

# AN INTRODUCTION TO PRACTICAL WEB PERFORMANCE

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# WHO CARES?

**Walmart: 100ms improvement = up to 1% incremental revenue<sup>1</sup>**

<sup>1</sup> WalmartLabs performance slide deck

# WHO CARES?

Firefox: -2.2s on download page → +15.4% downloads<sup>2</sup>

<sup>2</sup> [Firefox & Page Load Speed – Part II](#)

# WHO CARES?

- ▶ Google: 100-400ms results slowdown → 0.2%-0.6% fewer searches per user<sup>3</sup>

<sup>3</sup> [Google Research Blog: Speed Matters](#)

# WHO CARES?

- ▶ Users are getting more impatient, webpages are getting bigger, and more users are going mobile
  - ▶ Google search prioritizes faster websites
- ▶ Page speed of our apps is an indicator to clients of our proficiency as engineers

# 3 PILLARS OF FAST WEBSITES

1. low page size
2. few HTTP requests
3. optimized for rendering by the browser

# 10 WAYS TO MAKE YOUR STUPID WEBSITE FEEL REALLY FAST

(AND YOU DON'T EVEN HAVE TO CARE ABOUT ALGORITHMIC COMPLEXITY)



**(BY THE WAY, IF YOU'RE NOT USING GULP OR  
GRUNT YOU SHOULD START)**

# MINIFY YOUR CSS, JS, HTML

`cssmin, uglify.js, htmlmin`

**(ELIMINATE UNNECESSARY WHITESPACE,  
SHORTEN VARIABLE NAMES, ETC)**

# CONCATENATE YOUR CSS AND JS

gulp-concat, grunt-contrib-concat

**LOAD YOUR CSS IN THE `<head>`  
AND YOUR JS RIGHT BEFORE `</body>`**

**INLINE ABOVE-THE-FOLD CSS**

**Critical BY ADDY OSMANI**

**criticalCSS BY FILAMENT GROUP**

*(this one is kinda hard)*

# COMPRESS YOUR IMAGES

gulp-image AND grunt-image

LOSSLESSLY COMPRESS ALL IMAGE TYPES

SOMETIMES THESE MANGLE SVGS, SO BE CAREFUL

**USE A CDN FOR STATIC CONTENT**  
**AMAZON S3 + CLOUDFRONT**

# LEVERAGE BROWSER CACHING

## Cache-Control HTTP HEADER

▶ index.html

Cache-Control: no-cache

▶ style.3da37df.css:

Cache-Control: max-age=31536000  
(1 year in seconds)



# LEVERAGE BROWSER CACHING

```
// gulpfile.js for a static website
var gulp = require('gulp');
var cachebust = new require('gulp-cachebust')();
var sass = require('gulp-sass');
var ejs = require('gulp-ejs');
```

```
gulp.task('css', function() {
  return gulp.src('style/*.scss')
    .pipe(sass())
    .pipe(cachebust.resources())
    .pipe(gulp.dest('style/'));
});
```

```
gulp.task('html', ['css'], function() {
  return gulp.src('*.ejs')
    .pipe(ejs())
    .pipe(cachebust.references())
    .pipe(gulp.dest('./'));
});
```

# FASTCLICK.JS

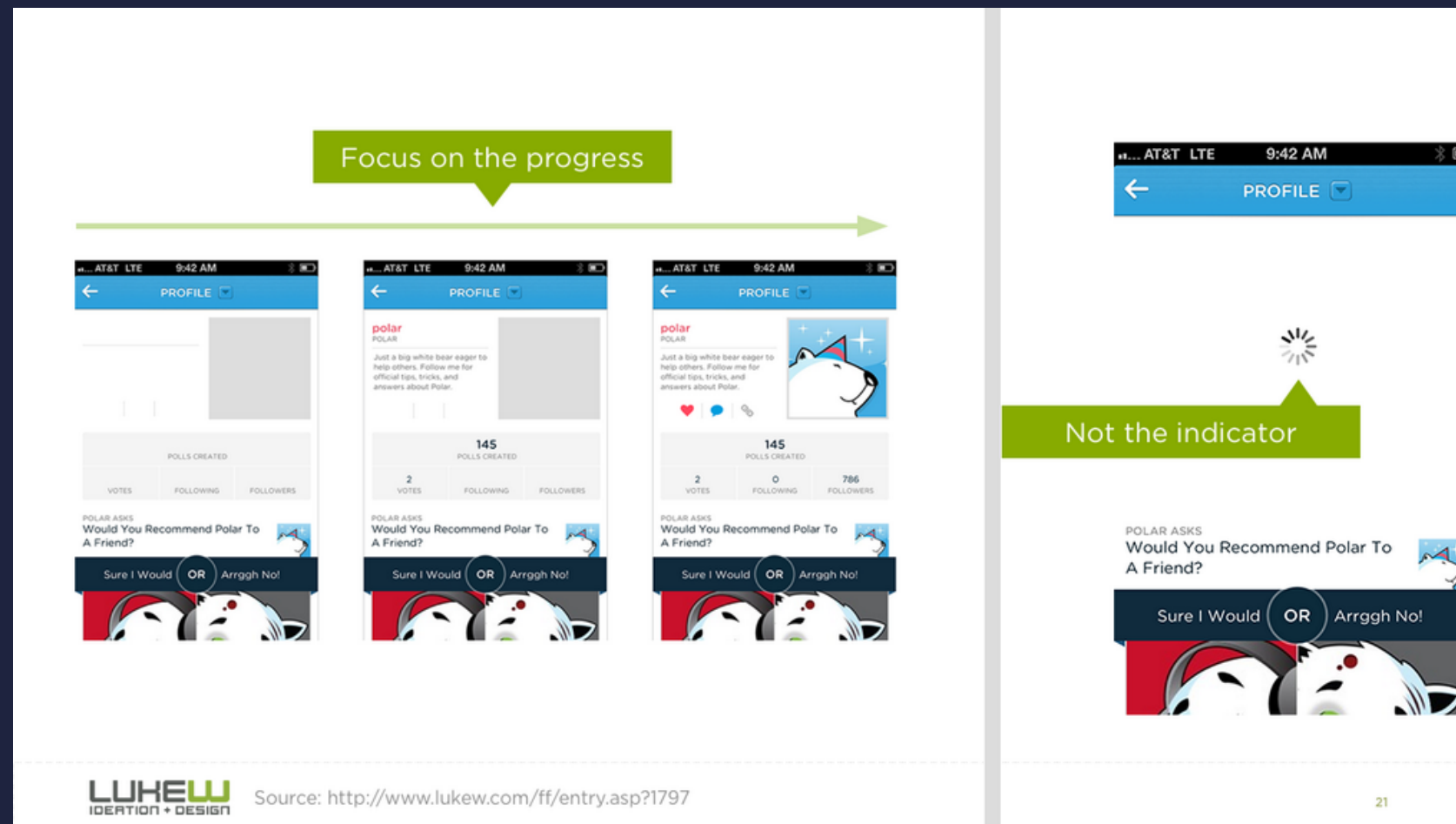
Touchscreen browsers artificially add a 300ms delay on click events due to a touch gesture. FastClick removes the delay and makes your page feel faster

[GITHUB.COM/FTLABS/FASTCLICK](https://github.com/ftlabs/fastclick)

```
bower install --save fastclick
```

# PREFER SKELETONS TO SPINNERS

Focus on progress feels faster



# DO ANIMATIONS THE RIGHT WAY

- ▶ If possible, prefer CSS animations to JS animations

- ▶ Prefer cheap animation properties:<sup>4</sup>

- ▶ **position:** `transform: translate(10px, 20px);`

- ▶ **scale:** `transform: scale(0.5);`

- ▶ **rotation:** `rotate(90deg);`

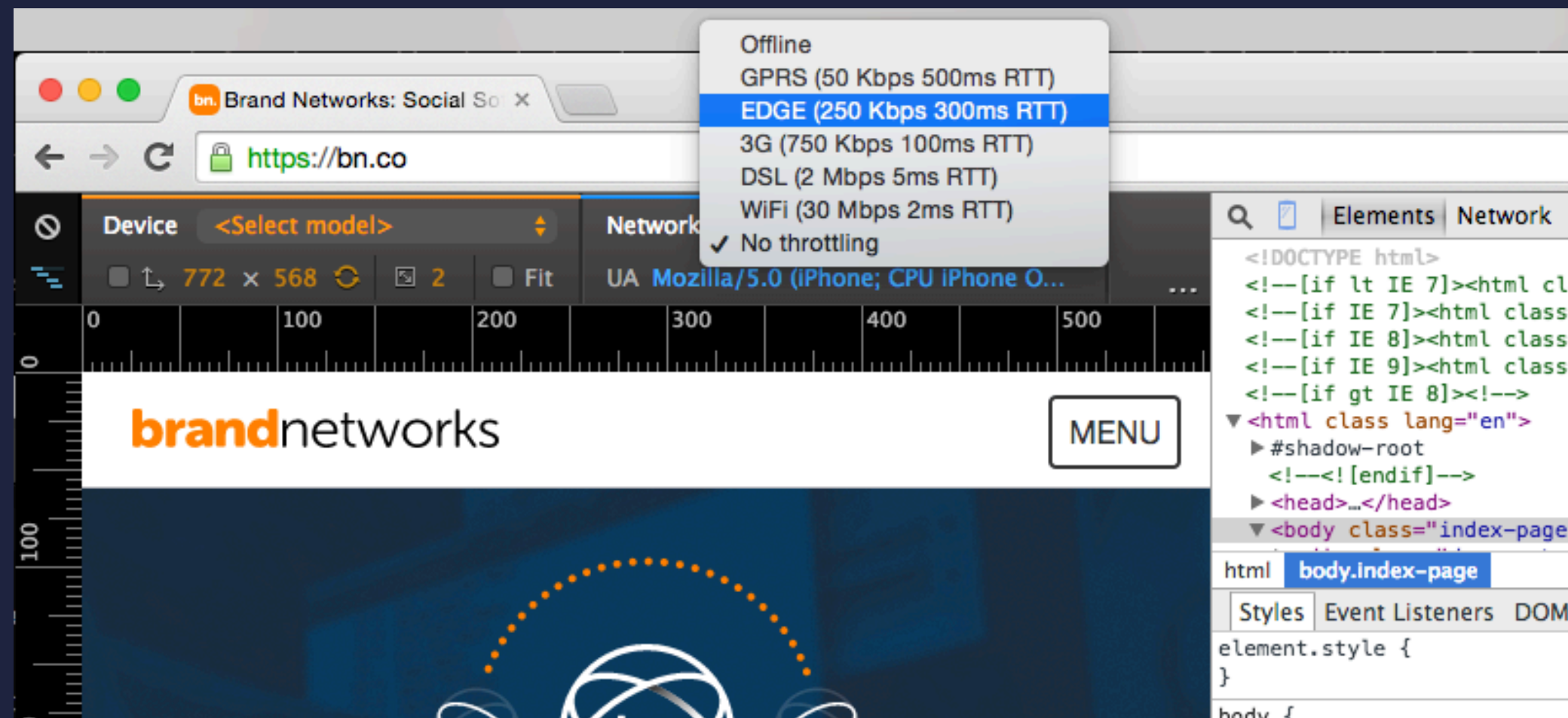
<sup>4</sup> [Paul Irish: High Performance Animations, Demo: The wrong way, Demo: The right way](#)

# HOW CAN I MEASURE HOW FAST MY WEBSITE IS?

1. Google PageSpeed
2. [webpagetest.org](https://webpagetest.org)
3. Chrome Dev Tools network tab

# HOW CAN I MEASURE HOW FAST MY WEBSITE IS?

Use Chrome Dev tools to throttle your network speed



# KEEP INFORMED: FOLLOW THESE PEOPLE ON TWITTER

- ▶ @paul\_irish, Google Chrome developer advocate
  - ▶ @lukew, author of Mobile First
- ▶ @scottjehl, author of Responsible Responsive Design
- ▶ @RWD, run by the author of Responsive Web Design

**THANK YOU**