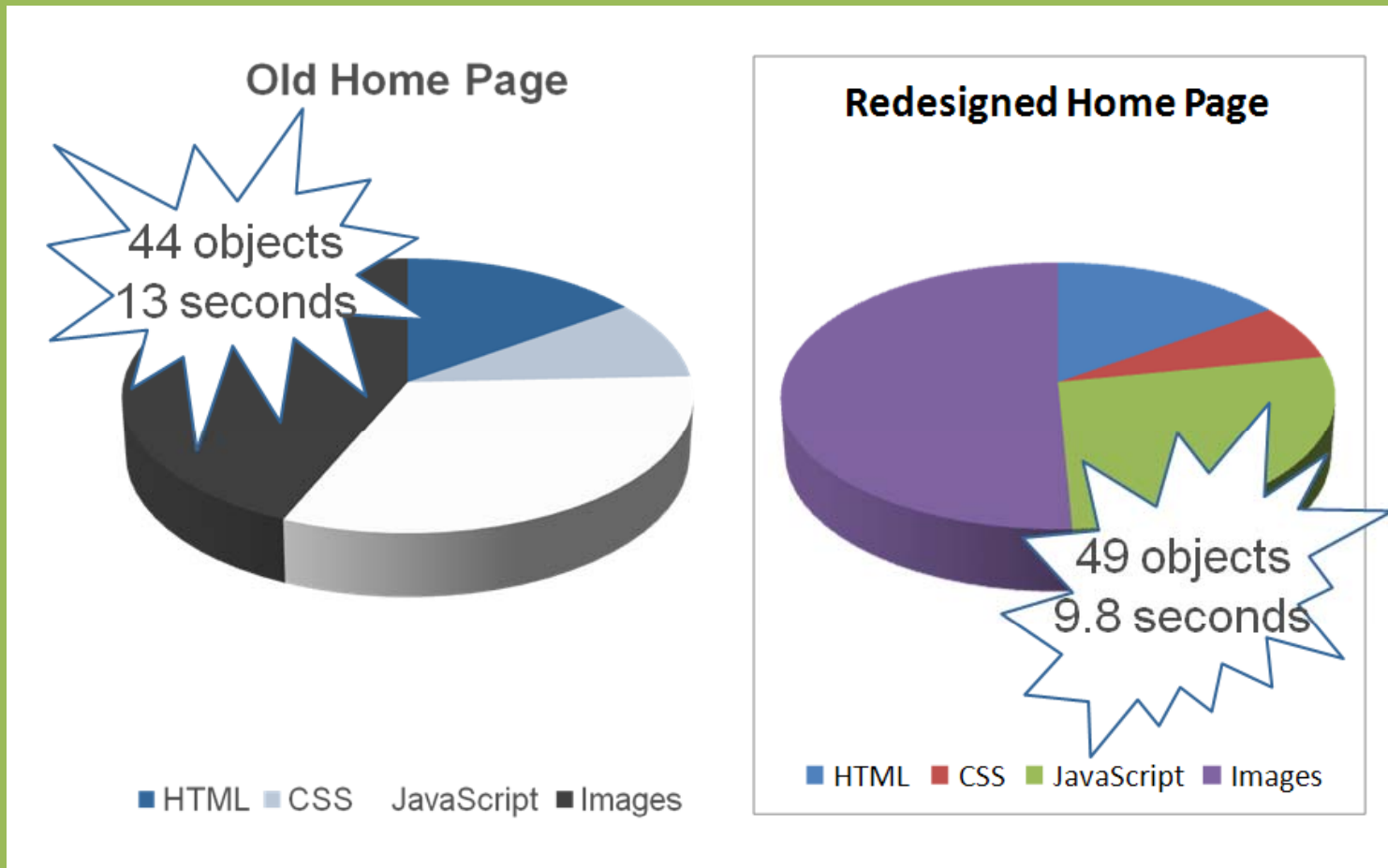


OPTIMIZE YOUR SITE IN 7 EASY STEPS

KIMBERLY BLESSING
kimberlyblessing.com

ASSUMPTIONS

- Your site is Web-standards compliant



ASSUMPTIONS

- Your site is Web-standards compliant
- Server tuning is either not an option or has already been done
- Not going to discuss server-side code

CAVEAT

- Optimization cannot be performed in a blanket or blind fashion!
 - Requires object and code *analysis*
 - Requires *testing* in order to ensure nothing breaks
 - Requires *tuning* to figure out the combination of techniques that work for *your* site

OK, READY?

STEP ONE:

VALIDATE

STEP ONE: VALIDATE

- Declare a valid DOCTYPE to enable standards mode in the browser
- Validate your HTML and CSS

STEP ONE: VALIDATE

```
<div id="divline">
  <span class="blkline"><p></p></span>
  <span class="maindiv"><p></p></span>
  <span class="gradient1"><p></p></span>
</div>
```

```
#divline .blkline {clear:both; float:left;
width:720px; height:4px; margin-bottom:1px;
background:transparent
url(../images/scr_BlkJDiv_720x4.gif) no-repeat;}
#divline .maindiv {clear:both; float:left;
width:720px; height:1px; padding-bottom:1px;
background:url(../images/scr_orangeDiv_720x1.gif)
no-repeat;}
#divline .gradient1 {clear:both; float:left;
width:720px; height:5px; background:transparent
url(../images/scr_gradientbg720x20.gif) no-repeat;}
```


STEP ONE: VALIDATE

```
<div id="divline">  
  <div class="blkline"></div>  
  <div class="maindiv"></div>  
  <div class="gradient1"></div>  
</div>
```

```
#divline .blkline {height:4px; margin-  
bottom:1px; background:transparent  
url(../images/scr_BlkJDiv_720x4.gif) no-repeat;}  
#divline .maindiv {height:1px;  
background:url(../images/scr_orangeDiv_720x1.gi  
f) no-repeat;}  
#divline .gradient1 {height:5px;  
background:transparent  
url(../images/scr_gradientbg720x20.gif) no-  
repeat;}
```

**STEP TWO:
SIMPLIFY**

STEP TWO: SIMPLIFY

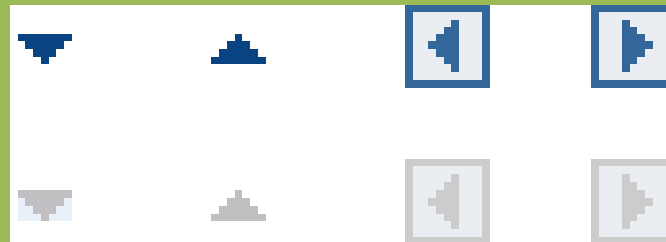
- Reduce the number of images called
 - Remember image maps?



- 3 separate images, 1156 bytes and 3 server calls
- Could be 1 image, 522 bytes and 1 server call

STEP TWO: SIMPLIFY

- Reduce the number of images called
 - Use CSS sprites
 - You can call 8 separate images (447 bytes and 8 server calls)
 - Or you can call 1 image (298 bytes and 1 server call) and use CSS to position and crop the image as needed.



STEP TWO: SIMPLIFY

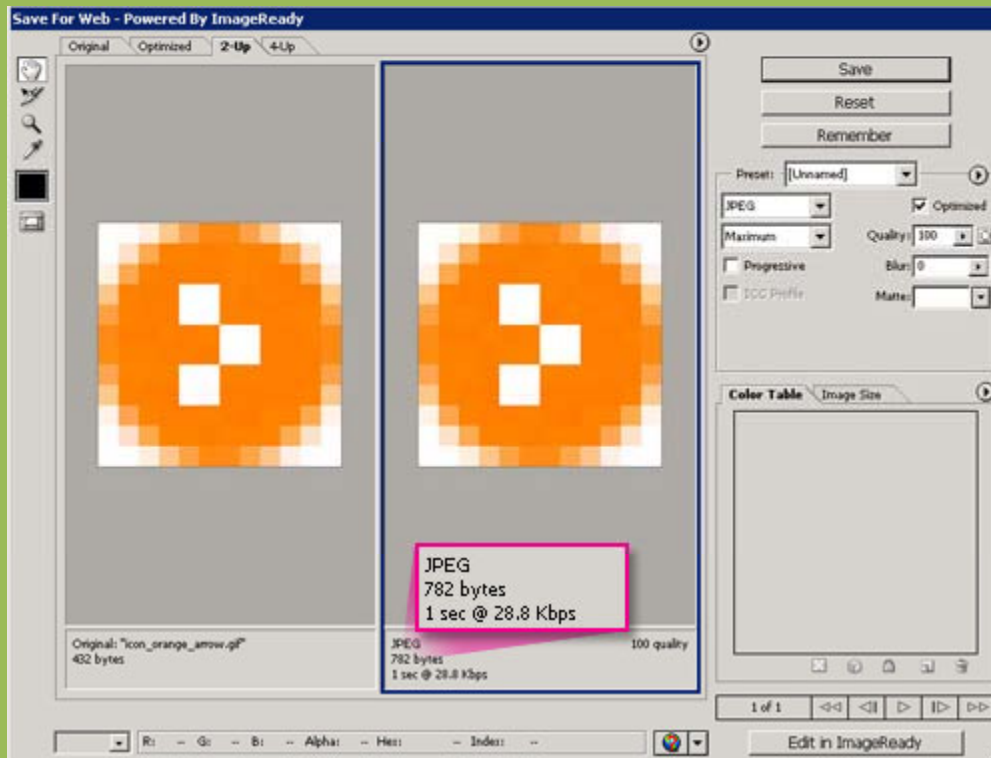
```
<a href="#" class="next"><span  
class="hide">Next</span></a>
```

```
a.next {display:block; width:11px;  
height:11px;  
background:url(sprite.gif) -75px 0 no-  
repeat;}
```

```
.hide {display:block;  
position:absolute; top:0; left:-500em;  
width:1px; height:1px;  
overflow:hidden; text-indent:-9999em;  
line-height:0;}
```

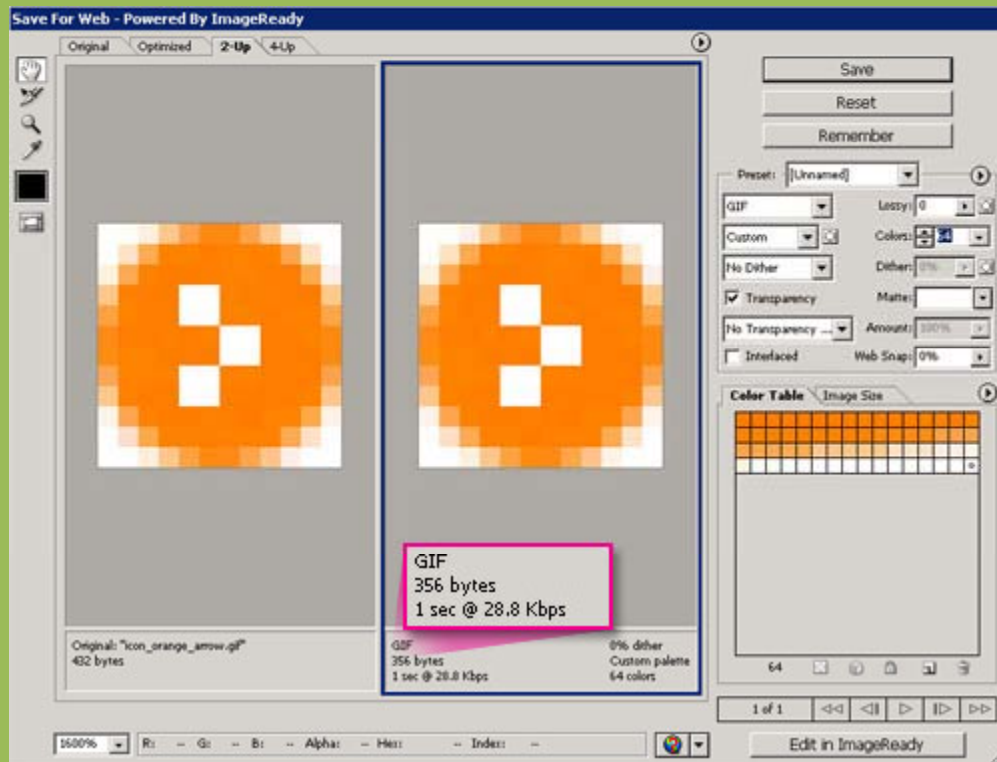
STEP TWO: SIMPLIFY

- Use “Save for Web”
 - Use the correct file format



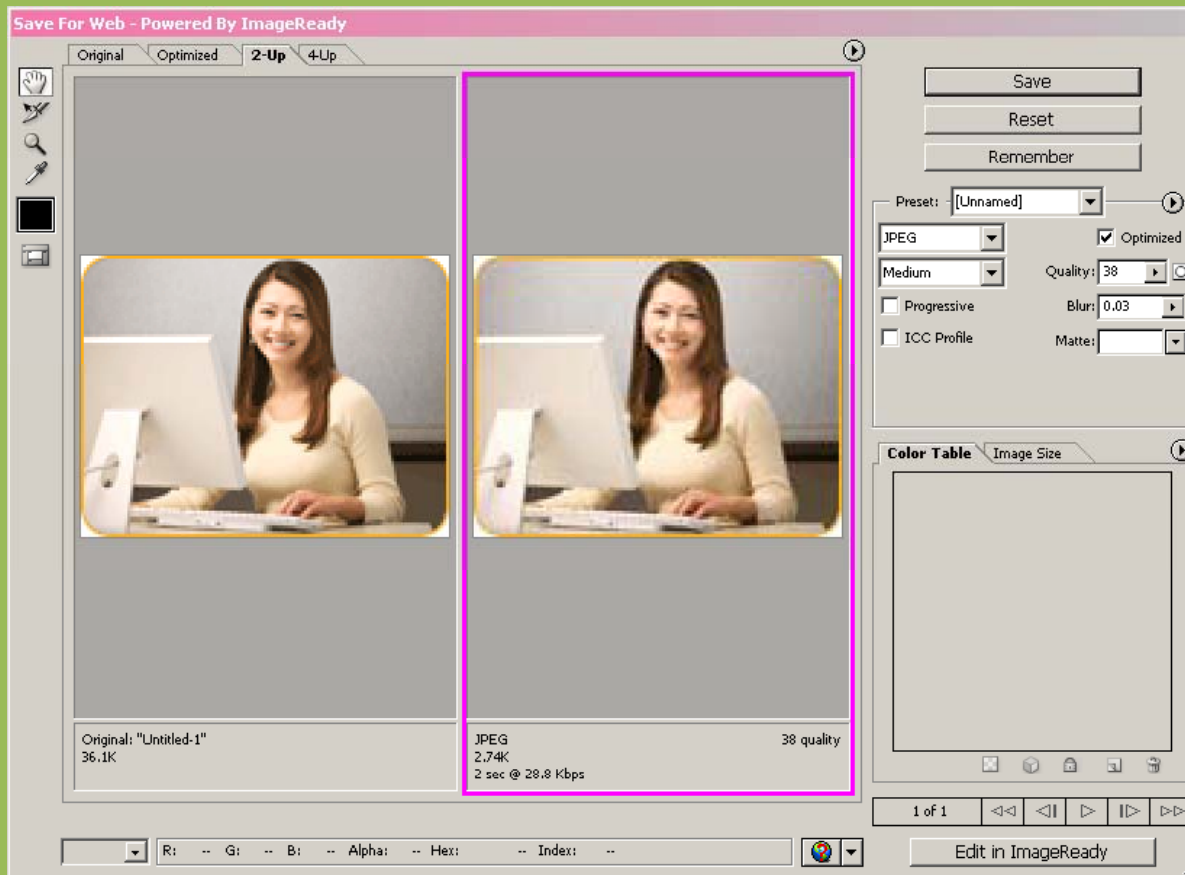
STEP TWO: SIMPLIFY

- Use “Save for Web”
 - Use the correct file format



STEP TWO: SIMPLIFY

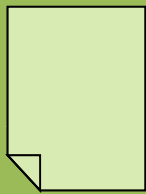
- Use “Save for Web”
 - Tweak compression quality and blur for JPGs



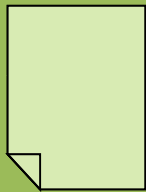
**STEP THREE:
CONCATENATE**

STEP THREE: CONCATENATE

- Combine external CSS and JavaScript files to further reduce the number of objects

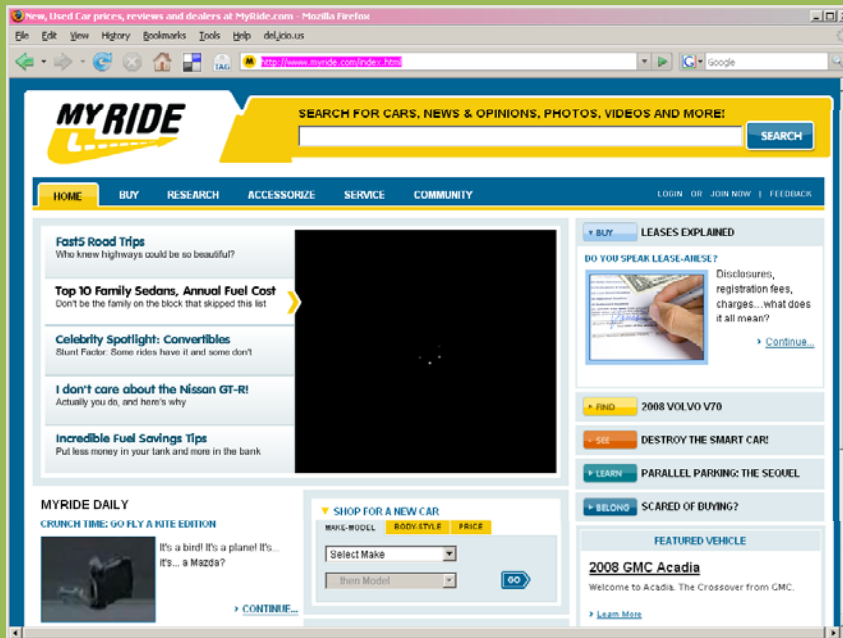


One main CSS library



One main JS library

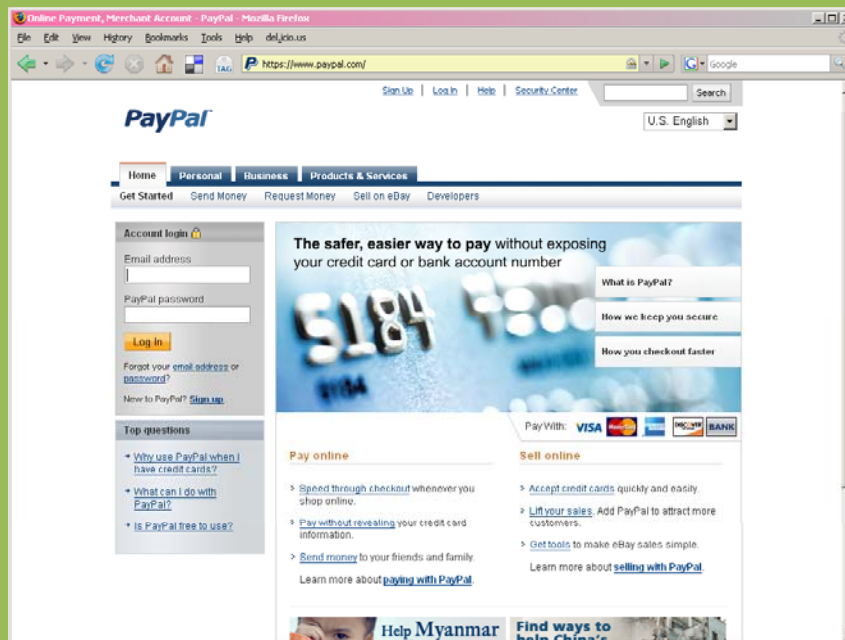
STEP THREE: CONCATENATE



myride.com

- Before:
 - 6 CSS files
 - 11 JavaScript files
 - Average 35 seconds to load
- After
 - 1 CSS file
 - 2 JavaScript files
 - Average 20 seconds to load

STEP THREE: CONCATENATE



paypal.com

- Before:
 - 8 CSS files
 - 6 JavaScript files
 - Average 12 seconds to load
- After
 - 2 CSS file
 - 2 JavaScript files
 - Average 6 seconds to load

STEP FOUR: IE-PROOF CSS

STEP FOUR: IE-PROOF CSS

- Avoid @import! Use LINK element to call CSS into page
- How are these CSS calls different?

```
<link rel="stylesheet"  
type="text/css" href="styles.css" >
```

```
<style type="text/css">  
    @import(styles.css)  
</style>
```

STEP FOUR: IE-PROOF CSS

- Avoid IE-proprietary properties
 - Expression
 - AlphaImageLoader

STEP FIVE:

CALL

JAVASCRIPT AS

NEEDED

STEP FIVE: CALL JAVASCRIPT AS NEEDED

- Call external JS files in the document head, or in the body where needed
- Use SCRIPT blocks to trigger functionality where needed

STEP FIVE: CALL JAVASCRIPT AS NEEDED

```
if( typeof( Prototype ) != 'undefined' &&
    typeof( LowPro ) != 'undefined' &&
    document.getElementById &&
    document.getElementsByTagName &&
    document.createElement &&
    document.getElementsByTagName( 'div' ) ){
  Event.onReady( function(){
    var cabinets = Array();
    $$('div.tabbed').each( function( el, i ){
      cabinets[i] = new TabInterface( el, i );
    } );
  } );
}
```

STEP FIVE: CALL JAVASCRIPT AS NEEDED

```
<div class="tabbed">
  <ul>
    <li>...</li>
  </ul>
</div>
```

```
<script type="text/javascript">
var cabinets = Array();
$$('div.tabbed').each(function( el, i ){
  cabinets[i] = new TabInterface( el, i );
} );
</script>
```

**STEP SIX:
SAVE SCRIPTS
FOR LAST**

STEP SIX: SAVE SCRIPTS FOR LAST

- Place calls to external scripts just before the closing BODY tag

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict/EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en"
lang="en">
<head>
<title>Welcome!</title>
<link rel="stylesheet" type="text/css" href="styles.css" />
→ <script type="text/javascript" src="yui-dom-event.js"></script>
</head>
```

ST

- Pl
cl

```
<title>Welcome!</title>  
<link rel="stylesheet" type="text/css" href="styles.css" />  
<script type="text/javascript" src="yui-dom-event.js"></script>  
</head>
```

```
<div id="footer">  
  <ul>  
    <li>...</li>  
  </ul>  
</div>
```

→ <script type="text/javascript" src="yui-dom-event.js"></script>

```
</body>  
</html>
```

**STEP SEVEN:
IF YOU CAN'T
ZIP, THEN STRIP**

STEP SEVEN: IF YOU CAN'T ZIP, THEN STRIP

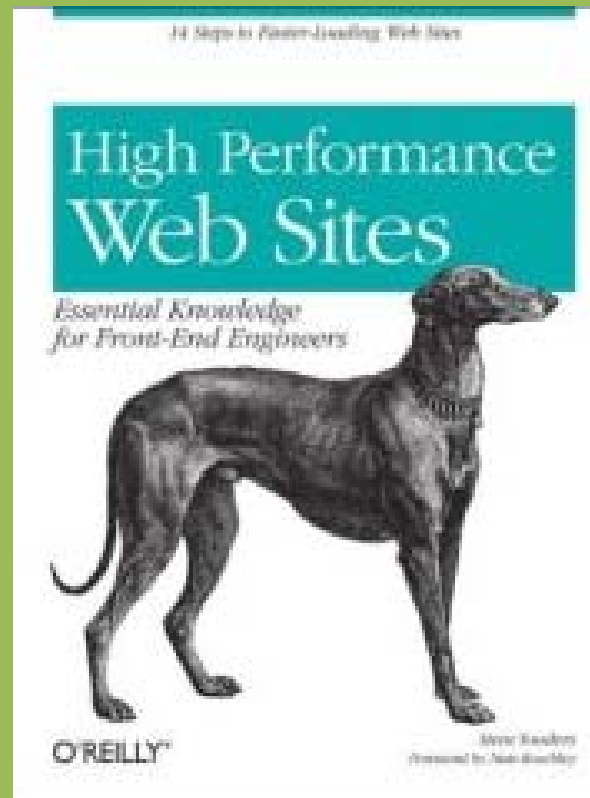
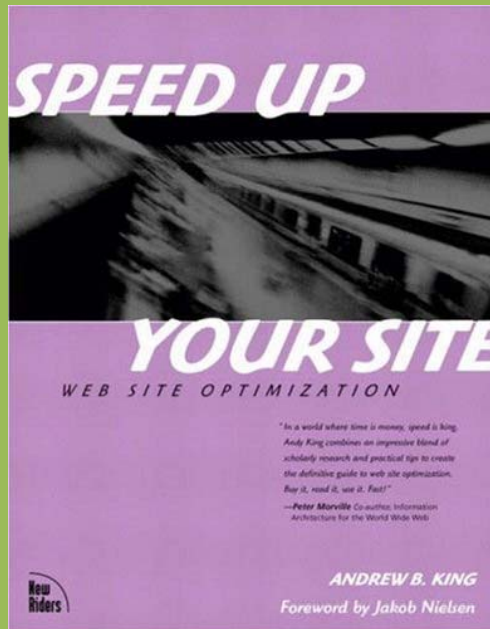
- Remove white space from all HTML, CSS, and JavaScript
- Use comments sparingly

STEP SEVEN: IF YOU CAN'T ZIP, THEN STRIP

- Start with a 60 KB HTML file
- Replace multiple spaces with tabs = 53 KB
- Remove tabs = 50 KB
- Remove large blocks of whitespace = 48 KB
- Remove comments = 44 KB
- Savings of **16 KB** or **26%**!

WANT MORE?

WANT MORE?



WANT MORE?

- **Web Site Optimization**
<http://www.websiteoptimization.com/speed/>
- **YDN Performance Best Practices:**
<http://developer.yahoo.com/performance/rules.html>
- **Web Site Optimization article:**
<http://www.sitepoint.com/article/web-site-optimization-steps>
- **Lazy Loading article:**
http://www.digital-web.com/articles/improve_page_performance_with_lazy_loading

GOOD LUCK &
GOD *SPEED*

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