

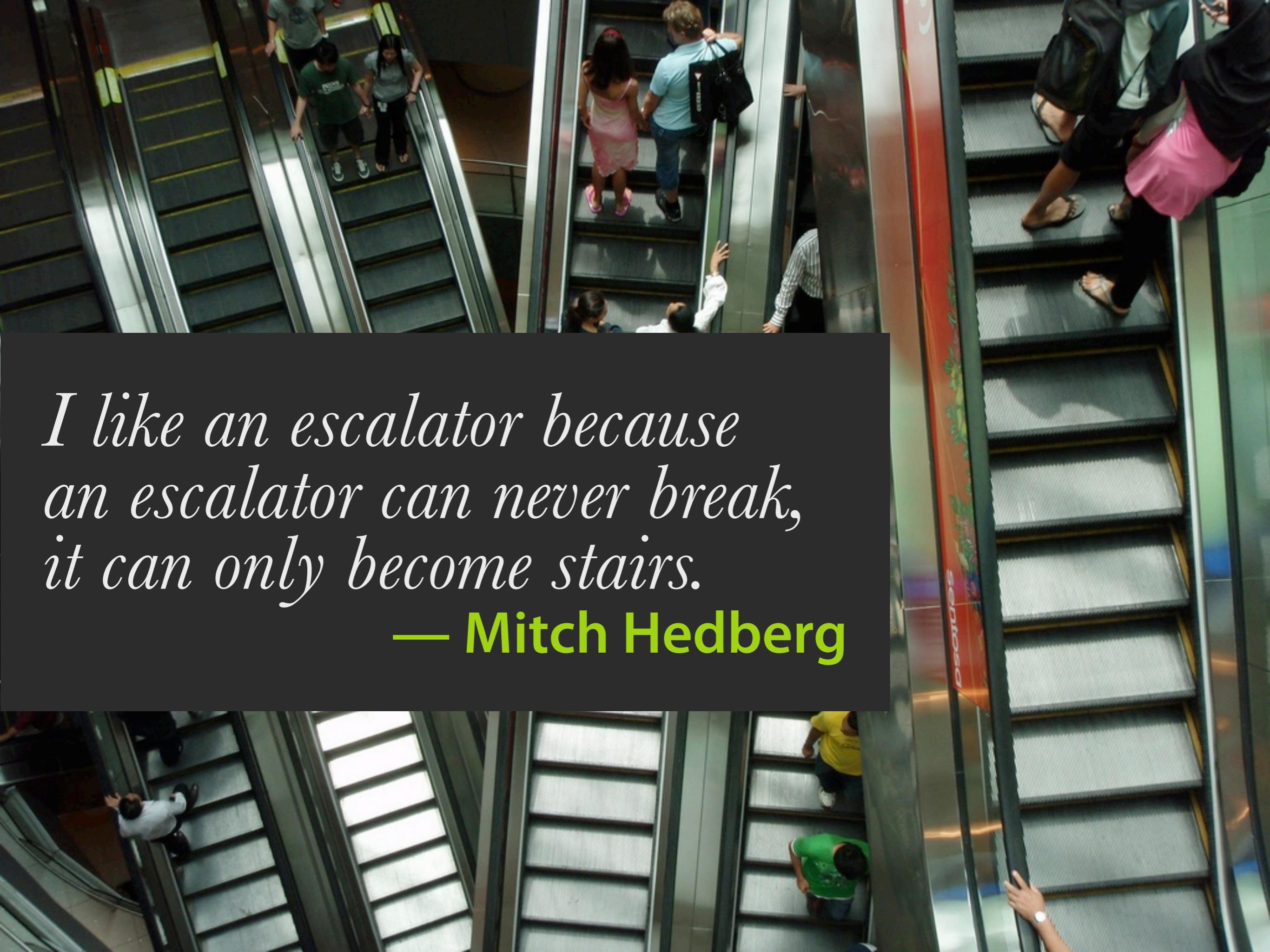
# CRAFTING RICH EXPERIENCES

## with progressive enhancement

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

# progressive enhancement





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

— Mitch Hedberg

*an electric toothbrush  
can never break, it  
can only become a  
toothbrush.*





## WEEKENDHACKER

### WEEKENDHACKER

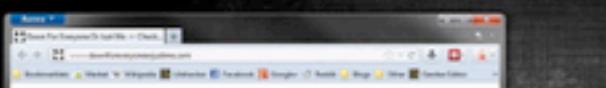
## Make the Best of Your Travel Plans This Weekend

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](#)

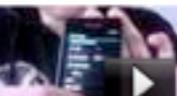
[www.tesco.com](http://www.tesco.com)

\*When you spend £50 or more. Excludes delivery charge. [Terms here.](#)



### WEEKENDHACKER

Make the Best of Your Travel Plans This Weekend



### FOR WHAT IT'S WORTH

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...](#)

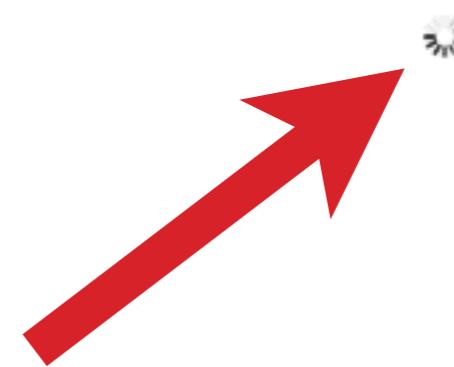
# DIES IST UMSTÄNDLICH

[MORE STORIES...](#)

TIPS AND DOWNLOADS FOR  
GETTING THINGS DONE

---

[MORE STORIES...](#)







TIPS AND DOWNLOADS FOR  
GETTING THINGS DONE

---

[MORE STORIES...](#)

**TECHNOLOGICAL  
RESTRICTIONS**



# ZERO GRAVITY TOILET

PASSENGERS ARE ADVISED TO  
READ INSTRUCTIONS BEFORE USE

1

The toilet is designed to work in both a normal gravity  
environment and in zero gravity environments.

2

Toilet seat can be removed from the toilet bowl  
and stored in the overhead luggage bin.

3

Toilet bowl is designed to be used in both a normal gravity  
environment and in zero gravity environments.

4

Toilet bowl is designed to be used in both a normal gravity  
environment and in zero gravity environments.

5

Toilet bowl is designed to be used in both a normal gravity  
environment and in zero gravity environments.

6

Toilet bowl is designed to be used in both a normal gravity  
environment and in zero gravity environments.

7

Toilet bowl is designed to be used in both a normal gravity  
environment and in zero gravity environments.



MCMXXVII

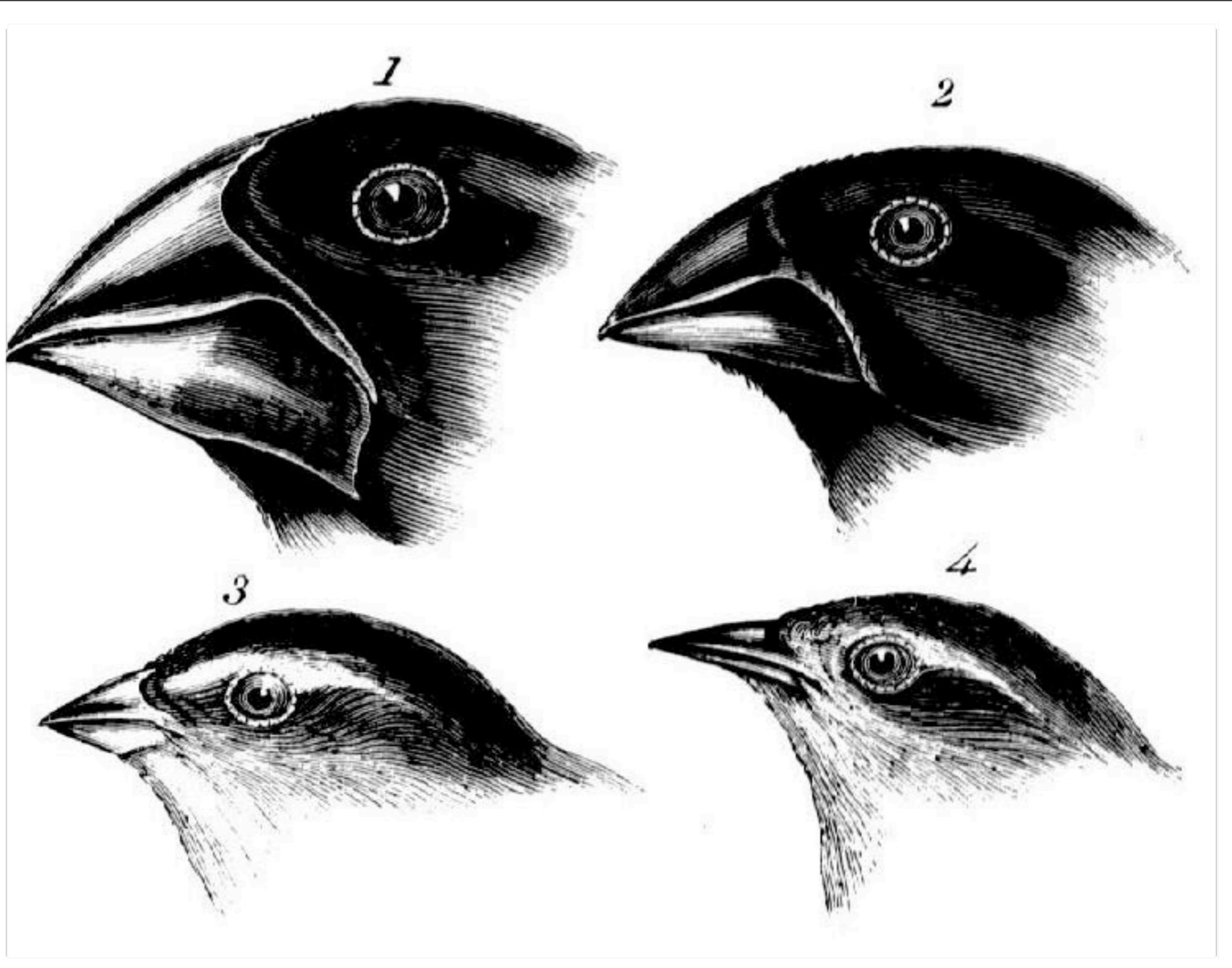
MCM~~LXXVII~~  
**(that's 1977)**

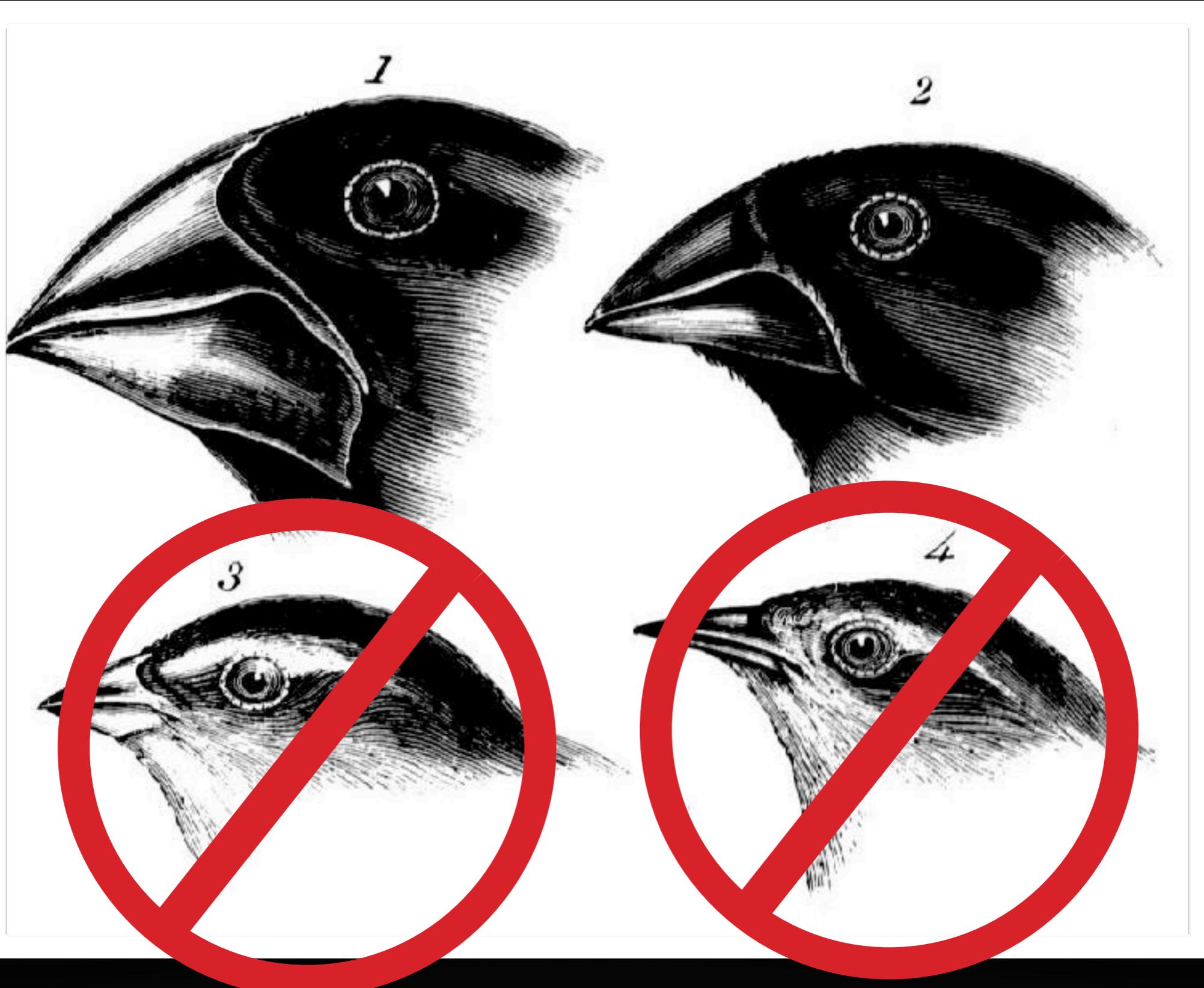














HTML

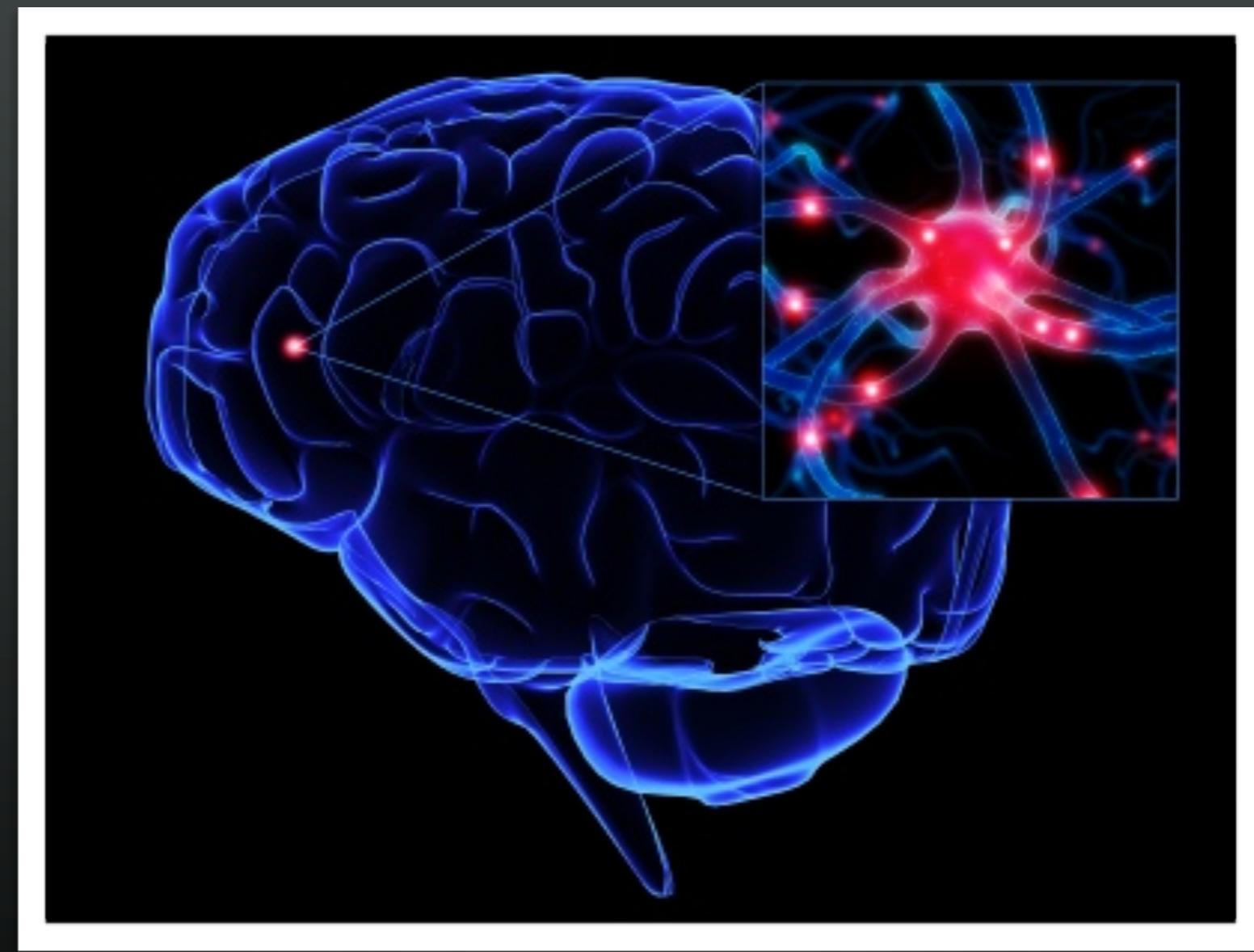


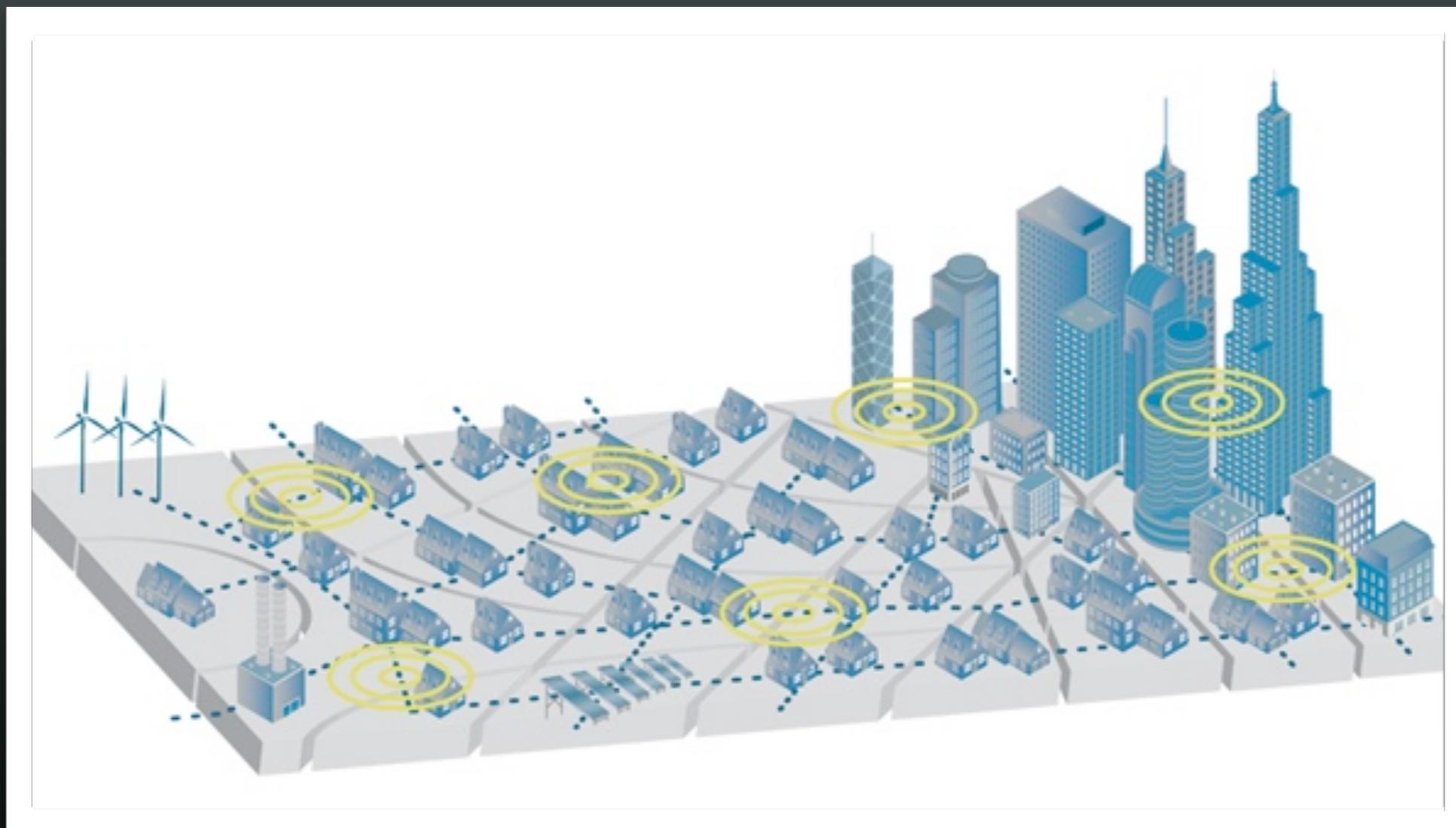
CSS

# **fault tolerance**

*n.* a system's ability to continue to operate when it encounters an unexpected error.







BROWSERS  
**IGNORE WHAT**  
THEY DON'T  
UNDERSTAND

# GRACEFUL DEGRADATION

# MODERN BROWSERS

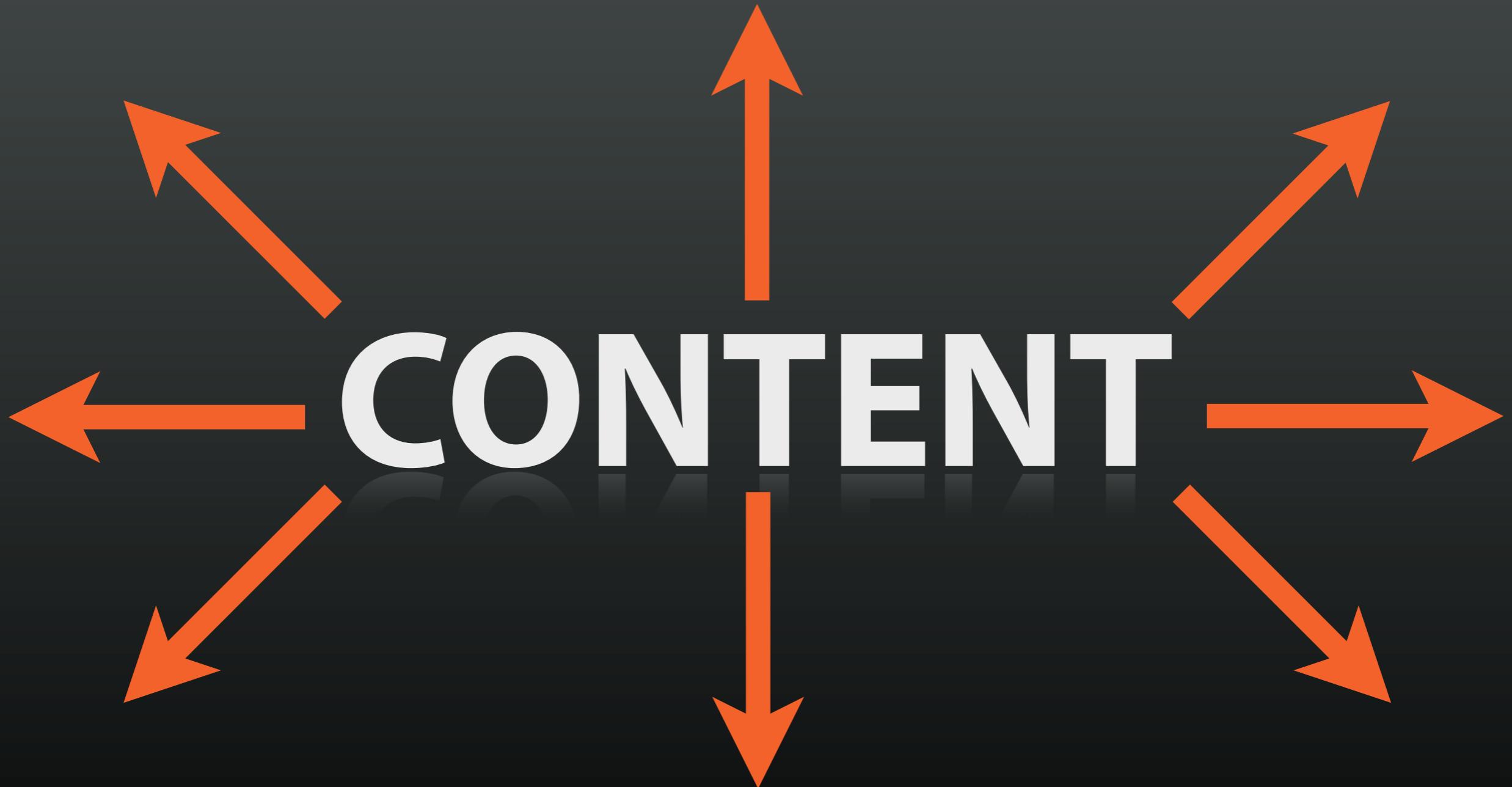


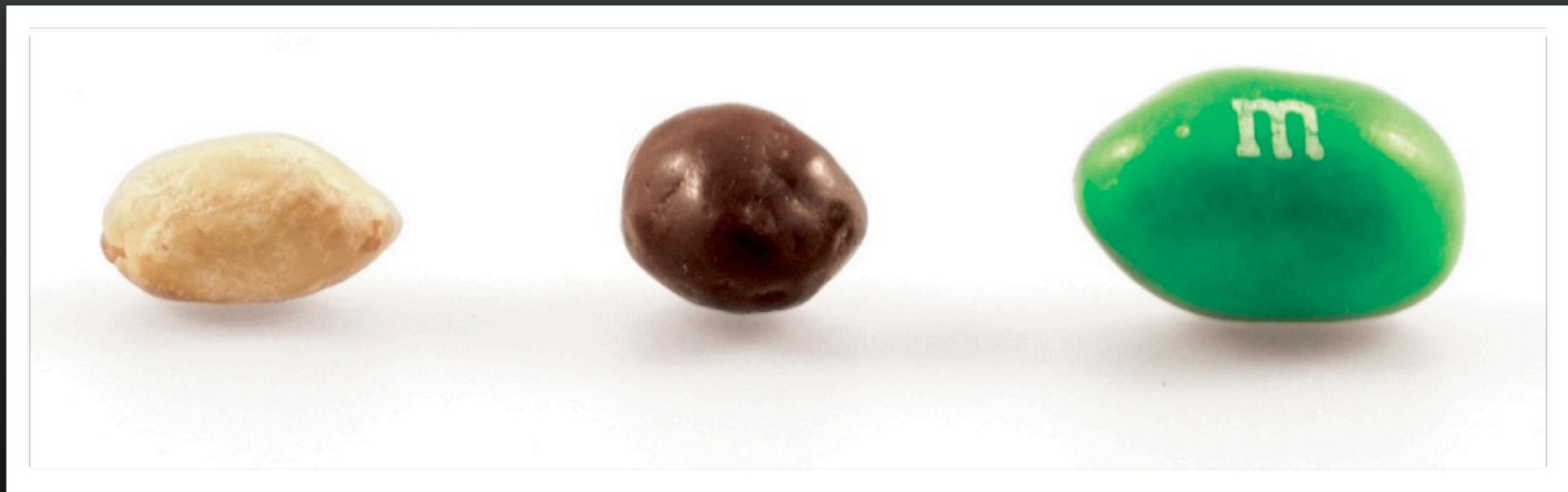
OLDER BROWSERS

# MODERN BROWSERS



# PROGRESSIVE ENHANCEMENT





# ACCESSIBILITY

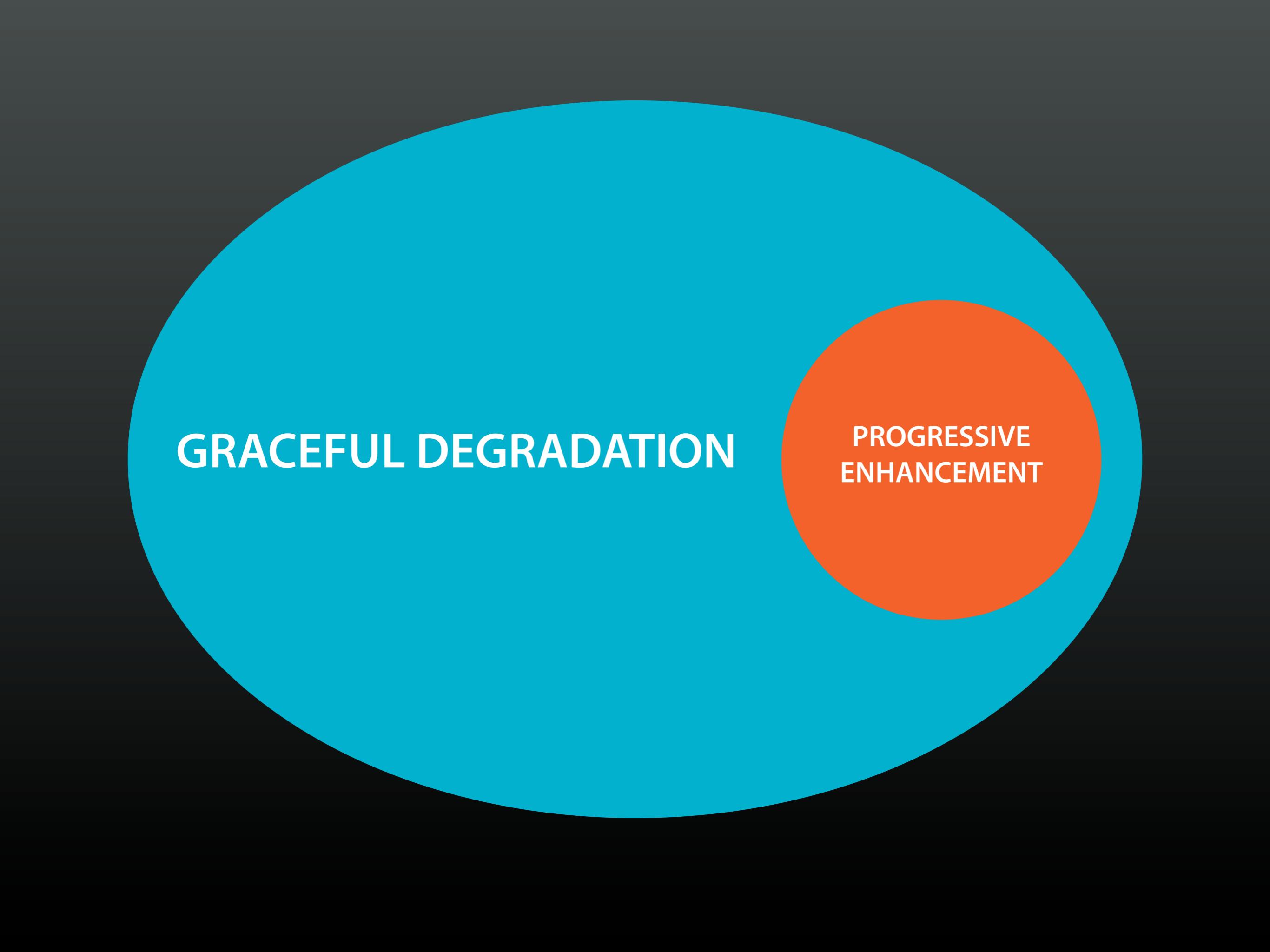
**“SPECIAL NEEDS”**

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



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





**GRACEFUL DEGRADATION**

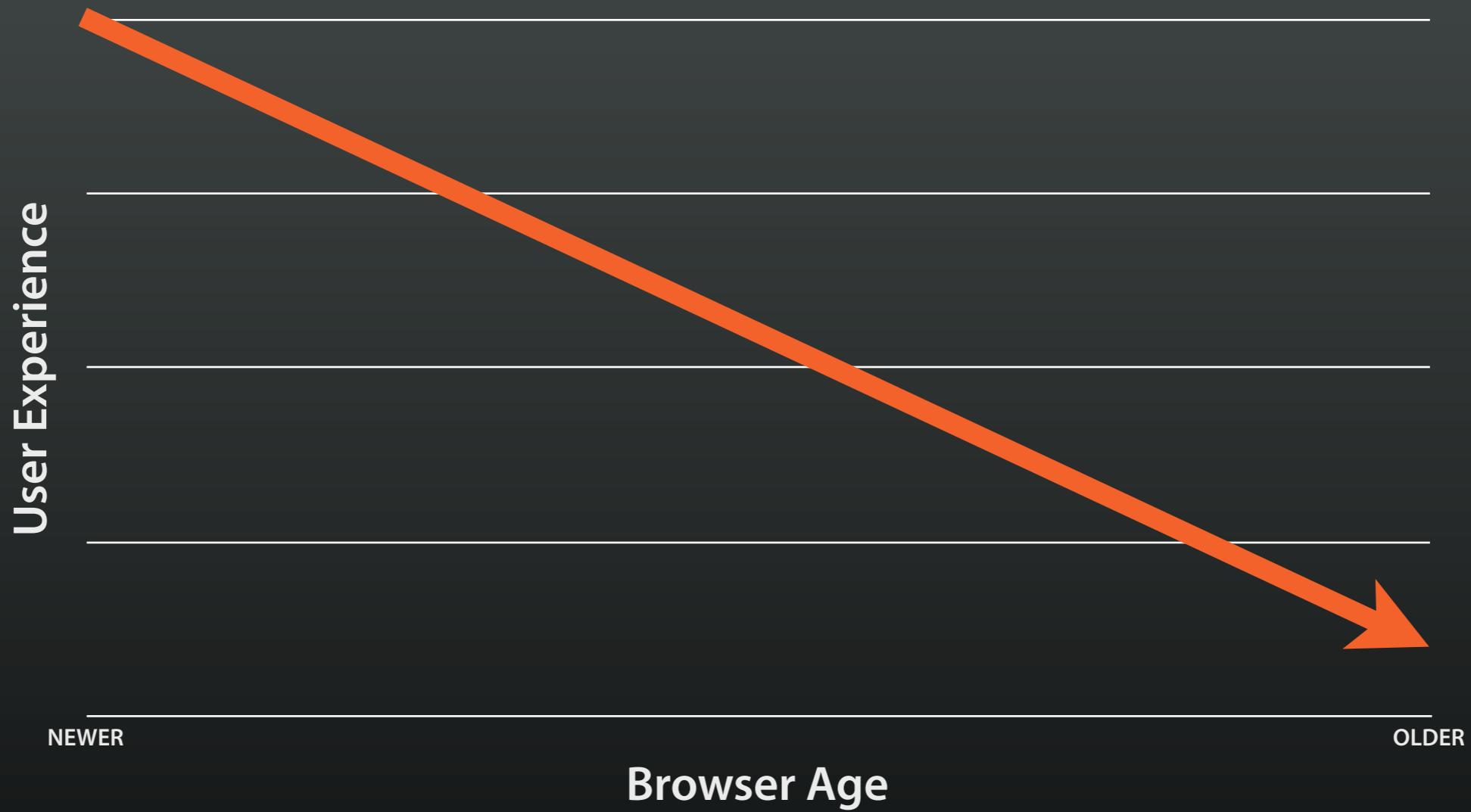
**PROGRESSIVE  
ENHANCEMENT**

OOOH, SHINY!

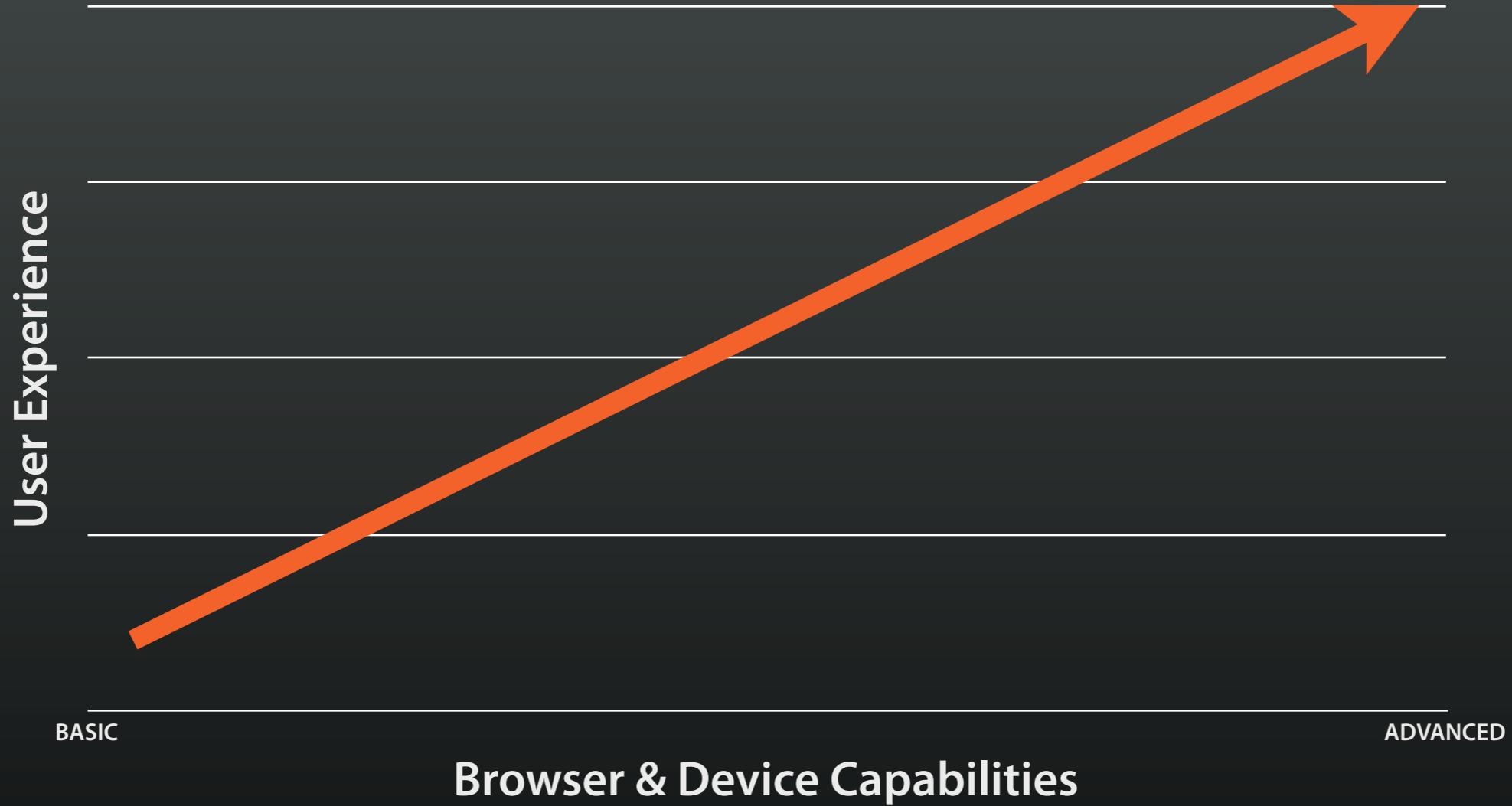
PROGRESSIVE  
ENHANCEMENT  
**ISN'T ABOUT**  
BROWSERS

**BROWSERS AND  
TECHNOLOGIES  
COME AND GO**

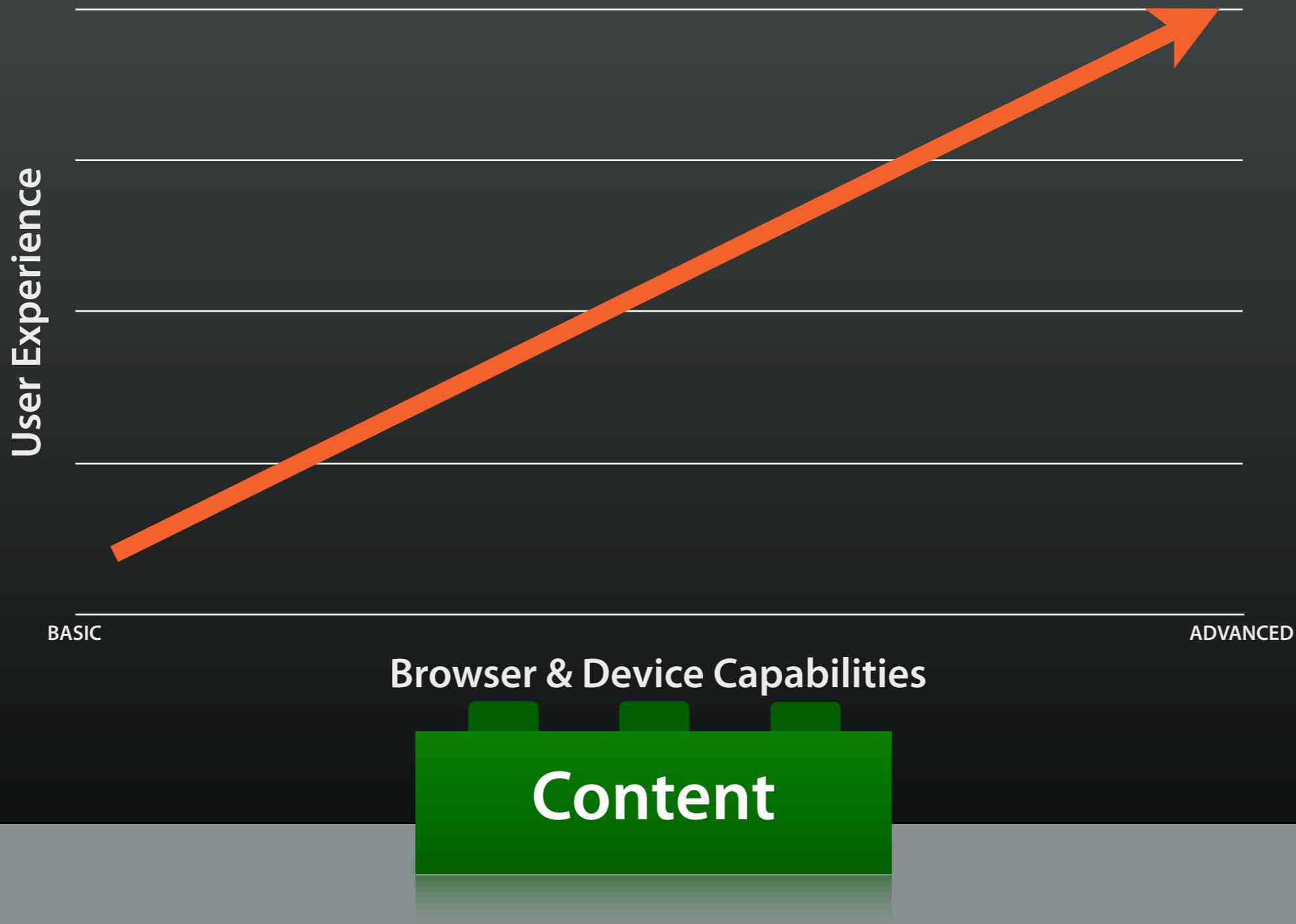
DON'T LOSE  
SIGHT OF  
YOUR USERS

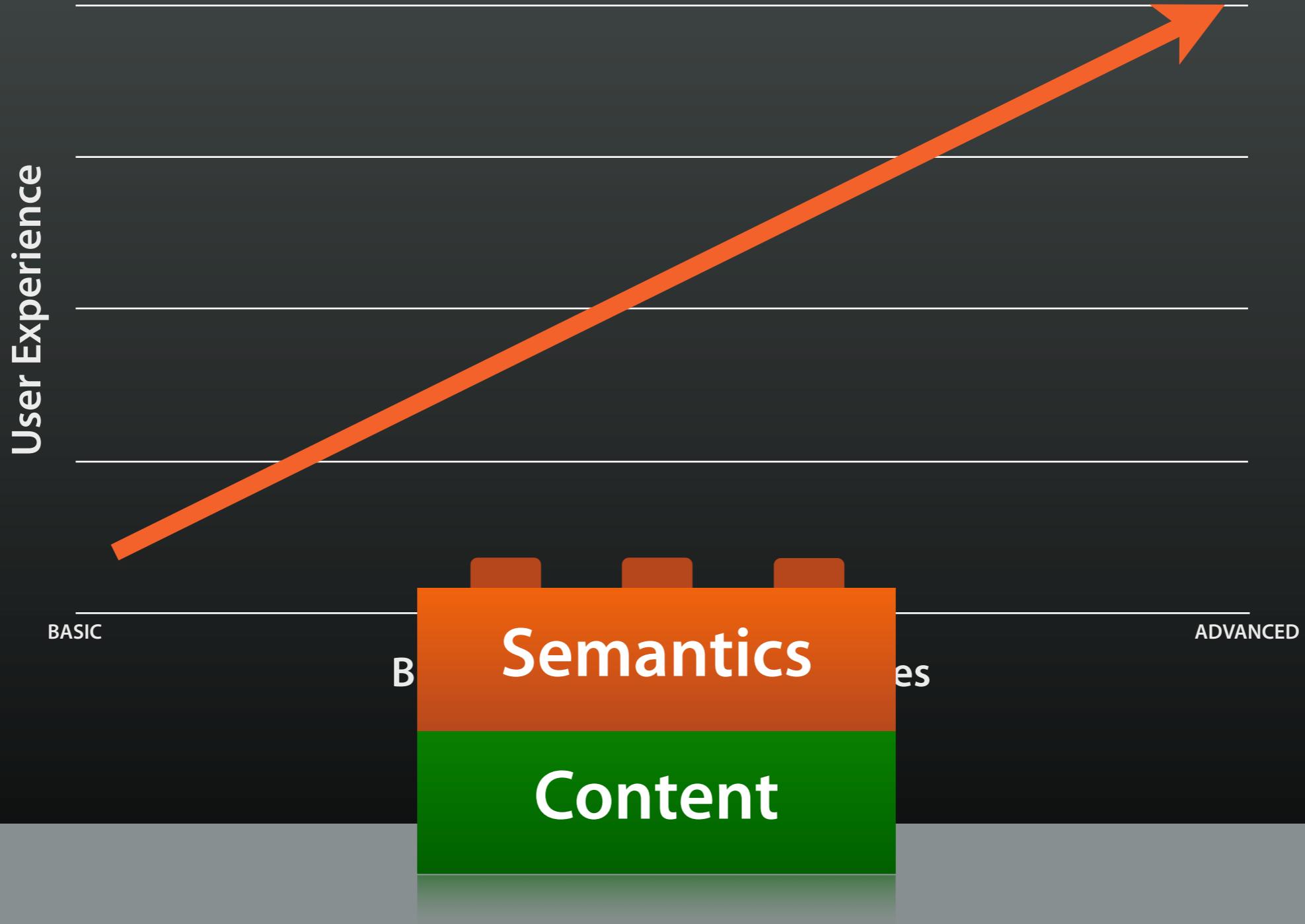


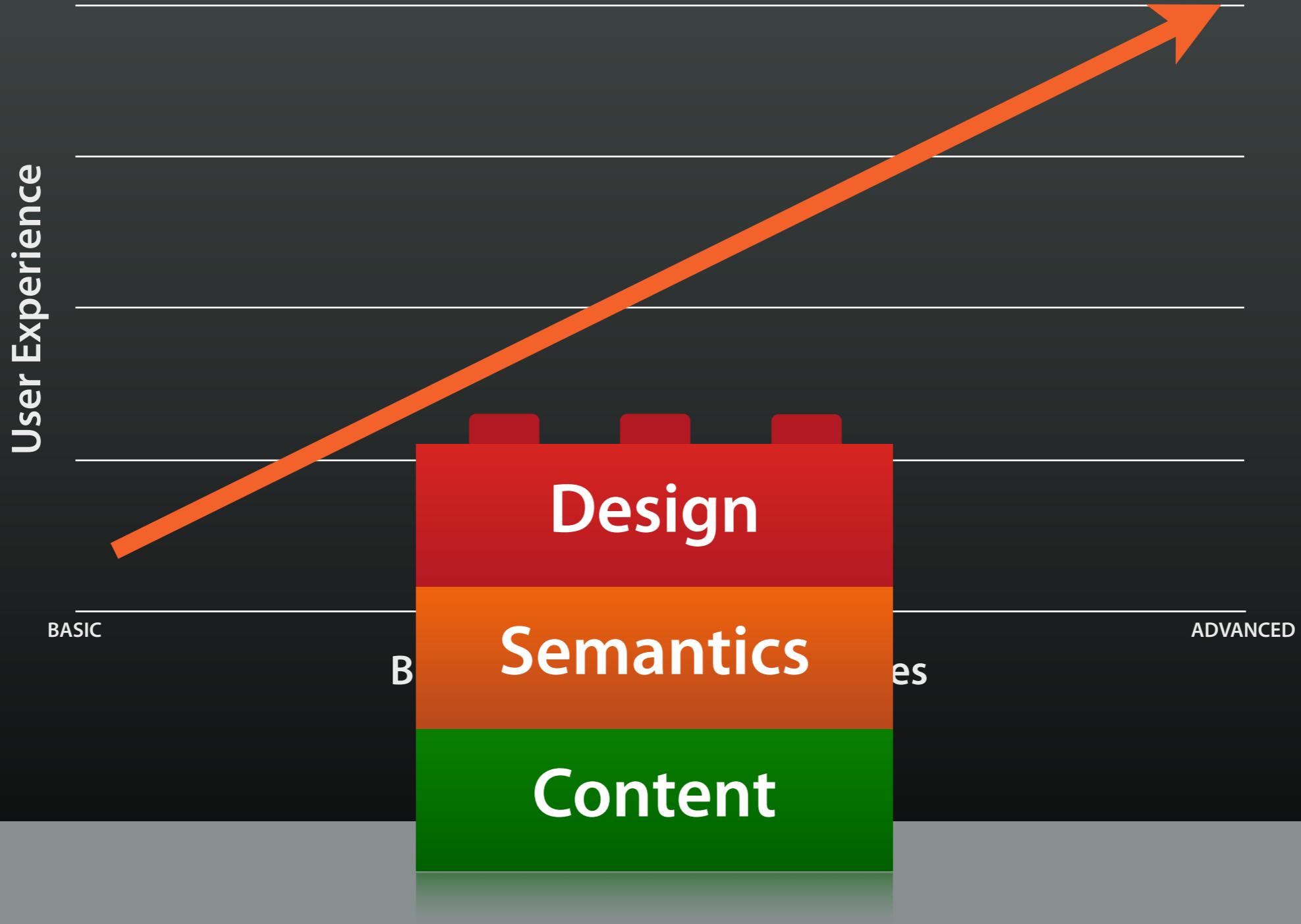
Graceful Degradation

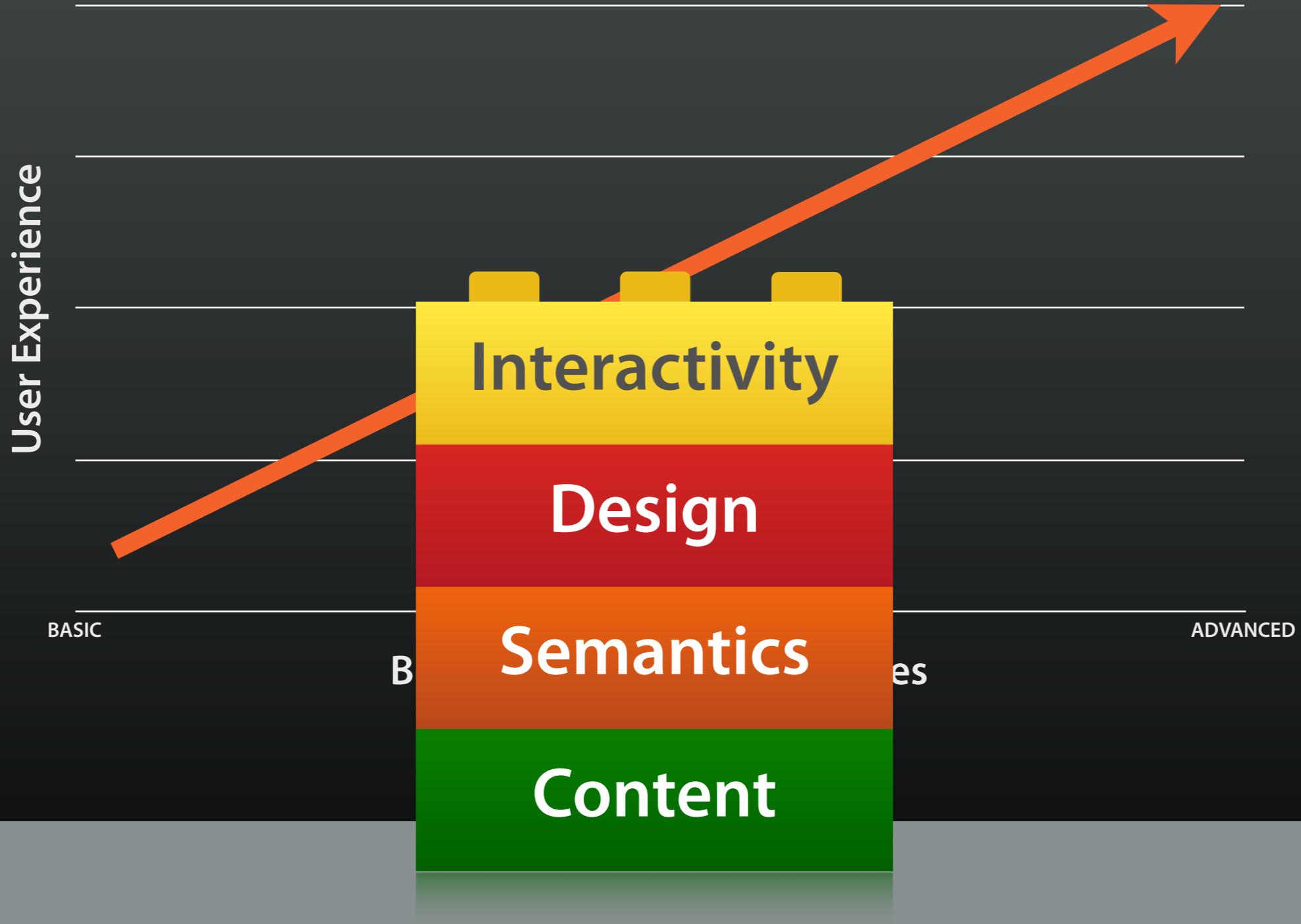


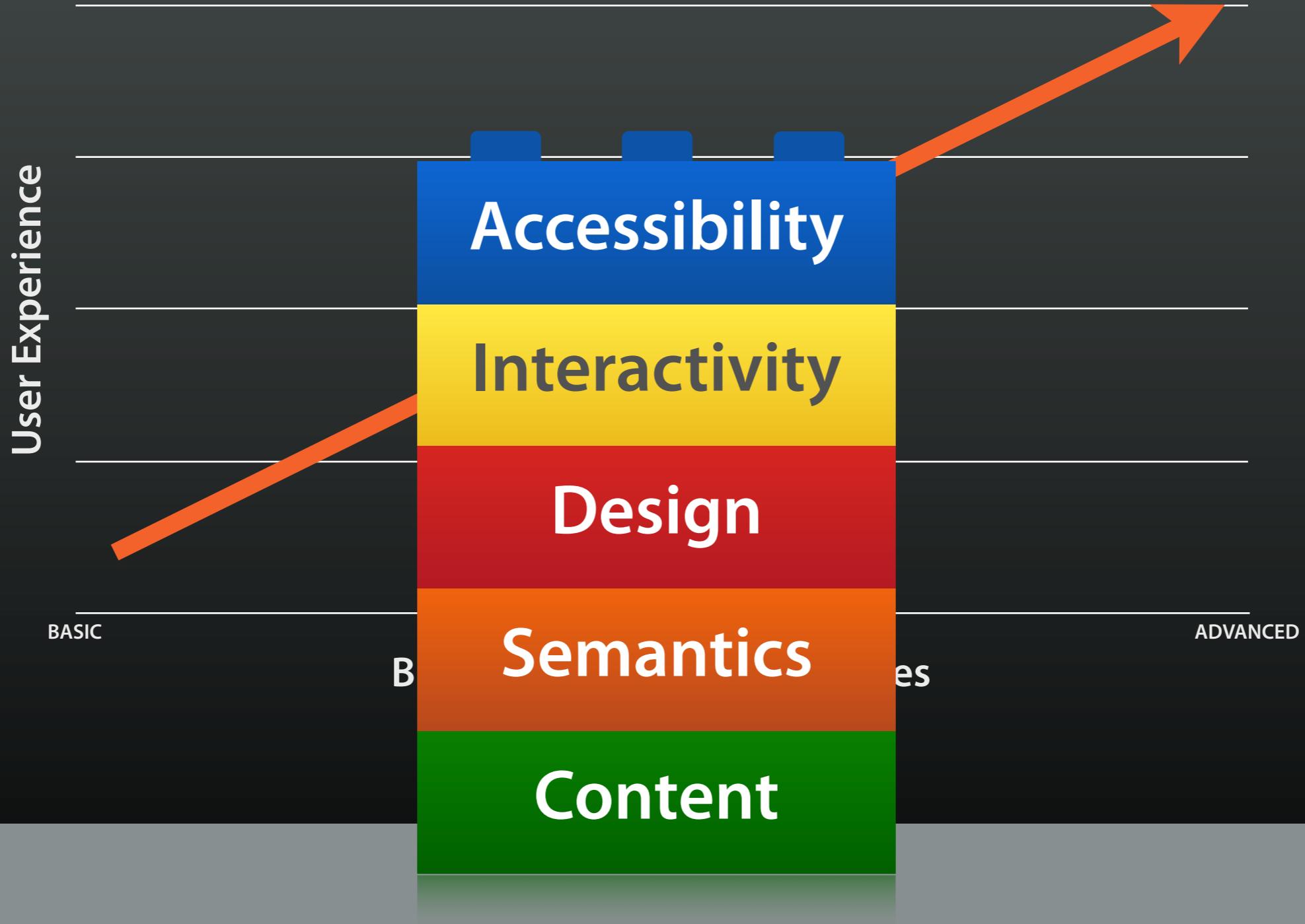
Progressive Enhancement

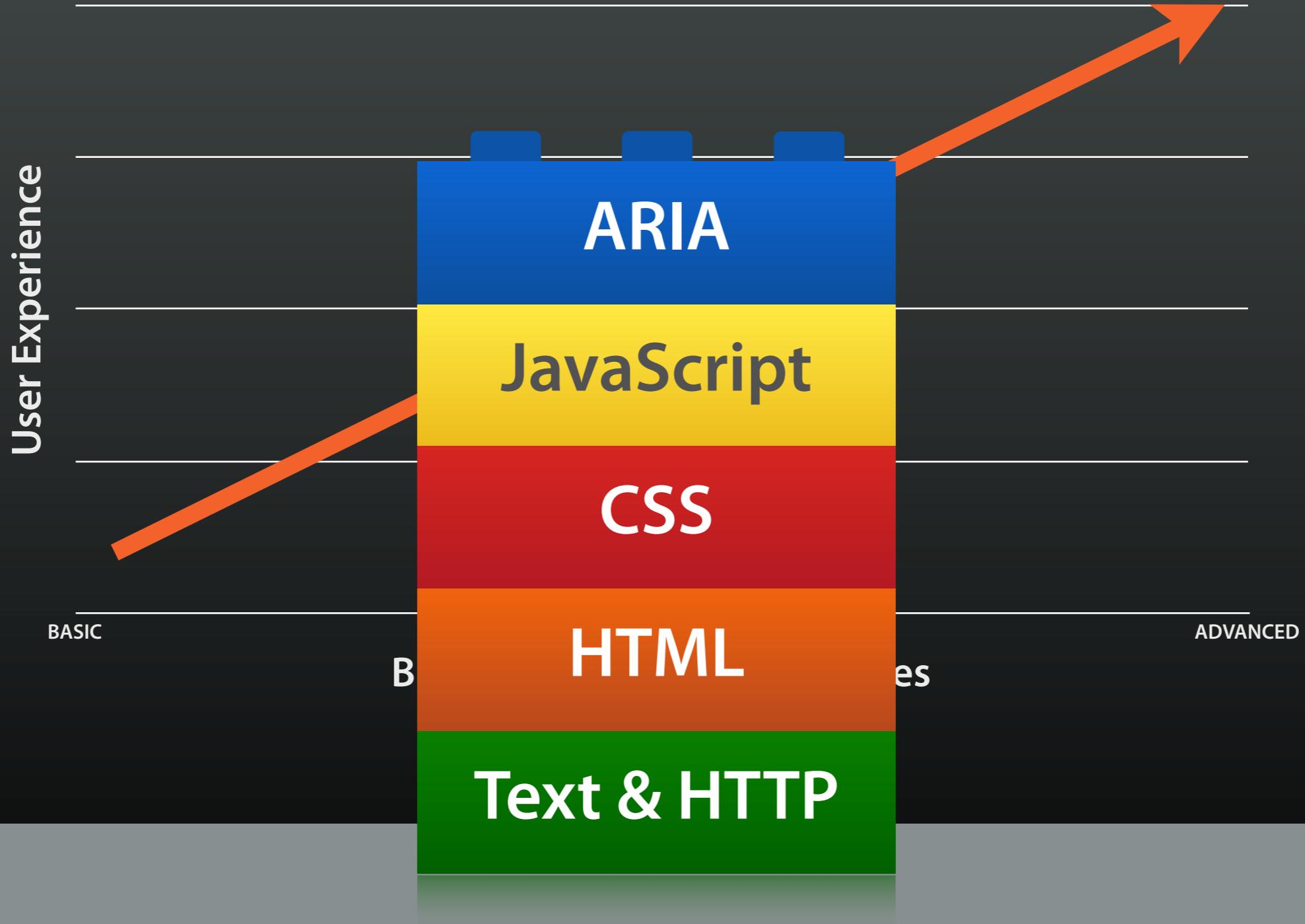














**HTML**

HTML5

The diagram consists of three horizontal orange bars of increasing height from bottom to top. The top bar has the word 'HTML5' in white. The middle bar has the word 'Microformats' in white. The bottom bar has the words 'HTML4' in white. Three small orange rectangles are positioned above the top bar, corresponding to its peaks.

Microformats

HTML4

# EXAMPLES

# 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

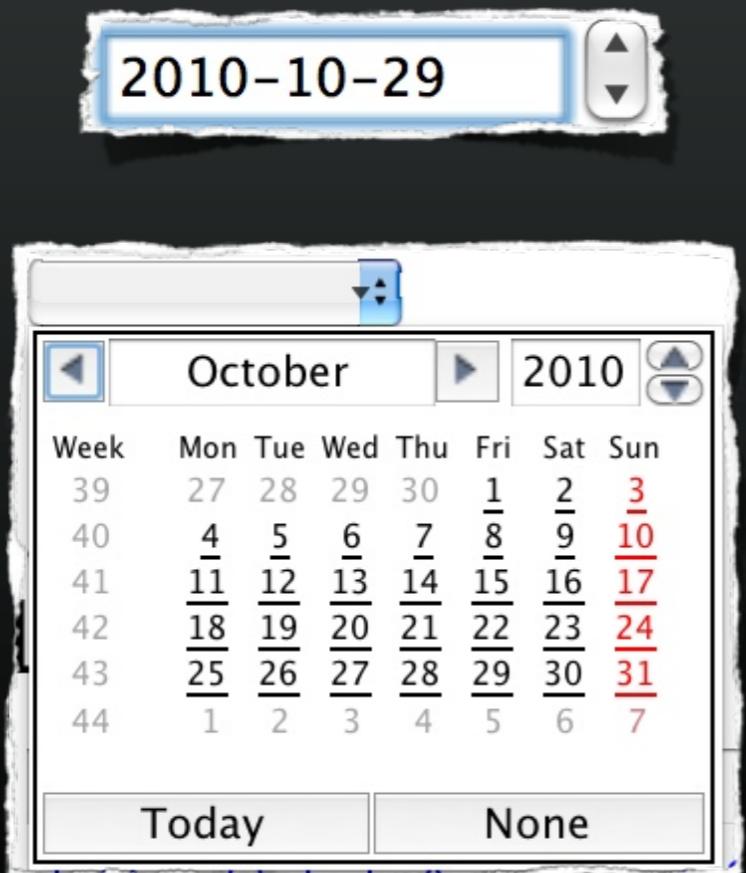
```

<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 CSS

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

# PE with CSS

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

**CSS ZEN GARDEN**  
PICKING THE RIGHT "BOX MODEL"

**the road to enlightenment**

Littering a dark and dreary road lay the past relics of browser-specific tags, incompatible DOMs, 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, WaSP 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 invigorating 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 structurists 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 example files 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 listed links to learn more, and use the sample files as a guide.

Download the sample [html file](#) and [css file](#) 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 sorely 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 in as many as you can. If your design doesn't work in at least IE5+Win and Mozilla (run by over 90% of the population), chances are we won't accept it.

← IE6 & under

MOSe

**zen garden**

**the road to enlightenment**

Littering a dark and dreary road lay the past relics of browser-specific tags, incompatible DOMs, 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, WaSP 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 invigorating 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 structurists and coders. Designers have yet to make their mark. This needs to change.

**participation**

A demonstration of what can be accomplished visually through CSS-based design. Select any style sheet from the list to load it into this page. Download the sample [html file](#) and [css file](#).

**dutchcelt**

# Fault tolerance

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

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

# Fault tolerance

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

# PE with CSS

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

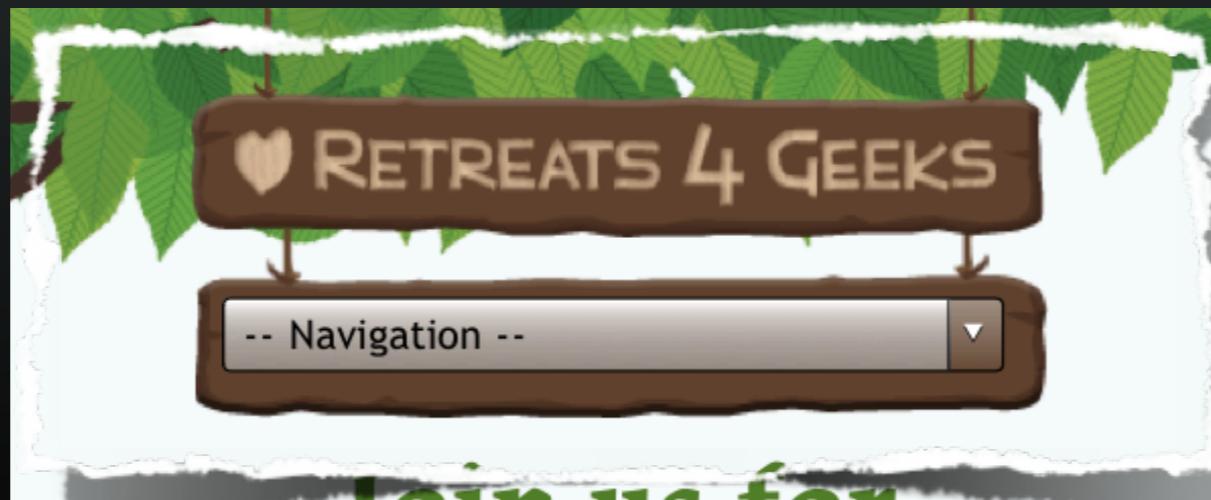
# PE with CSS

```
@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 */  
}
```

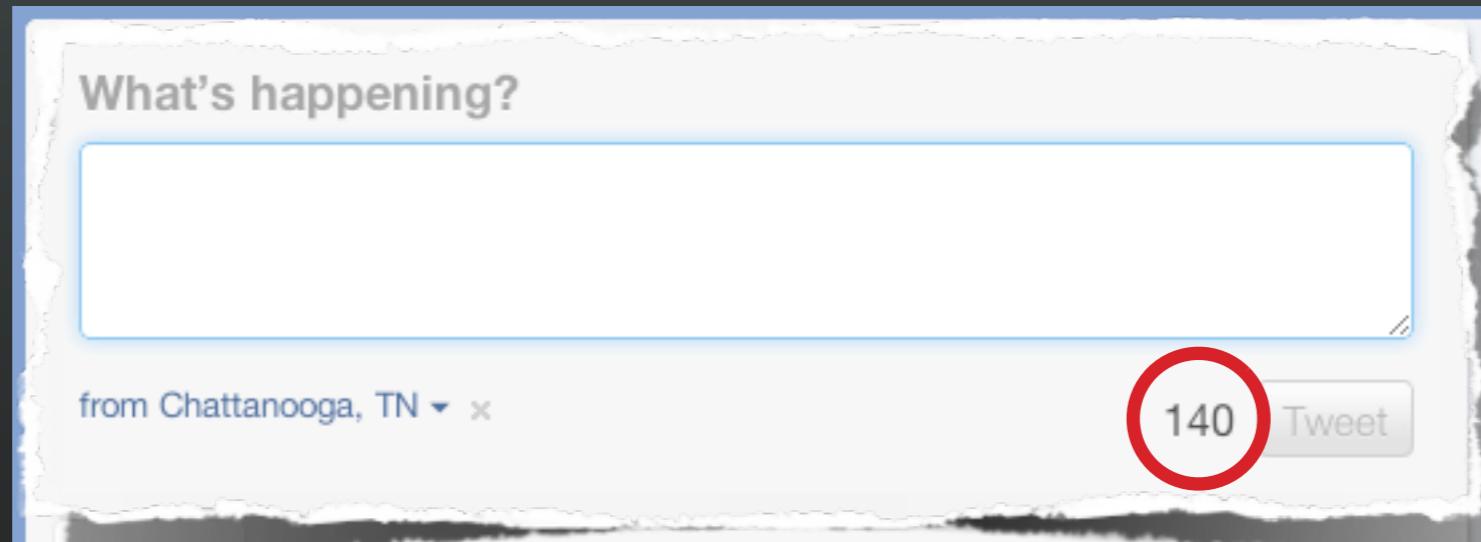
# PE with HTML & ARIA

```
<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>
```

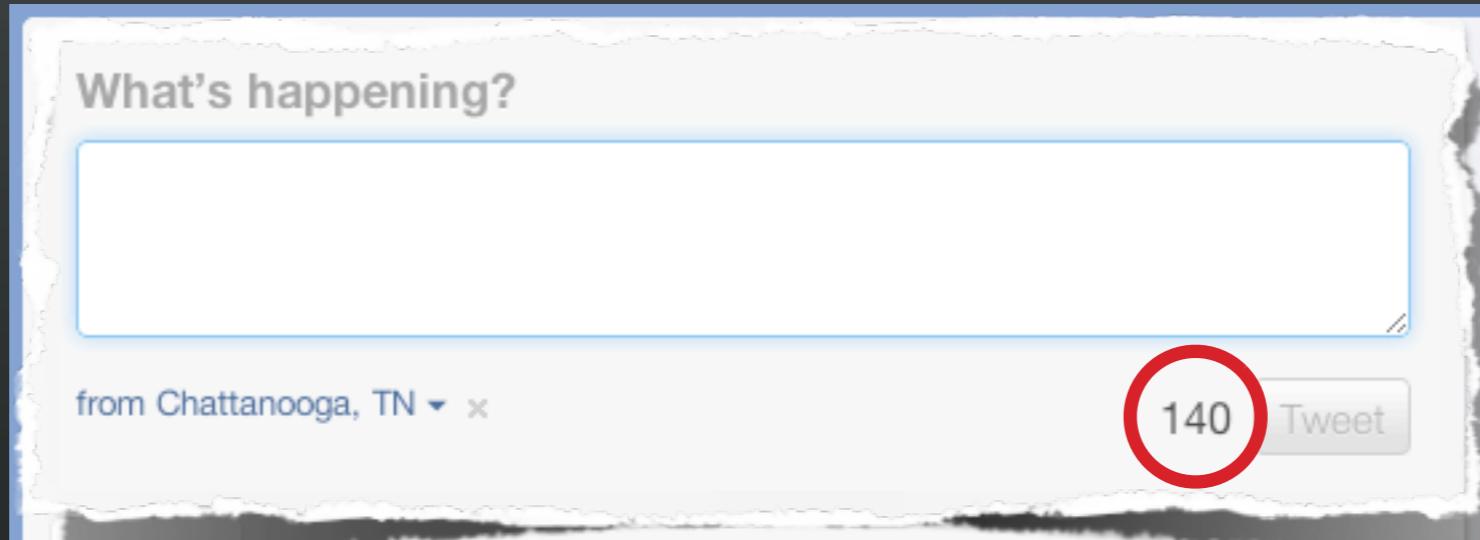
# PE with JavaScript



# PE with JavaScript

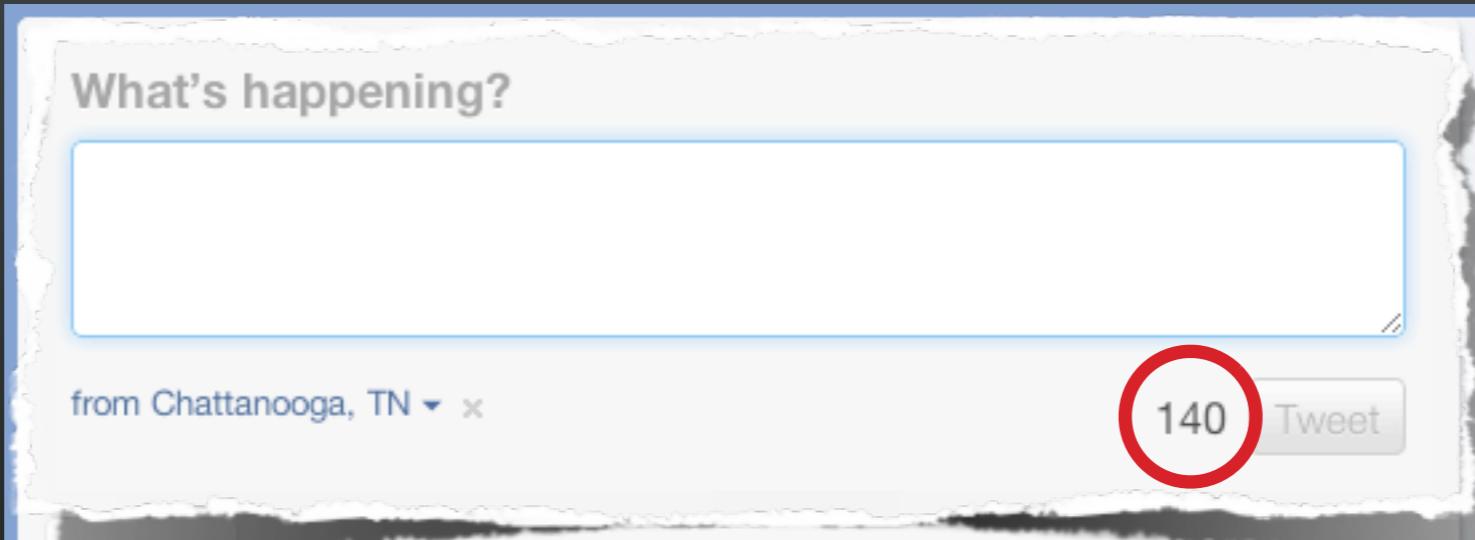


# PE with JavaScript



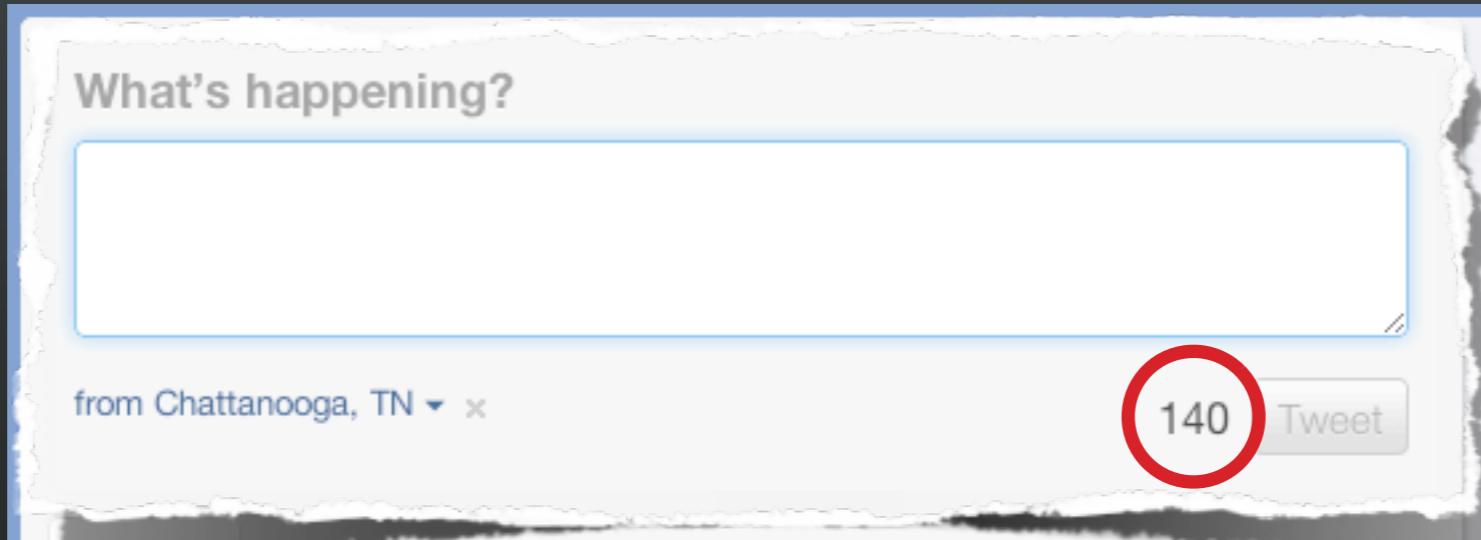
```
<input class="tweet-counter" value="140" disabled="disabled">
```

# PE with JavaScript



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

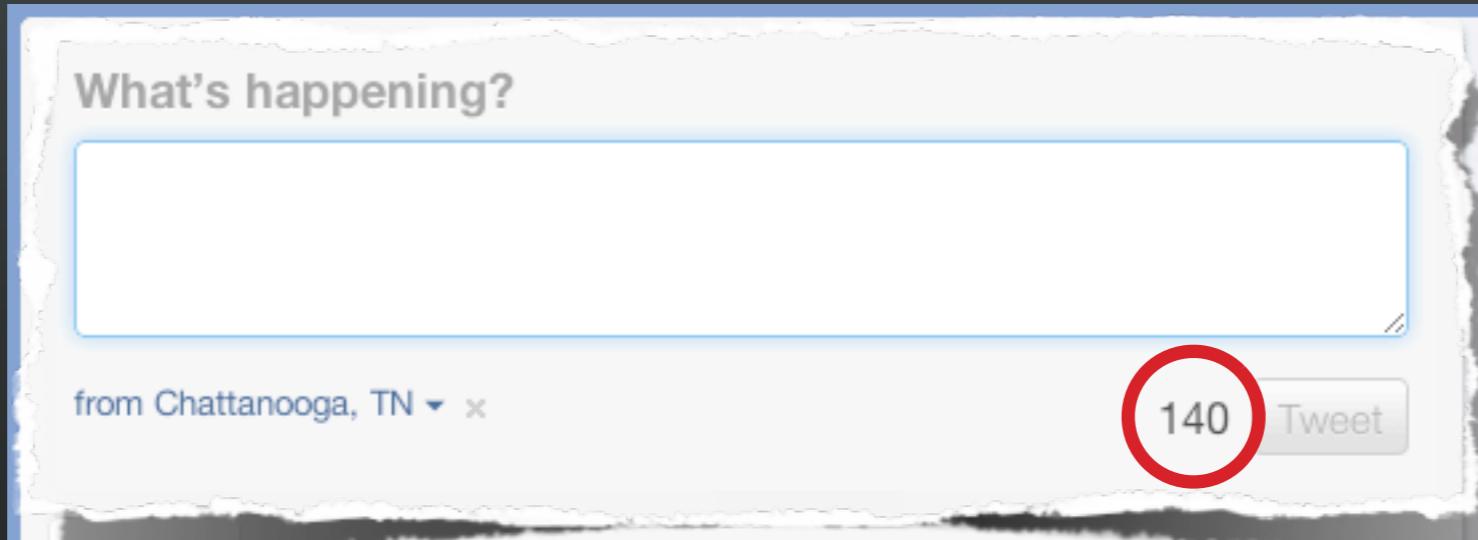
# PE with JavaScript



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

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

# PE with JavaScript

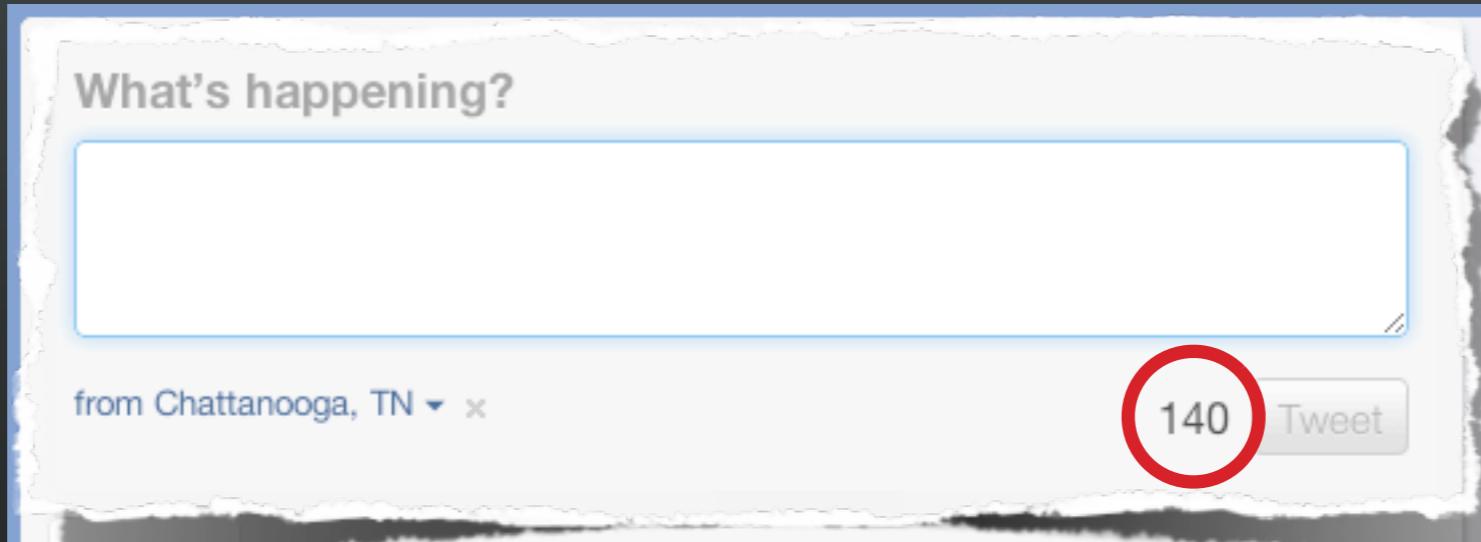


```
<span class="tweet-counter">maximum of 140 characters</span>
```



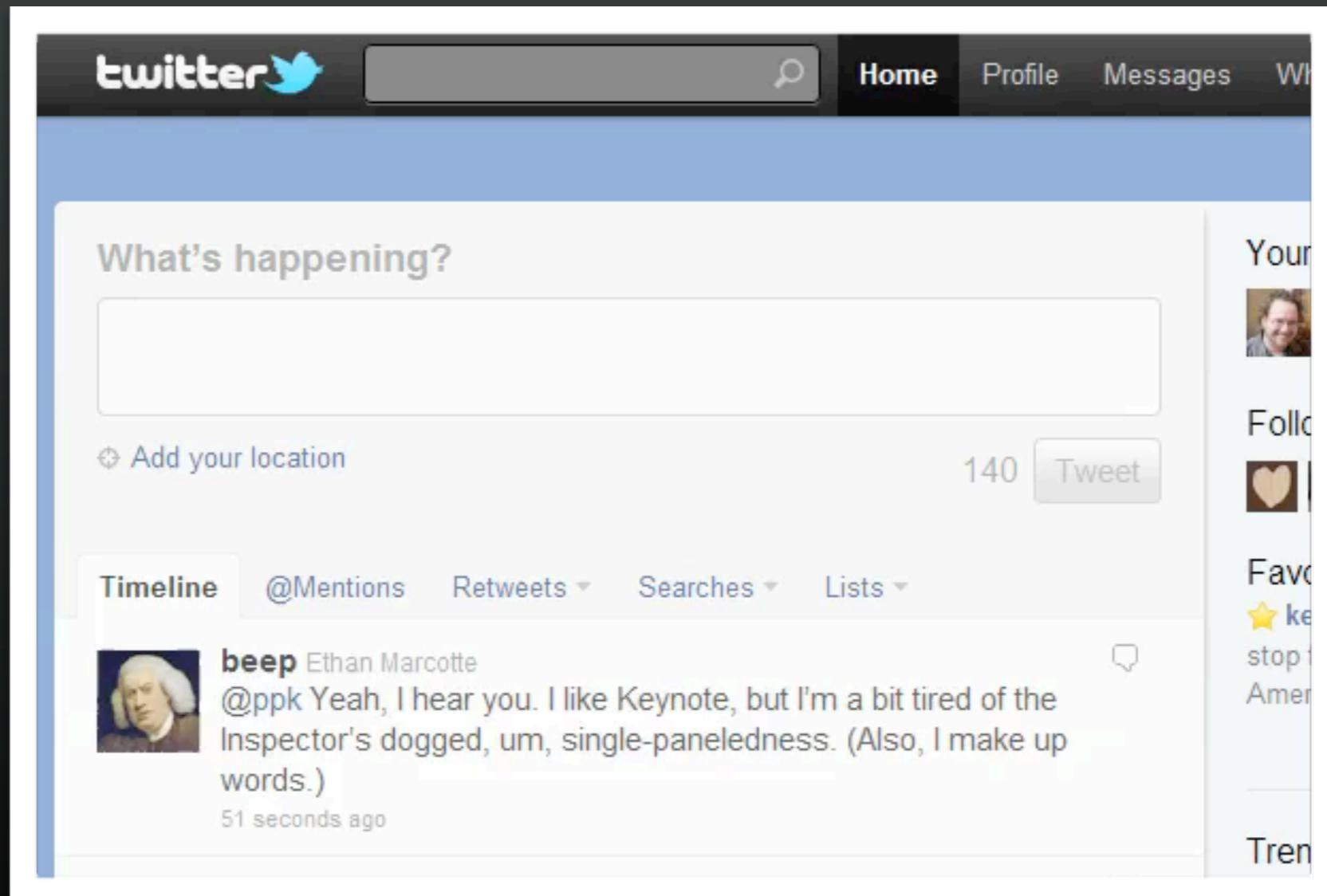
```
<span class="tweet-counter">140
<b class="hidden"> characters remaining</b></span>
```

# 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

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



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

# PE with JavaScript & 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 × 9-inch deep dish pie

**Prep Time:** 10min

**Cook Time:** 1hr

**Ready In:** 1hr 10min



# PE with JavaScript & ARIA

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

**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



# PE with JavaScript & ARIA

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

**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



# PE with JavaScript & 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

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



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

# PE with JavaScript & 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

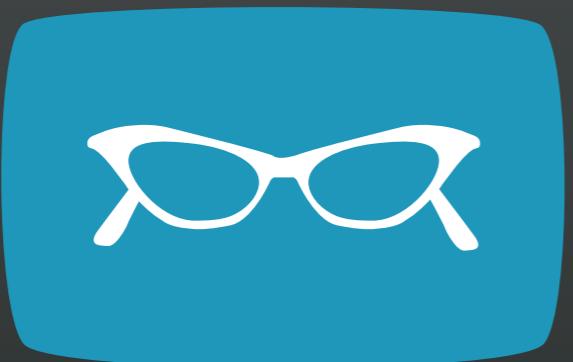
**Prep Time:** 10min  
**Cook Time:** 1hr  
**Ready In:** 1hr 10min



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



# Available now from



easy-readers.net

or Kelly



# Crafting Rich Experiences with Progressive Enhancement

by Aaron Gustafson

More of the same:

<http://adaptivewebdesign.info>

<http://easy-designs.net>

<http://easy-reader.net>

<http://aaron-gustafson.com>

Slides available at

<http://slideshare.net/AaronGustafson>

This presentation is licensed under

Creative Commons

[Attribution-Noncommercial-Share Alike 3.0](#)

## flickr Photo Credits

<http://www.flickr.com/photos/aarongustafson/galleries/72157628049759763/>