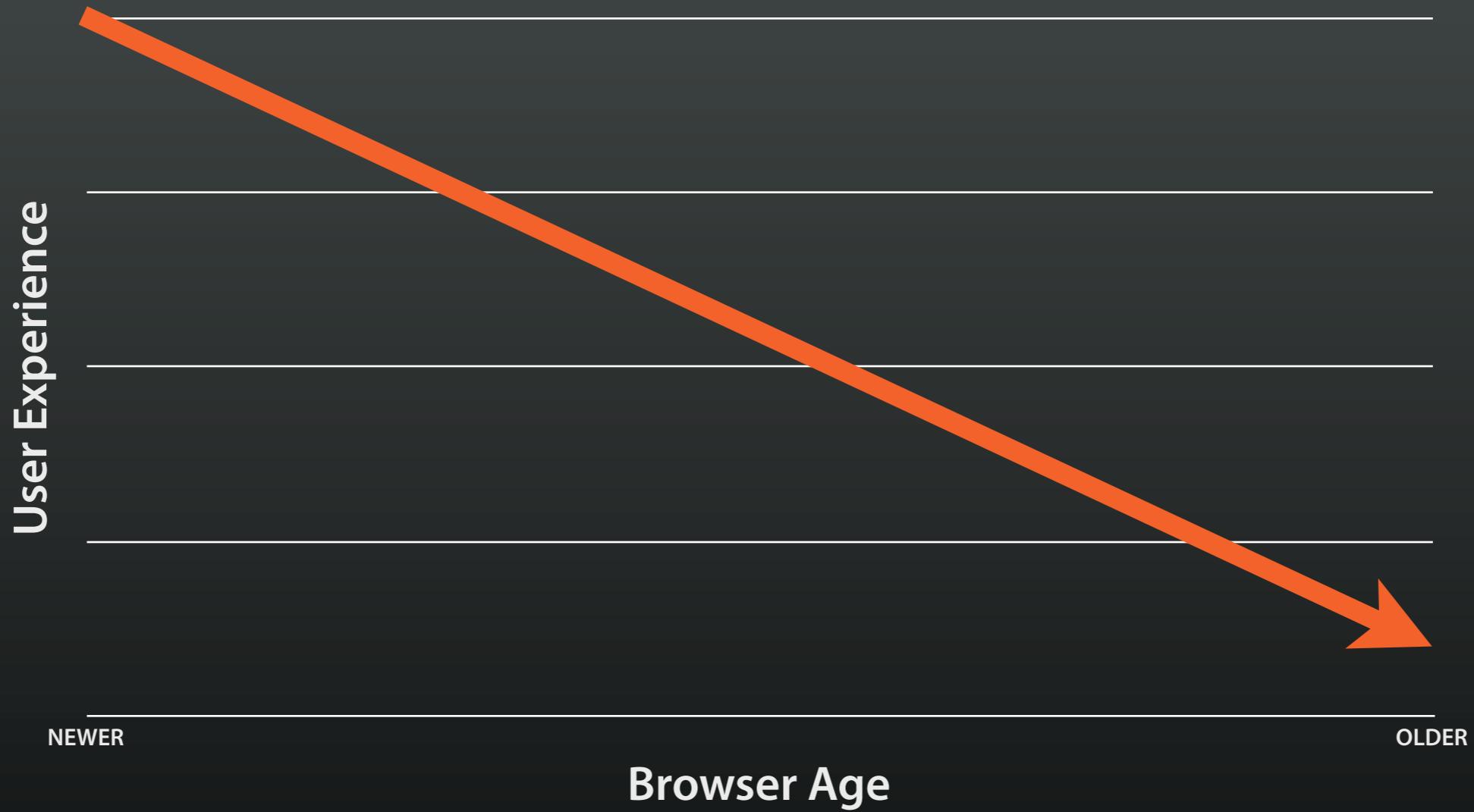


Graceful Degradation

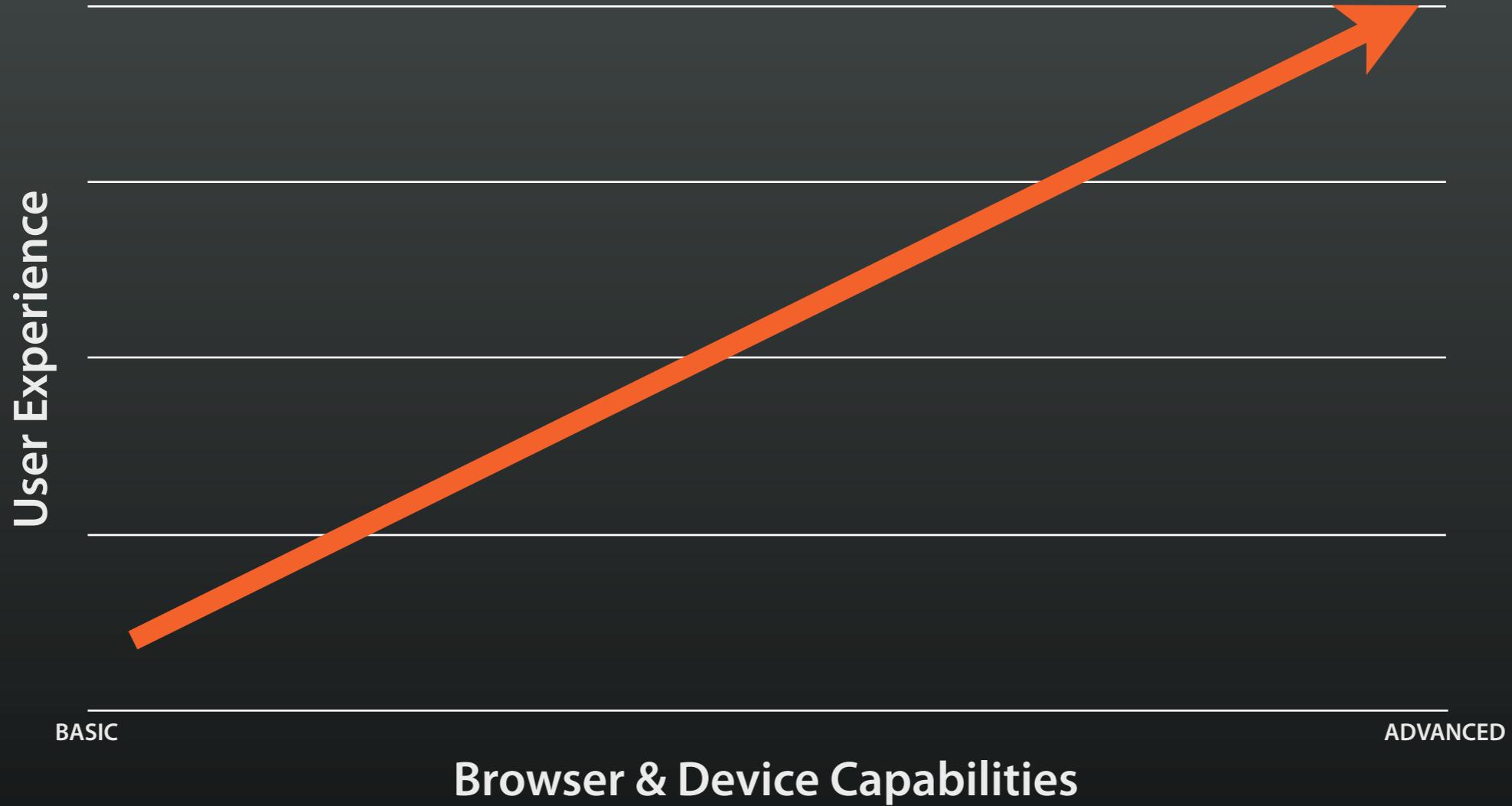
Progressive
Enhancement

on

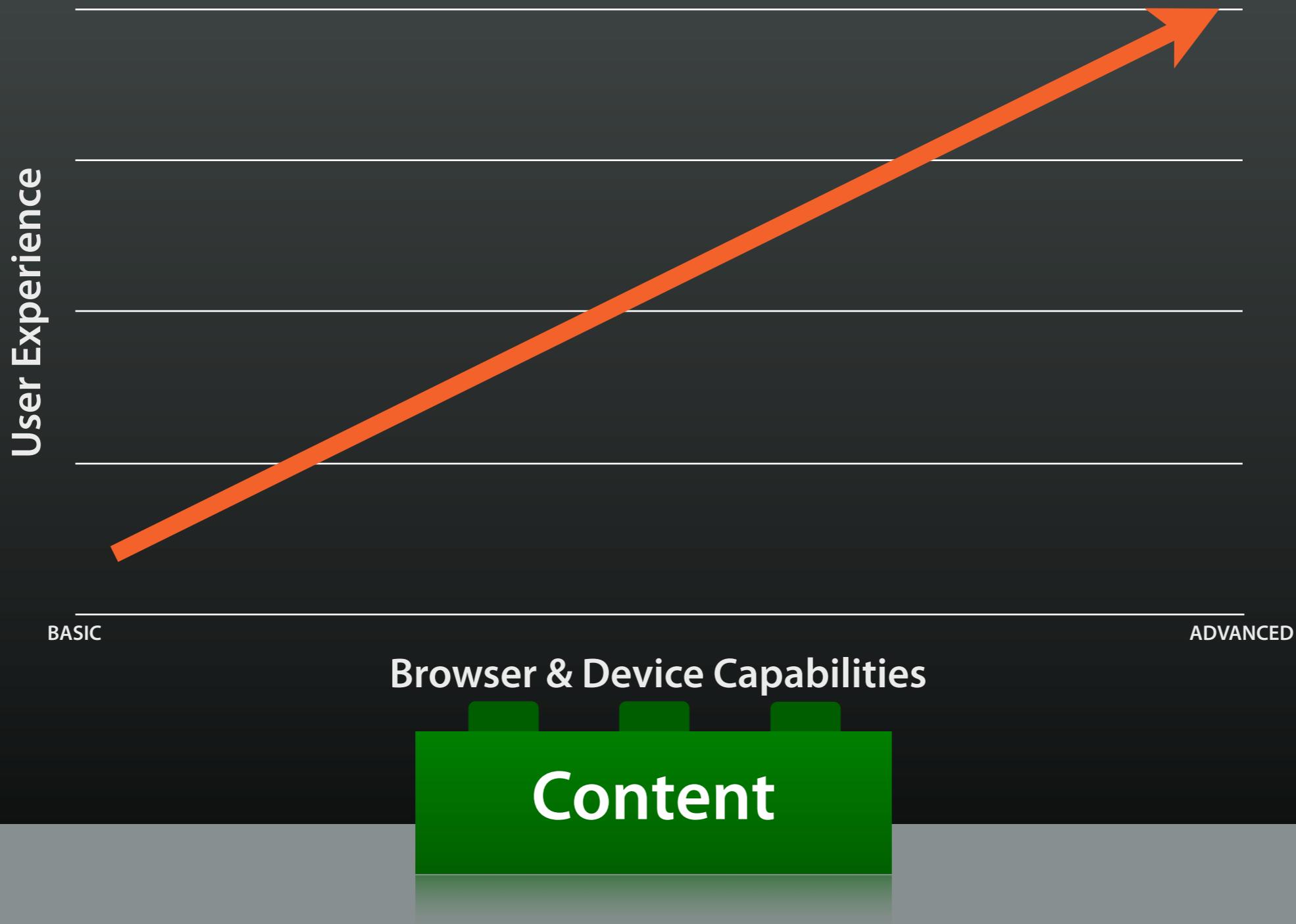


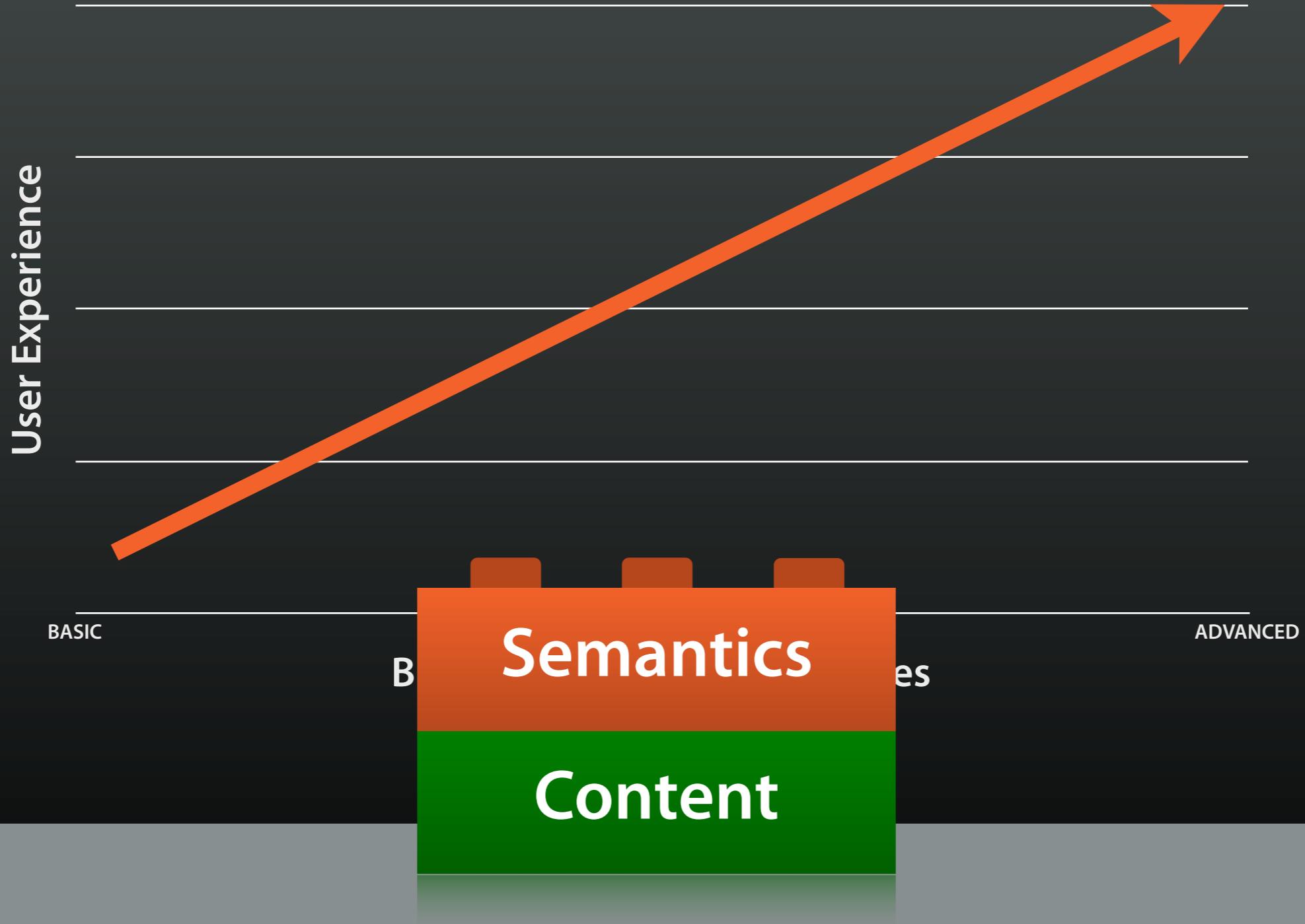


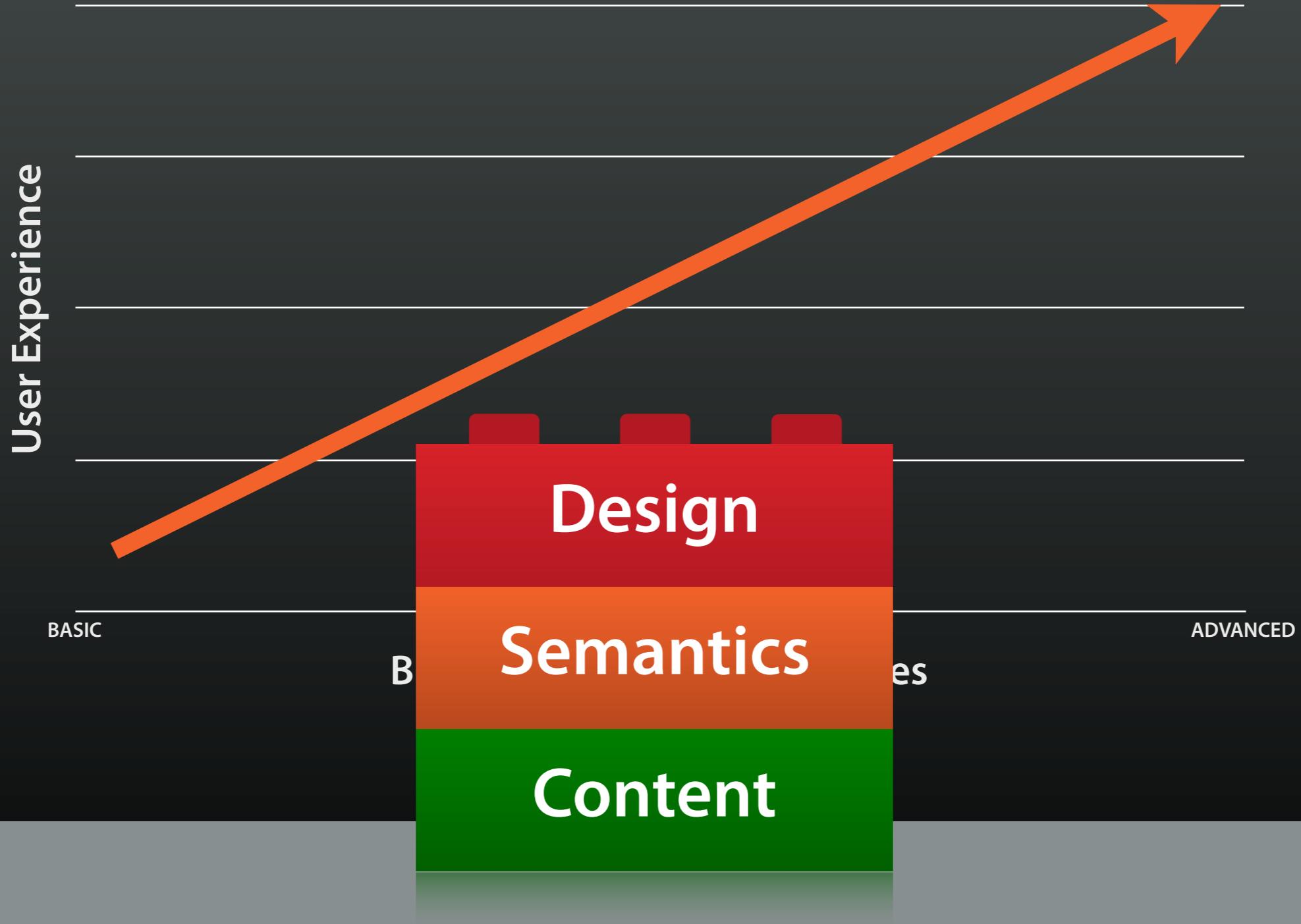
Graceful Degradation

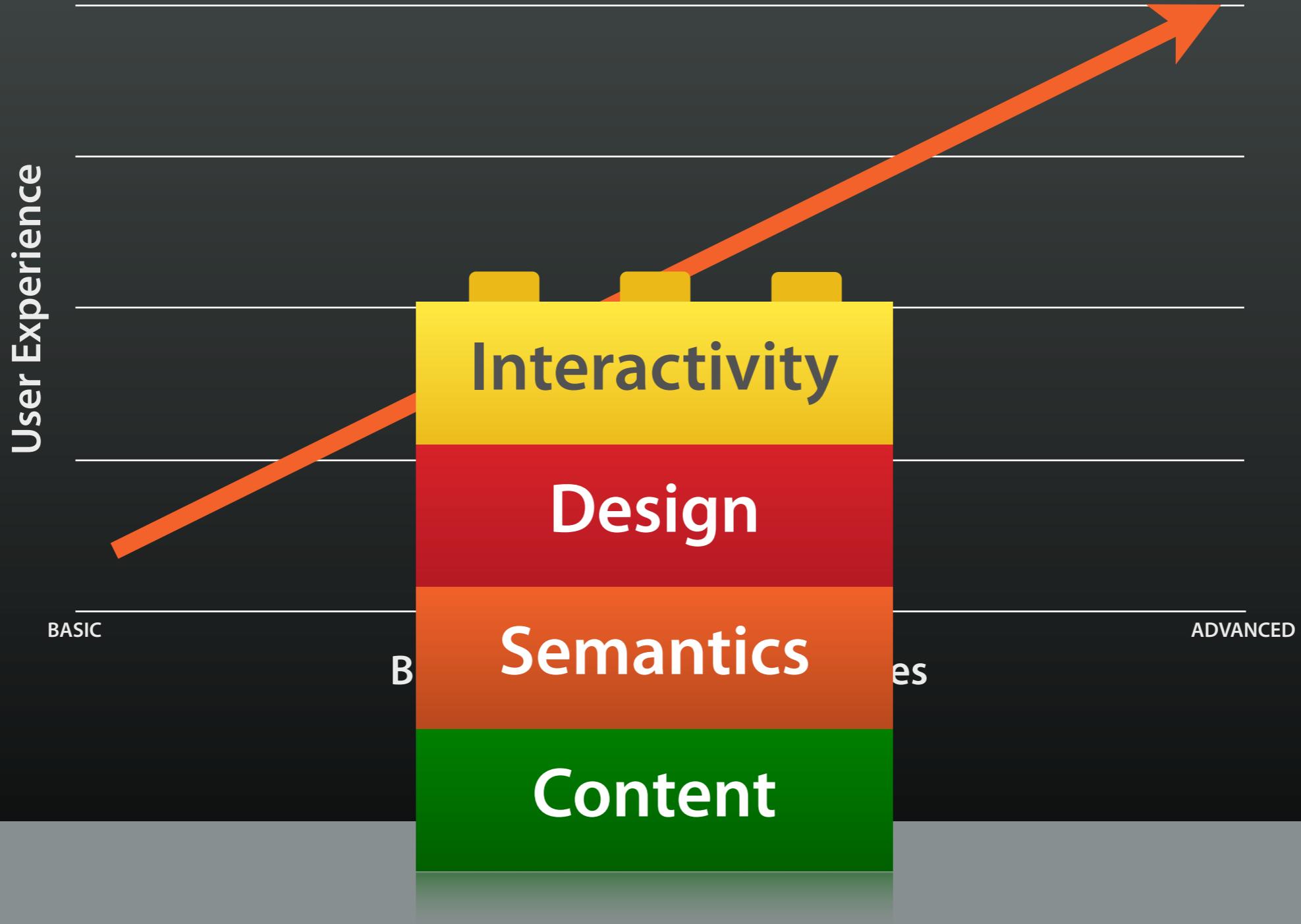


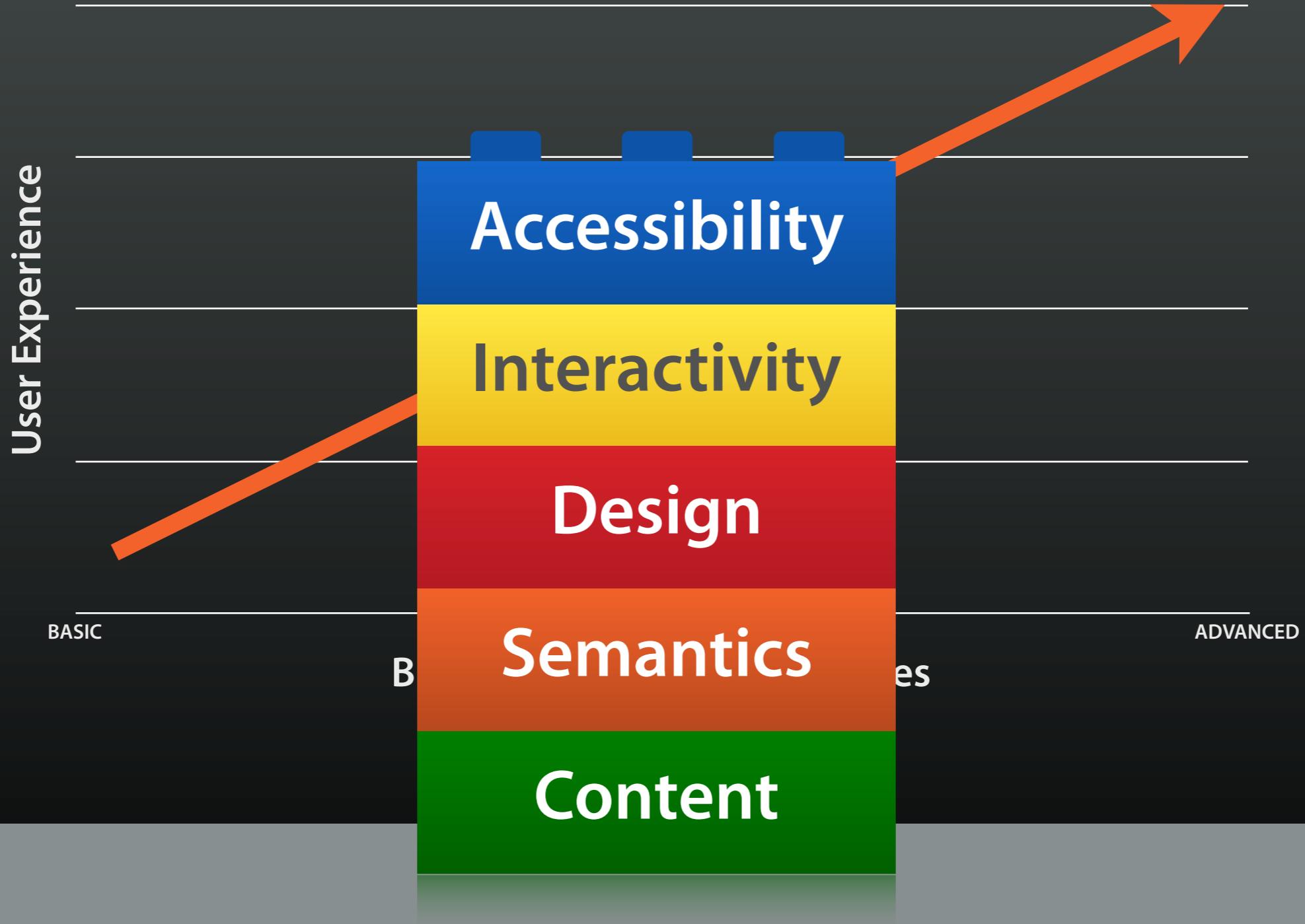
Progressive Enhancement

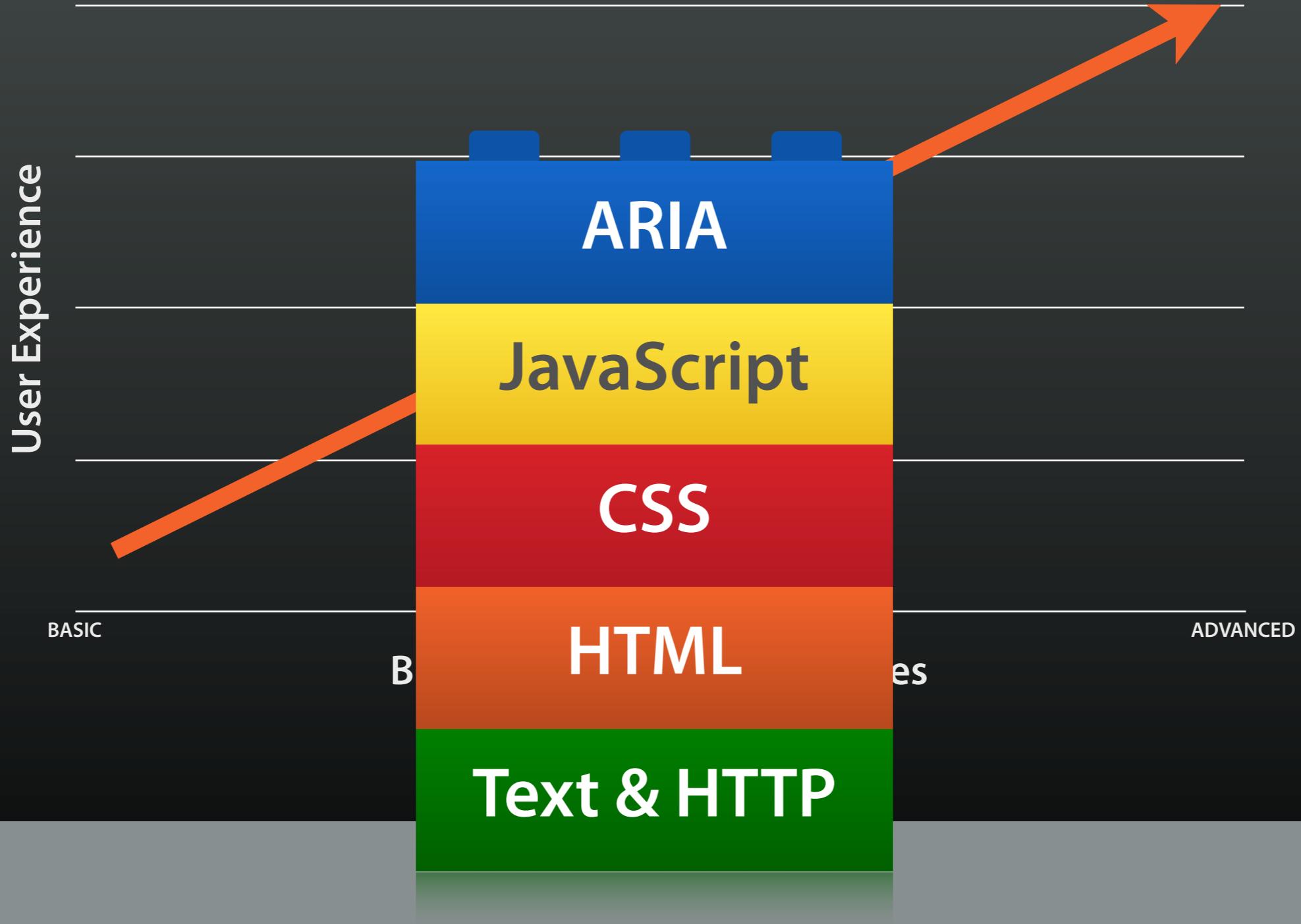














HTML

HTML5

The diagram consists of three horizontal orange rectangles of equal height, centered on a dark gray background. Above the top rectangle are three small, rounded orange squares. A thin black horizontal line is positioned between the top and middle rectangles, and another is between the middle and bottom rectangles.

Microformats

HTML4

EXAMPLES



Semantics 101

```
<p>HTML5 introduces several <em>really</em>  
useful elements and a ton of new APIs.</p>
```

```
<p>Please fill out the form below.  
<strong>Note: all fields are required.</strong></p>
```

```
<p>I like to work with markup languages because  
<strong>they are simple and easy to read</strong>. They also have that certain <i lang="fr" title="I don't know what">je ne sais quoi</i>.</p>
```

PE with HTML

```
<video poster="poster.png">
  <source src="video.m4v"/>
  <source src="video.webm"/>
  <source src="video.ogv"/>
  
  <ul>
    <li><a href="video.m4v">Download MP4</a></li>
    <li><a href="video.webm">Download WebM</a></li>
    <li><a href="video.ogv">Download Ogg</a></li>
  </ul>
</video>
```

PE with HTML

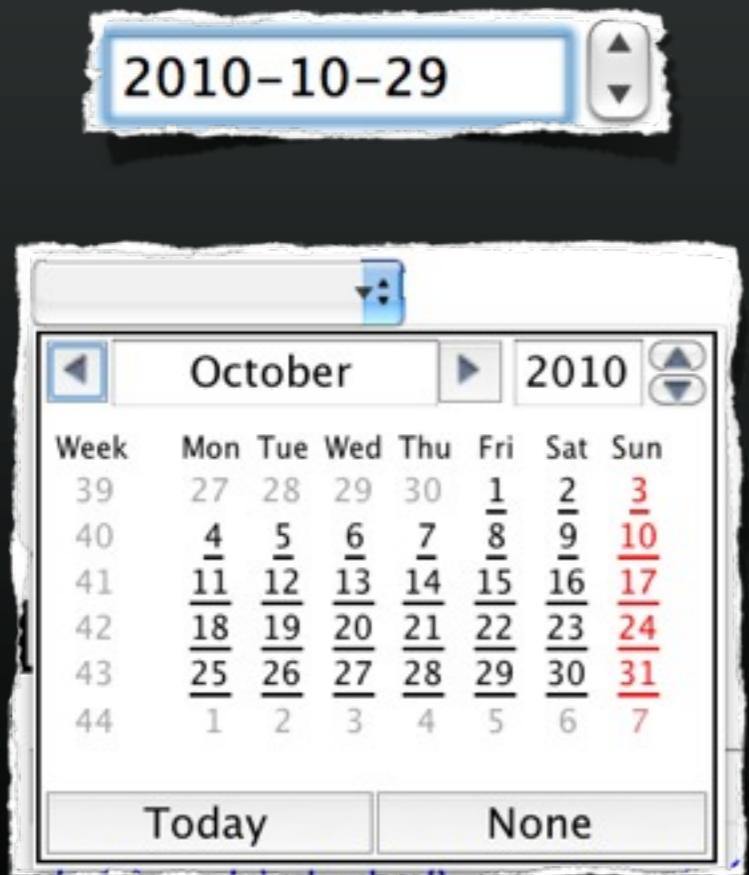
```

<ul>
  <li><a href="video.m4v">Download MP4</a></li>
  <li><a href="video.webm">Download WebM</a></li>
  <li><a href="video.ogv">Download Ogg</a></li>
</ul>
```

PE with HTML

```
<input type="date" name="dob"/>
```

I get it!



I don't get it :-(



PE with Microformats

```
<section class="vcard">
  <figure>
    
  </figure>
  <h1 class="fn">Aaron Gustafson</h1>
  ...
  <p>Aaron ... is <b class="role">Group Manager</b> of the
    <a class="org" href="http://webstandards.org">Web
      Standards Project (WaSP)</a> ....</p>
</section>
```

In his personal time, [Eric](#) is a List Chaperone for the very active [css-discuss](#) mailing list, enjoys a good meal whenever possible, and considers almost no type of music to be worthless. He lives in Cleveland Heights with his wife and daughters.

Aaron Gustafson

Aaron has been working on the web for nearly 15 years and, in that time, has cultivated a love of web standards and an in-depth knowledge of website strategy and architecture, interface design, and numerous languages (including XHTML, CSS, JavaScript, and PHP). Aaron and his wife, Kelly, own [Easy! Designs](#), a boutique web consultancy based in Chattanooga, TN. When not neck deep in code, Aaron is usually found evangelizing his findings and sharing his knowledge and passion with others in the field.

Aaron has trained professionals at *The New York Times*, Gartner, and the US Environmental Protection Agency (among others), and has presented at the world's foremost web conferences, such as An Event Apart and Web Directions. He is Group Manager of the [Web Standards Project \(WaSP\)](#) and serves as an Invited Expert to the World Wide Web Consortium's [Open Web Education Alliance \(OWEA\)](#). He created [eCSStender](#), serves as Technical Editor for [A List Apart](#), is a contributing writer for [.net Magazine](#), and has filled a small library with his technical writing and editing credits. His next book, *Adaptive Web Design: Crafting Rich Experiences with Progressive Enhancement*, is due out in early 2011.

Looking for a detailed curriculum or more information to help sell your boss on this event? [Download the HTML5 & CSS3 fact sheet](#) or view our [frequently asked questions](#). Ready to attend? [Register now](#).

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REGISTRATION IS NOW SOLD OUT

RETREATS 4 GEEKS

Details Schedule Lodging Location Instructors

In his personal time, Eric also lists Chape

Events • ½ mi About • ¾ mi Contact • ¼ mi

Aaron Gustafson

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CONTACT • ¼ mi

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In his personal time, Eric Aho is List Chaperone for the highly active [css-discuss](#) mailing list, enjoys a good meal, and loves to be outside. He loves to...

Aaron Gustafson

Aaron has been working on the web for nearly 15 years and, in that time, has cultivated a love of web standards and an in-depth knowledge of website strategy and architecture, interface design, and web development technologies, including XHTML, CSS, JavaScript, and...

Aaron Gustafson

Web Standards Project (WaSP)
Group Manager
<http://easy-designs.net/>

and the US Environmental Protection Agency. He has spoken at many web conferences, such as An Event Apart and Web Directions. He is Group Manager of the [Web Standards Project \(WaSP\)](#) and serves as an Invited Expert to the World Wide Web Consortium's [Open Web Education Alliance \(OWEA\)](#). He created [eCSStender](#), serves as Technical Editor for [A List Apart](#), is a contributing writer for [.net Magazine](#), and has filled a small library with his technical writing and editing credits. His next book, *Adaptive Web Design: Crafting Rich Experiences with Progressive Enhancement*, is due out in early 2011.

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Registration Sold Out

PE with HTML & ARIA

```
<header role="banner">
  <h1></h1>
  <nav role="navigation">
    <ol>
      <li><a href="#details">Details</a></li>
      <li><a href="#schedule">Schedule</a></li>
      <li><a href="#instructors">Instructors</a></li>
      <li><a href="#lodging">Lodging</a></li>
      <li><a href="#location">Location</a></li>
    </ol>
  </nav>
</header>
```

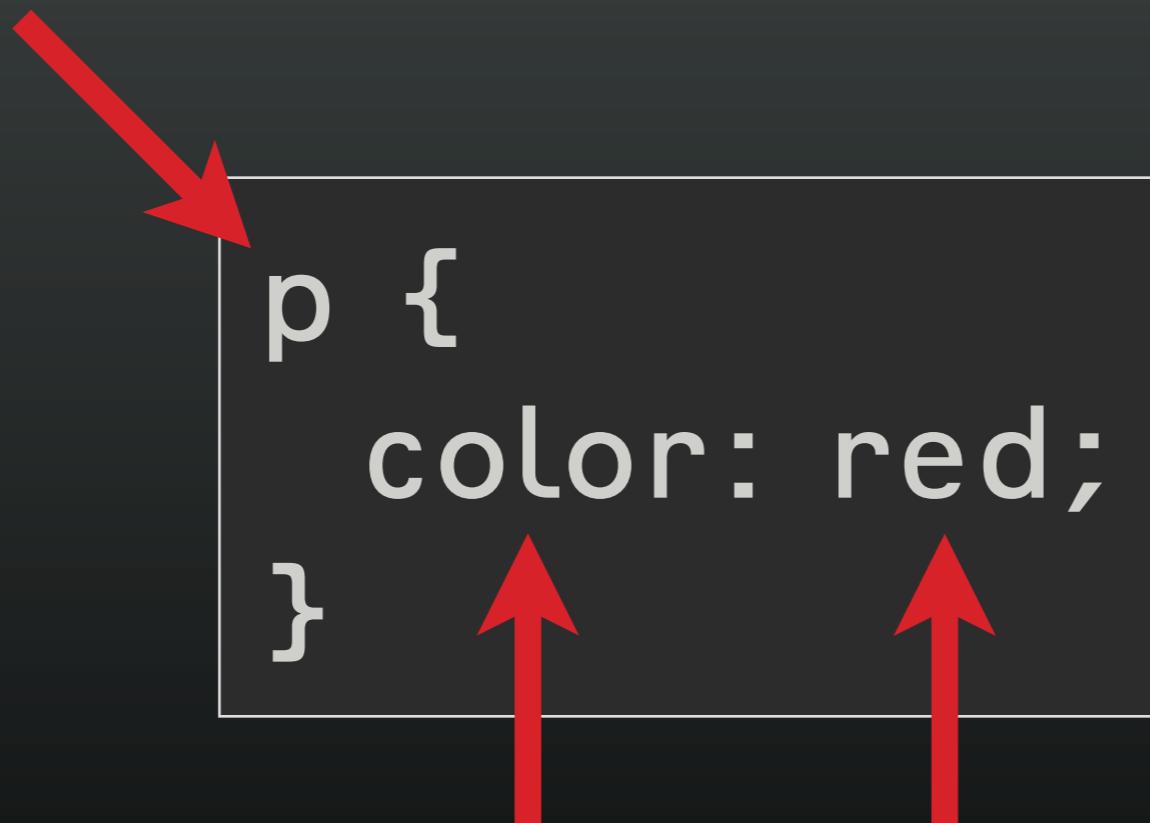
These *are* the droids you seek

```
<span role="button">0K</span>
```

```
<div role="alert">
  <p>Something went wrong.</p>
</div>
```

```
<div role="alertdialog">
  <p>Something went wrong.</p>
  
</div>
```

Parsing errors



Parsing errors

```
p {  
    color: red;  
    font-weight: bold;  
}
```



Parsing errors

```
p {  
  color: #ccc;  
  color: rgba( 0, 0, 0, .5 );  
}
```

Parsing errors

```
html[lang] p {  
  color: #ccc;  
  color: rgba( 0, 0, 0, .5 );  
}
```

Parsing errors

```
@-moz-document url-prefix() {  
    html[lang] p {  
        color: #ccc;  
        color: rgba( 0, 0, 0, .5 );  
    }  
}
```

```
#intro {
    /* Basic Layout */
}

/* ... */

body[id=css-zen-garden] #intro {
    /* Advanced Layout */
}
```

CSS ZEN GARDEN
FOCUSING THE MIND... "BY DESIGN"

the road to enlightenment

Untiring a dark and dreary road lay the past
relics of browser-specific tags, incompatible DOCTYPEs,
and broken CSS support.

Today, we must clear the mind of past practices.
Web enlightenment has been achieved thanks to
the tireless efforts of folk like the W3C, WebP and
the major browser creators.

The CSS Zen Garden invites you to relax and
meditate on the important lessons of the masters.
Begin to see with clarity. Learn to use the (yet to
be) time-honored techniques in new and
innovating fashion. Become one with the web.

SO WHAT IS THIS ABOUT?

There is clearly a need for CSS to be taken
seriously by graphic artists. The Zen Garden aims
to excite, inspire, and encourage participation. To
begin, view some of the existing designs in the list.
Clicking on any one will load the style sheet into this
very page. The code remains the same, the only thing
that has changed is the external.css file. Yes, really.

CSS allows complete and total control over the style
of a hypertext document. The only way this can be
illustrated in a way that gets people excited is by
demonstrating what it can truly be, once the reins are
placed in the hands of those able to create beauty
from structure. To date, most examples of neat tricks
and hacks have been demonstrated by structure and coders.
Designers have yet to make their mark.
This needs to change.

PARTICIPATION

Graphic artists only please. You are modifying this
page, so strong CSS skills are necessary, but the
examples that are commented well enough that even
CSS novices can use them as starting points. Please
see the [CSS Resource Guide](#) for advanced tutorials
and tips on working with CSS.

You may modify the style sheet in any way you wish,
but not the HTML. This may seem daunting at first if
you've never worked this way before, but follow the
linked links to learn more, and use the sample files
as a guide.

Download the sample [index.html](#) and [css.css](#) to work on
a copy locally. Once you have completed your
masterpiece (and please, don't submit half-finished work)
upload your .css file to a web server under your
control. [Send us a link](#) to the file and if we choose to
use it, we will spider the associated images. Final
submissions will be placed on our server.

BENEFITS

Why participate? For recognition, inspiration, and a
resource we can all refer to when making the case for
CSS-based design. This is surely needed, even
today. More and more major sites are taking the leap,
but not enough have. One day this gallery will be a
historical curiosity; that day is not today.

REQUIREMENTS

We would like to see as much CSS1 as possible.
CSS2 should be limited to widely-supported
elements only. The CSS Zen Garden is about
functional, practical CSS and not the latest bleeding-
edge tricks viewable by 2% of the browsing public.
The only real requirement we have is that your CSS
validates.

Unfortunately, designing this way highlights the flaws
in the various implementations of CSS. Different
browsers display differently, even completely valid
CSS at times, and this becomes maddening when a
fix for one leads to breakage in another. View the
[Resources](#) page for information on some of the fixes
available. Full browser compliance is still sometimes
a pipe dream, and we do not expect you to come up
with pixel-perfect code across every platform. But do
test as many as you can. If your design doesn't
work in at least IE5-Vista and Mozilla (run by over 90%
of the population), chances are we won't accept it.

© 2002 Brad Frost without editorial permission. [Dissent](#)

more information, contribute, buy me a beer, receive free personal consultation

```
#intro { /* Basic Layout */
}

/* ... */

[foo], #intro { /* Advanced Layout */
}
```

zen Garden

the road to enlightenment

Untiring a dark and dreary road lay the past
relics of browser-specific tags, incompatible DOCTYPEs,
and broken CSS support.

Today, we must clear the mind of past practices.
Web enlightenment has been achieved thanks to the
tireless efforts of folk like the W3C, WebP and
the major browser creators.

CSS allows complete and total control over the style
of a hypertext document. The only way this can be
illustrated in a way that gets people excited is by
demonstrating what it can truly be, once the reins are
placed in the hands of those able to create
beauty from structure. To date, most examples of neat tricks
and hacks have been demonstrated by structure and coders.
Designers have yet to make their mark. This needs to change.

so what is this about ?

There is clearly a need for CSS to be taken
seriously by graphic artists. The Zen Garden aims
to excite, inspire, and encourage
participation. To begin, view some of the existing designs in the list.
Clicking on any one will load the style sheet into this very page. The code
remains the same, the only thing that has
changed is the external.css file. Yes, really.

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of a hypertext document. The only way this can be
illustrated in a way that gets people excited is by
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beauty from structure. To date, most examples of neat tricks
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Designers have yet to make their mark. This needs to change.

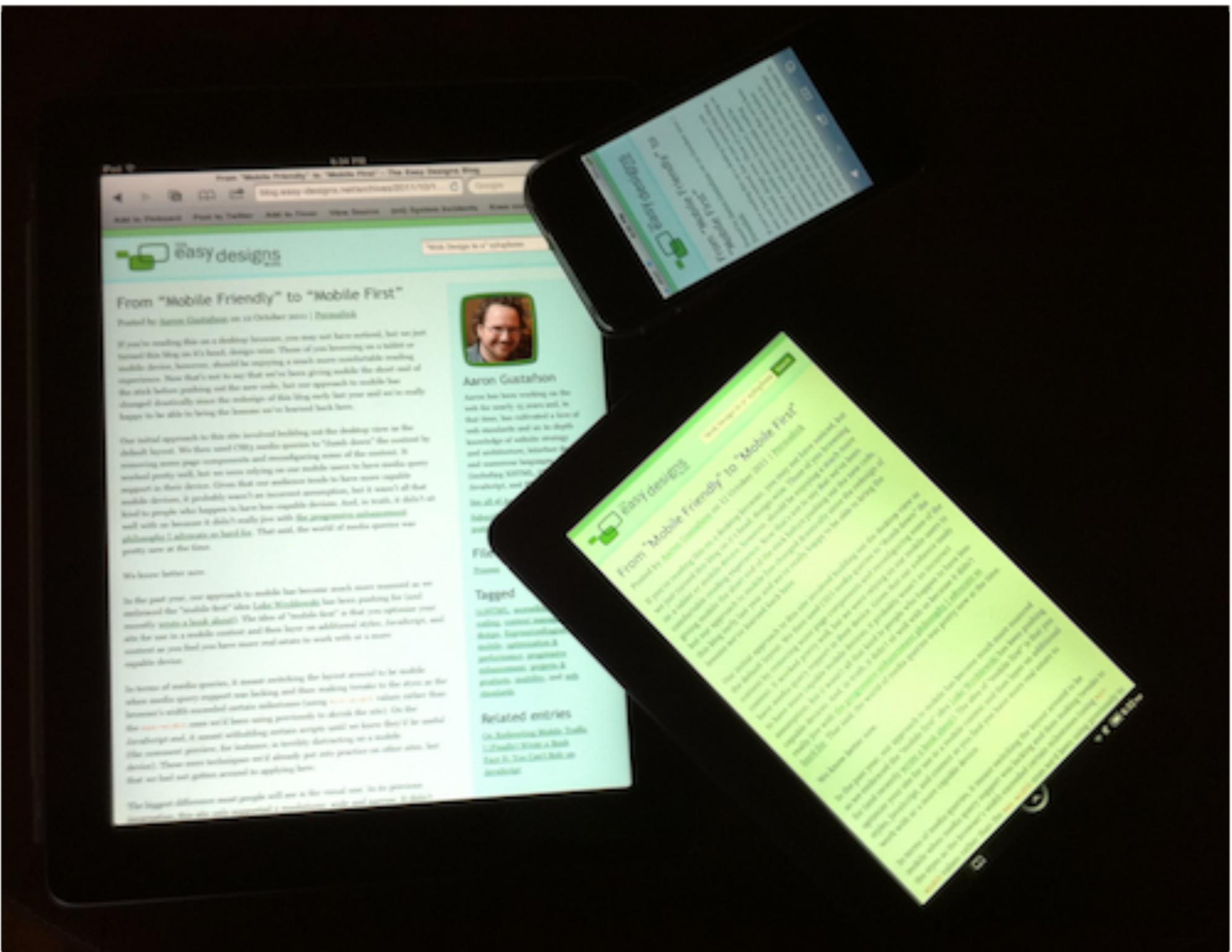
participation

dutchcolt

more information, contribute, buy me a beer, receive free personal consultation

Parsing errors

```
@import 'not-for-IE7-or-below.css' screen;  
  
@media screen, print, refrigerator {  
    /* IE will get these rules */  
}
```



From "Mobile Friendly" to "Mobile First"
Posted by Aaron Gustafson on 13 October 2011 | Permalink

If you're reading this on a desktop browser, you may not have noticed, but we just launched this blog on a brand new site. Those of you browsing on a tablet or mobile device, however, should be enjoying a much more comfortable reading experience. Now that's not to say that we've been giving mobile the short end of the stick before putting out the new code, but our approach to mobile has changed drastically since the release of this blog over last year and we're really happy to be able to bring the "mobile" we've learned back here.

Our initial approach to this site involved building out the desktop view as the default layout. We then used CSS media queries to "switch" down the content by removing some page compromises and reengineering some of the markup. It worked pretty well, but we were relying on our mobile users to have media query support in their device. Given that our audience tends to have more capable mobile devices, it probably wasn't an incorrect assumption, but it wasn't all that kind to people who happen to have less-capable devices. And, to boot, it didn't do well with us because it didn't really jive with the progressive enhancement philosophy I advocate as hard-line. That said, the world of media queries was pretty tame at the time.

We know better now.

In the past year, our approach to mobile has become much more refined as we embraced the "mobile first" idea Luke Wroblewski has been pushing for (and I recently wrote a book about). The idea of "mobile first" is that you optimize your site for use in a mobile context and then layer on additional styles, JavaScript, and content as you find you have more real estate to work with on a more capable device.

In terms of media queries, it means switching the layout around to be mobile when media query support was lacking and then making tweaks to the site as the browser's width increased (rather than doing [media queries](#) earlier than the [actual width](#), which will force parsing processes to check the size). On the desktop end, it means utilizing custom scripts until we know they'll be useful (like measured pressure, for instance, is terrible interacting on a mobile device). These were influences until already put more practice on other sites, but that we had not gotten around to applying here.

(The biggest difference most people will see is the visual cue for no pressure information. This site only displays a resolution, width and pressure in desktop).



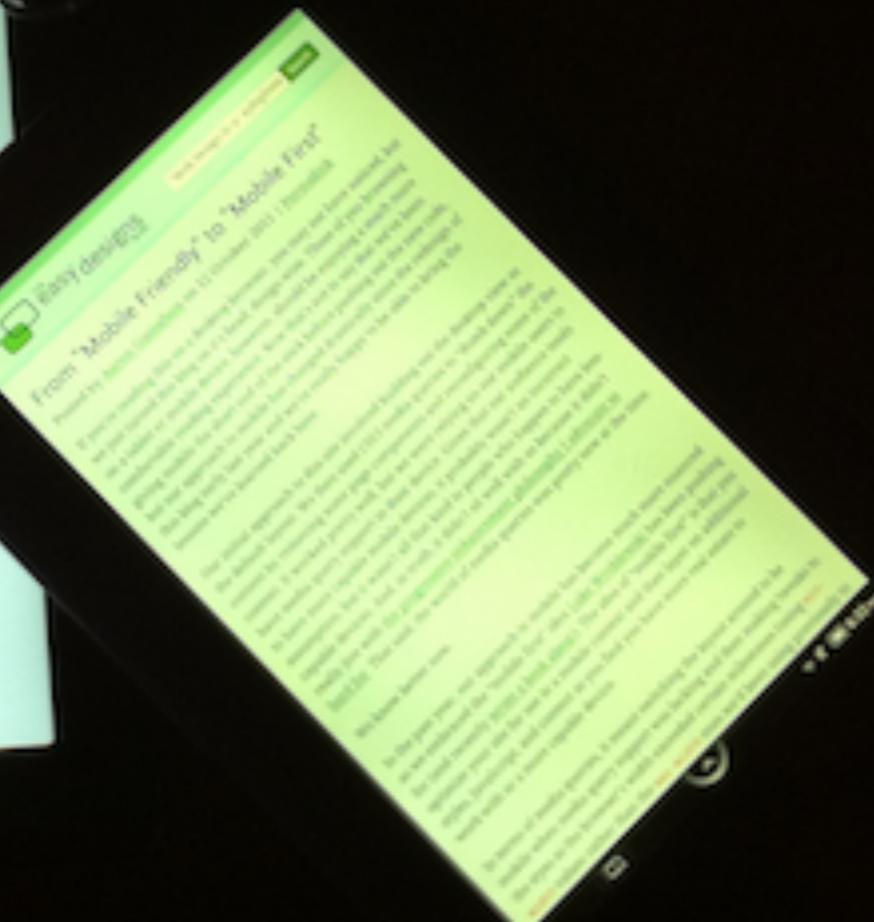
Aaron Gustafson

Aaron has been working on the web for nearly 15 years and, in that time, has cultivated a love of web standards and an in-depth knowledge of website strategy and optimization, interface design and numerous languages (including XSLT/XPath, JavaScript, and CSS) as well as a passion for learning and applying them.

Follow
RSS
Tagged
css, html, media queries, responsive design, web standards, mobile, performance, progressive enhancement, design, accessibility, web standards

Related entries

- On Accessibility, Media Queries, Layouts & From a Book
- From the DocCafe: Responsive Design



@Media blocks

```
@media screen {  
  /* Styles for screen media only */  
}
```

@Media blocks+

```
@media screen and (max-width:450px) {  
    /* Styles for screen media when browser  
       is 450px wide or below */  
}
```

Don't do this

```
@media  
  screen and (min-device-width:1024px)  
    and (max-width:989px),  
  screen and (max-device-width:480px),  
  screen and (max-device-width:480px)  
    and (orientation:landscape),  
  screen and (min-device-width:481px)  
    and (orientation:portrait) {  
    /* Layout for narrower desktop (below 990px)  
     or  
     iPhone running iOS 3 (or equivalent)  
     or  
     iPhone running iOS 4 (or equivalent) in "landscape" view  
     or  
     iPad (or equivalent) in "portrait" view */  
}
```

Mobile First w/ media queries

```
/* Universal Layout */  
  
@media screen {  
    /* Styles for all screens */  
}  
  
@media screen and (min-width:481px) {  
    /* Styles for all screens 480px+ width */  
}  
  
@media screen and (min-width:754px) {  
    /* Styles for all screens 754px+ width */  
}
```



We are Happy Cog

We painstakingly craft digital experiences that balance beauty and utility, on any device that successfully connects you to your audience.



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*

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— ZAPPOS —

The Shoe Fit

When the fine folks at Zappos.com realized that their business growth had outpaced the slowly-evolving aesthetic of their website, they called on Happy Cog. Customer service and site interaction wasn't a problem, but the site didn't capture and embrace the hallmarks of the Zappos.com culture.

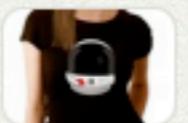
*

[Prove It →](#)



Super Ffly T-shirt

\$23 ★★★★☆ 8 Reviews



QTY

1

SIZE

S

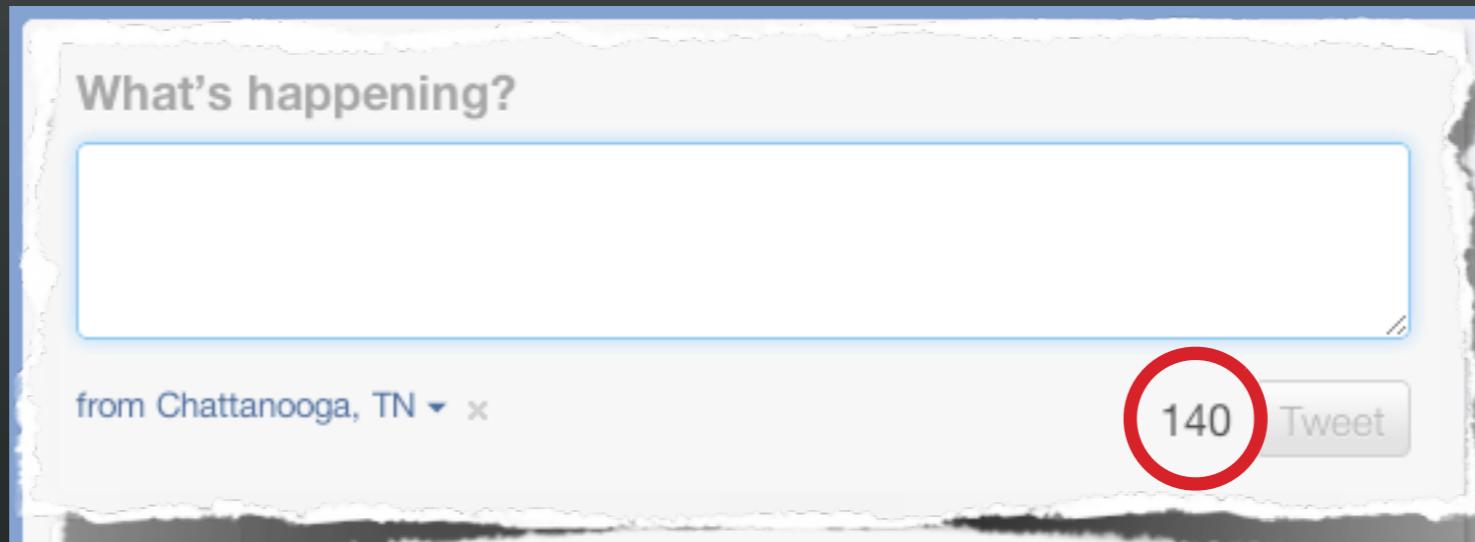


ADD TO CART

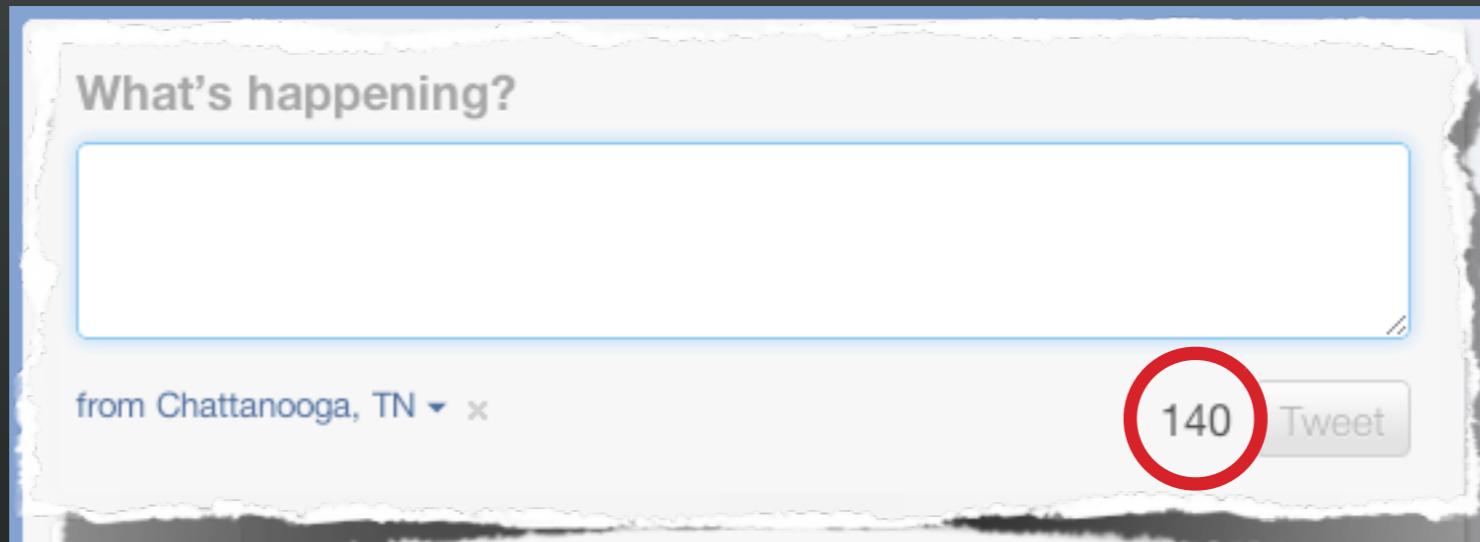
SHARE FIND NEARBY

http://is.gd/lazyloading_demo

PE with JavaScript

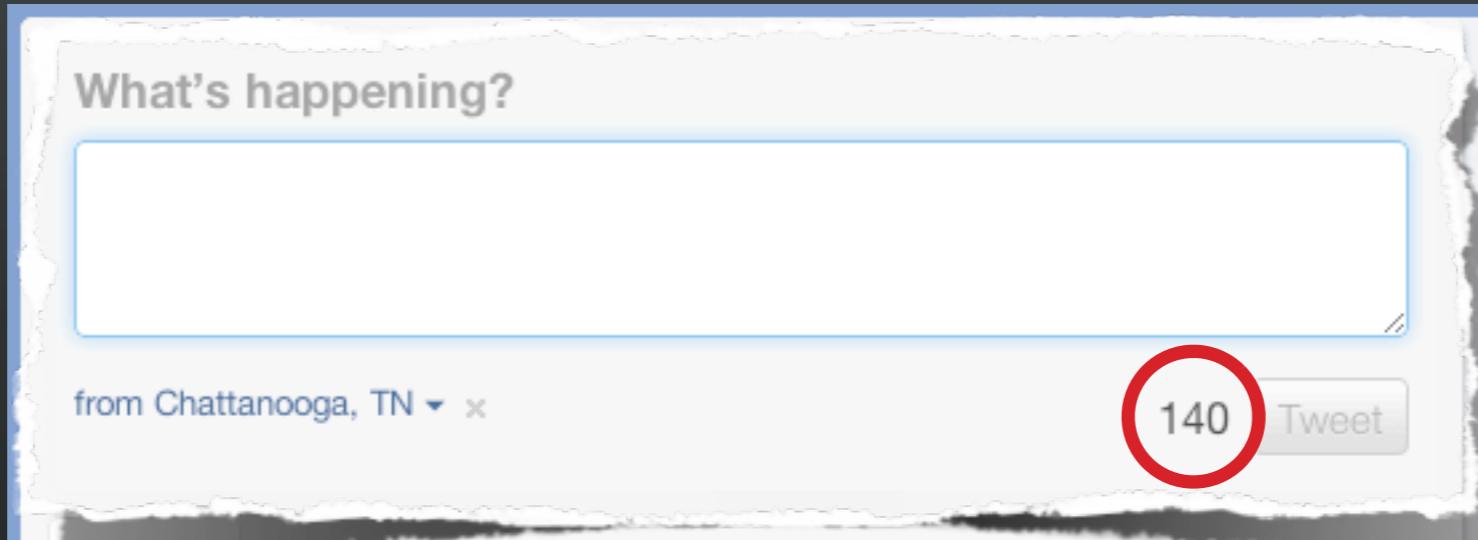


PE with JavaScript



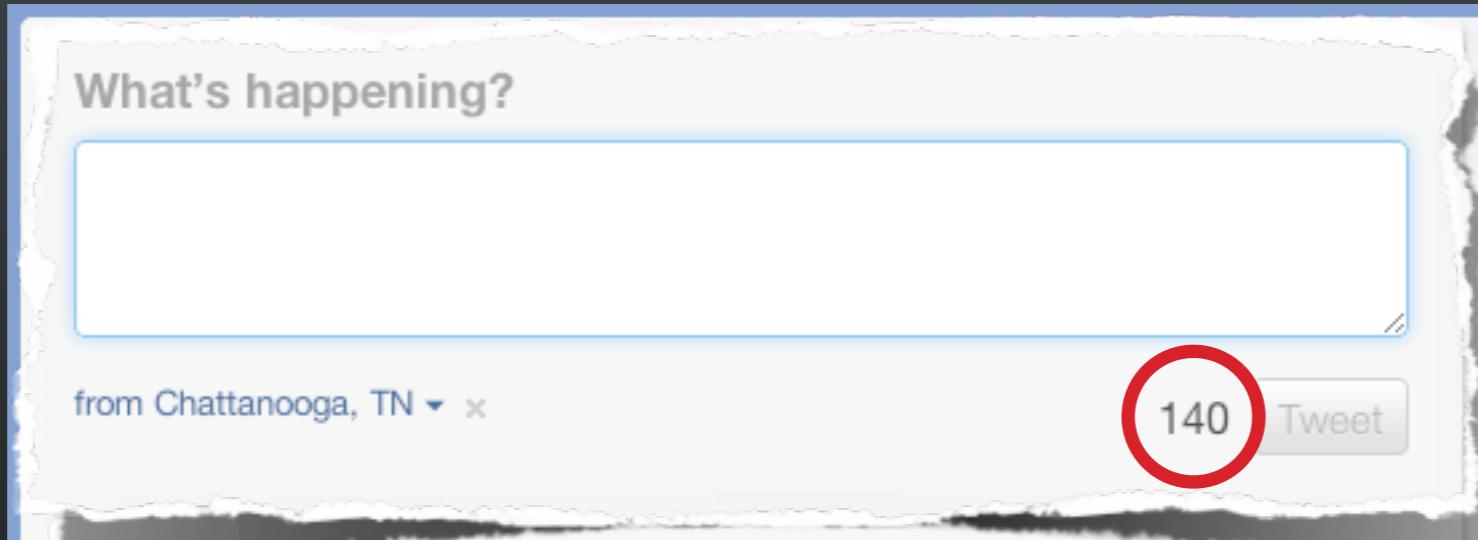
```
<input class="tweet-counter" value="140" disabled="disabled">
```

PE with JavaScript



```
<span id="chars_left_notice" class="numeric">
  <strong id="status-field-char-counter"
    class="char-counter">140</strong>
</span>
```

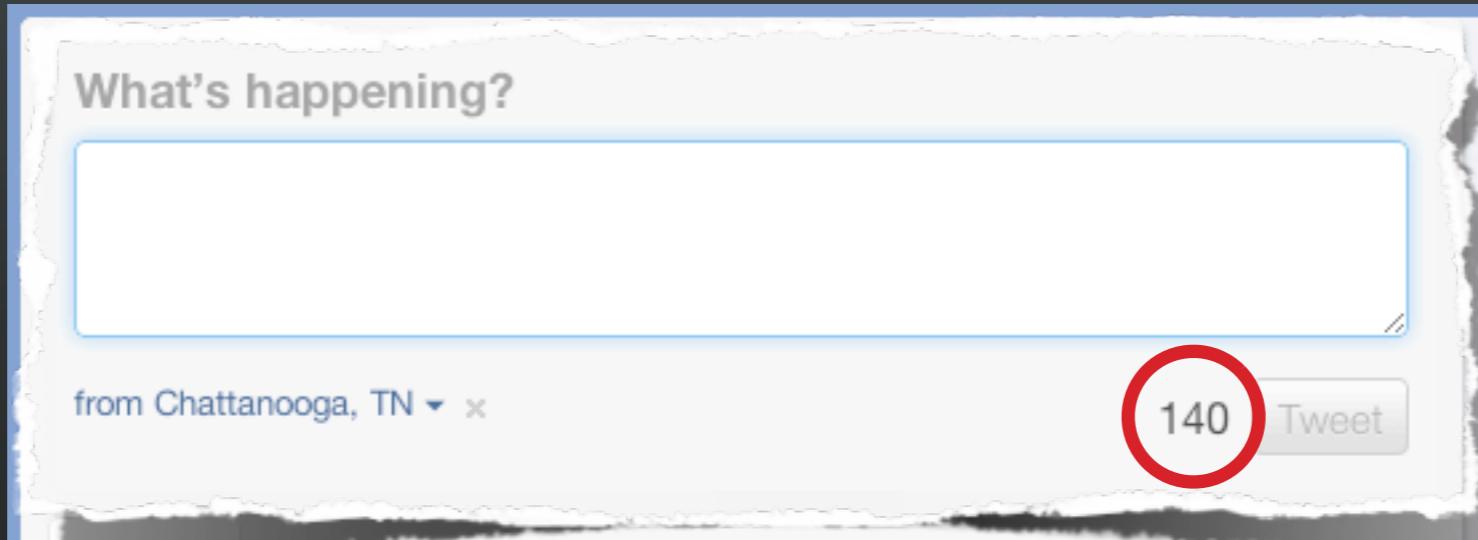
PE with JavaScript



```
<span class="tweet-counter">140
<b class="hidden"> characters remaining</b></span>
```

```
.hidden {
  position: absolute;
  left: -999em;
}
```

PE with JavaScript

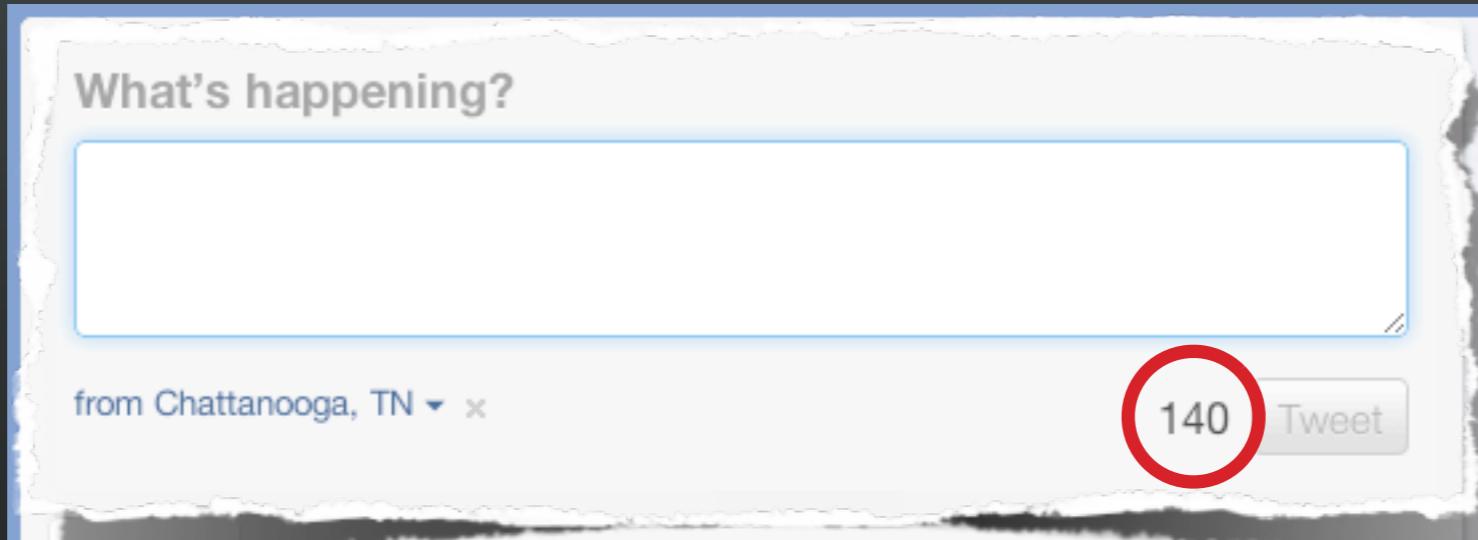


```
<span class="tweet-counter">maximum of 140 characters</span>
```



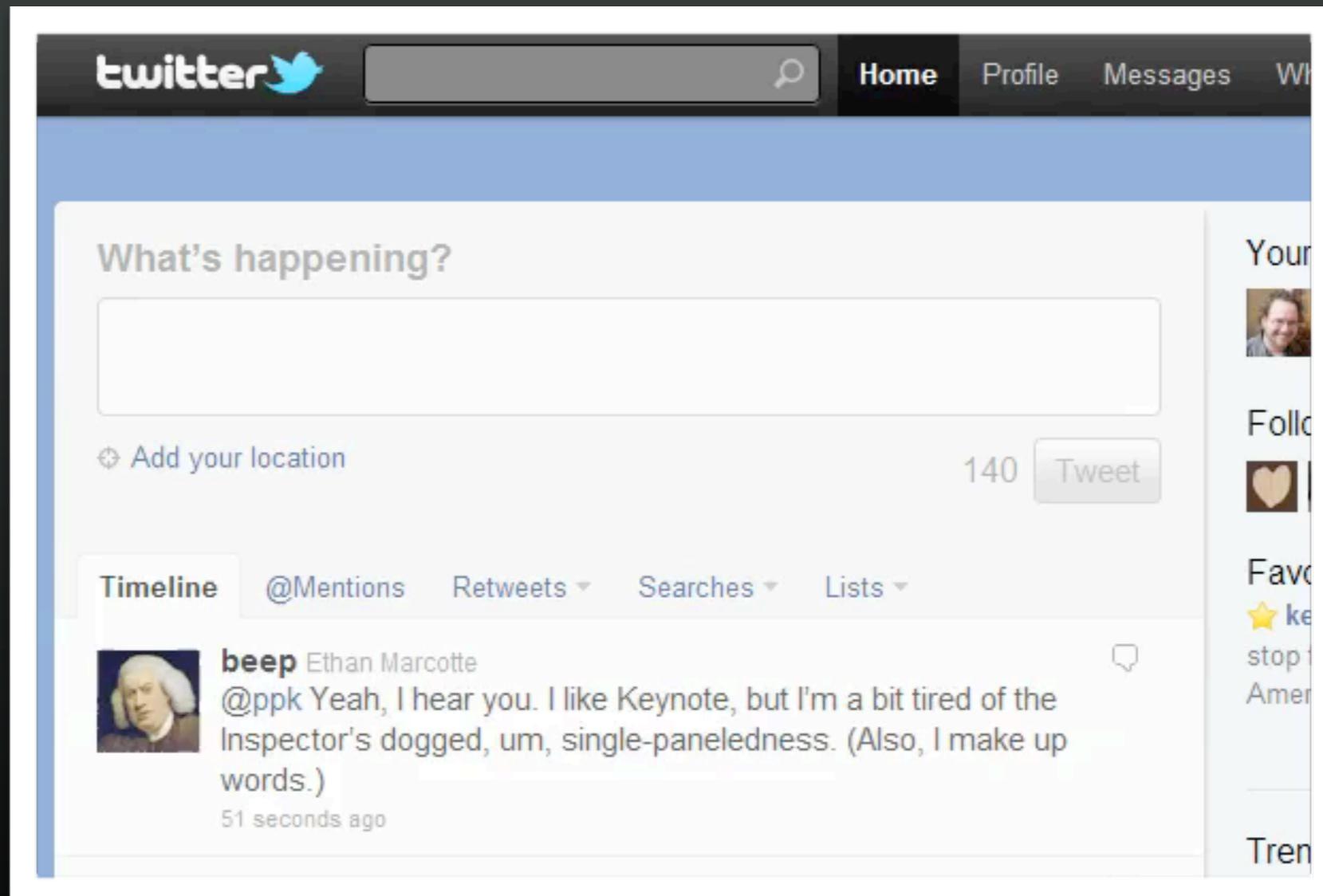
```
<span class="tweet-counter">140
<b class="hidden"> characters remaining</b></span>
```

PE with JavaScript & ARIA



```
<span aria-live="polite" aria-atomic="true"  
      class="tweet-counter">140<b class="hidden">  
      characters remaining</b></span>
```

PE with JavaScript & ARIA



PE with JavaScript & ARIA

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

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.

PE with JavaScript & ARIA

Pumpkin Pie

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role="application"
aria-activedescendant="folder-1"

PE with JavaScript & ARIA

role="tablist"

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PE with JavaScript & ARIA

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

Pumpkin Pie

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PE with JavaScript & ARIA

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

Pumpkin Pie

OVERVIEW INGREDIENTS DIRECTIONS NUTRITION

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PE with JavaScript & ARIA

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Cook Time: 1hr
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```
role="tabpanel"
aria-hidden="false"
aria-labelledby="folder-1-tab"
```

PE with JavaScript & ARIA

Pumpkin Pie

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Pumpkin pie Mozilla Firefox
Photo by [Paul Goyette](#), licensed under [Creative Commons](#).

THANK YOU!

<http://readlists.com/7d414b24/>

Progressive Enhancement & Mobile

by Aaron Gustafson
@AaronGustafson

Further reading:

<http://adaptivewebdesign.info>

<http://blog.easy-designs.net>

<http://mobilewebbestpractices.com>

Slides available at

<http://slideshare.net/AaronGustafson>

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