

Visual/CSS Regression Testing

Catching the “Unintended Consequences”
of modifying your theme

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Who am I?

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About Promet Source

Open Source Applications – Focus on Drupal



- Founded in 2003
- Open source technologists
- Drupal platform since 2008
- Mobile apps since 2009
- Based in Chicago
- Distributed global team
- Agile development practices
- 24x7 support

Custom Development

- Drupal websites
- Drupal-based web applications
- Mobile apps integration
- Systems integration
- CMS migrations
- Custom ecommerce
- Prototyping and proof-of-concepts

DevOps

- Automated cloud infrastructure
- Drupal deployments
- Configuration management for Drupal
- Automated testing
- Continuous integration
- Performance and scaling
- Open source tools (Chef, Git, Jenkins)

Support

- 24x7 with SLA
- Support for Drupal sites built by others
- 24x7 monitoring
- Drupal security and maintenance updates
- QA for custom modules
- Code-level fixes
- Help desk support
- Ongoing development

What is Regression Testing?

–Wikipedia



How do you
regression test the
visual components of
a user interface?

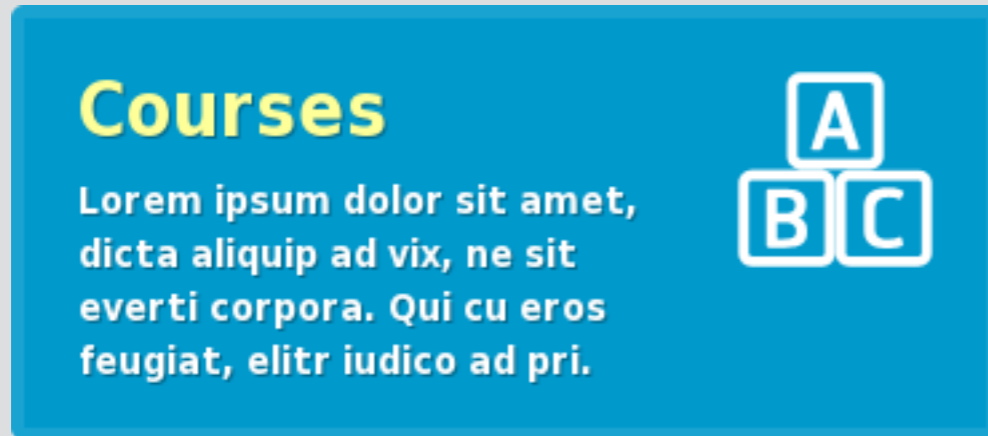
What if you could take a
“before” and “after”
picture?

And could easily
compare those pictures
to each other?

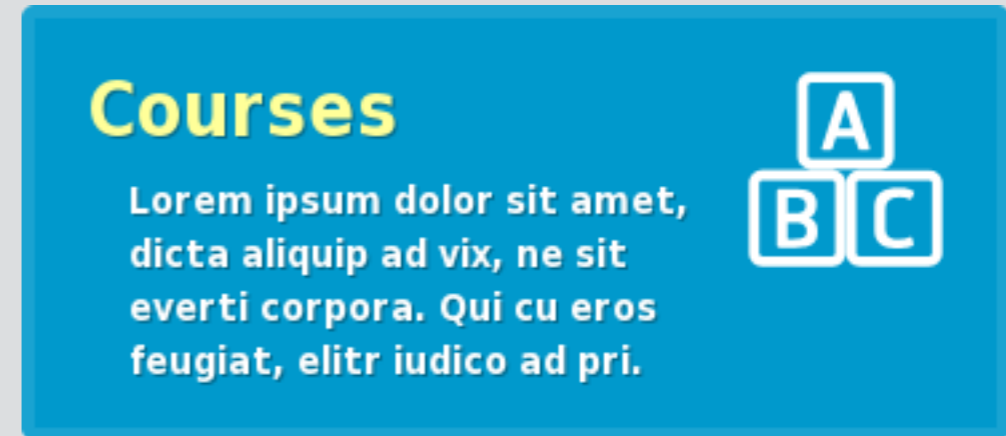
Enter PhantomCSS

How does it work?

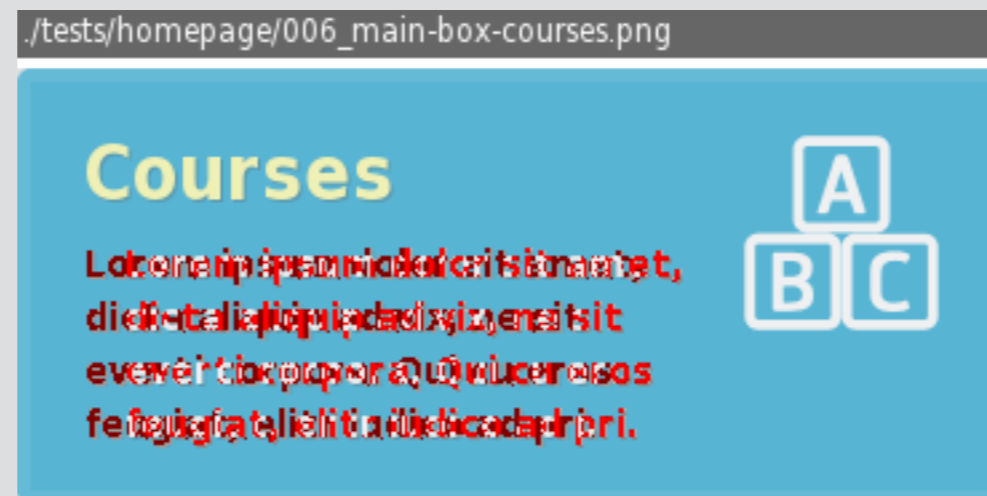
What does that look like?



Baseline Image



Comparison Image



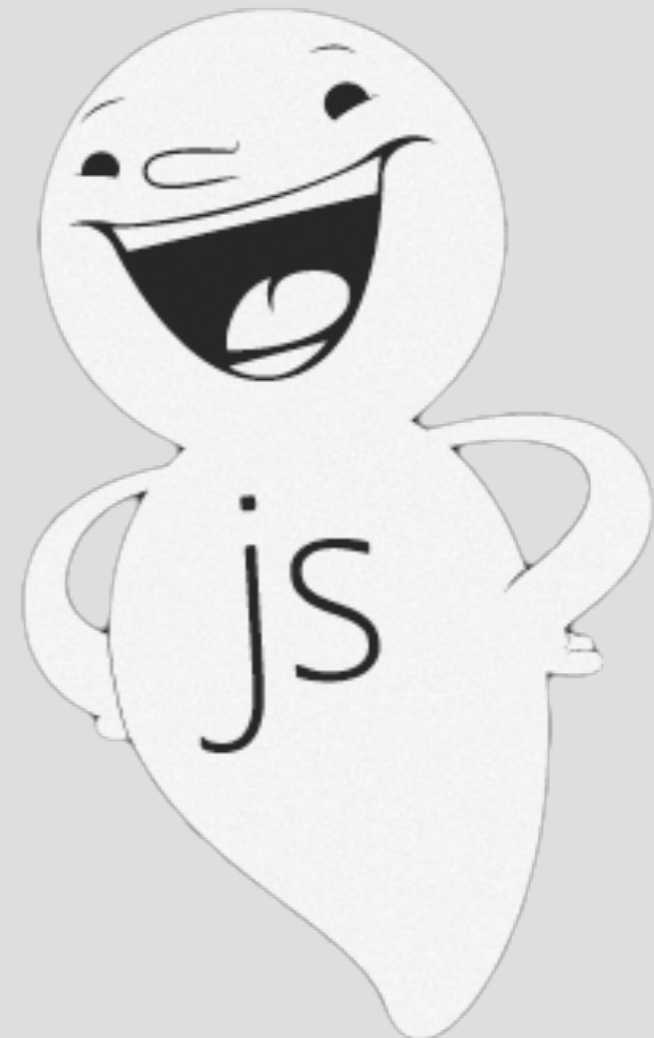
PhantomCSS Diff Image

PhantomCSS Dependencies

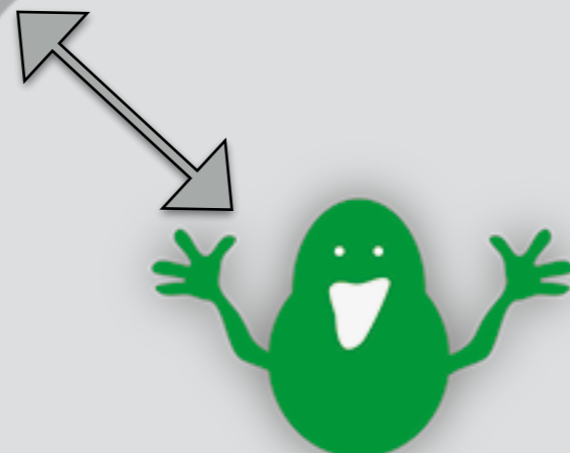


PhantomJS
(v1.9.7)

+



CasperJS
(1.1.beta-3)



SlimerJS
(v0.9.4)

Other Dependencies for Testing Servers (Linux)

- FontConfig
- FreeType
- ttf-dejavu
- ttf-mscorefonts-installer
- xvfb (SlimerJS)

Skillsets Needed to Write Tests for PhantomCSS

Javascript

```
casper.start( 'url-of-web-page' );  
casper.viewport(1024, 768);
```

```
casper.then(function(){  
    phantomcss.screenshot('#css-selector', 'image-name');  
});
```

```
casper.then( function now_check_the_screenshots(){  
    phantomcss.compareAll();  
});
```

```
casper.then( function end_it(){  
    casper.test.done();  
});
```

```
casper.run(function(){  
    phantom.exit(phantomcss.getExitStatus());  
});
```

Javascript Object Instances Available to Test Scripts

- phantom
- casper
- phantomcss

Author recommended Best Practices for PhantomCSS

- Does not replace functional testing
- Don't use complex CSS3 selectors
- Name Your Screenshots
- Don't try to test all the visuals
- Full page screenshots are a bad idea

Limitations of PhantomCSS

- No Support for Flash
- May require non-standard font installations on your testing server
- May generate false test failures due to spatial aliasing of antialiased images
- Some page elements that have display: none on larger viewports but are visible on smaller viewports are seen as “not visible”

Let's look at a test site

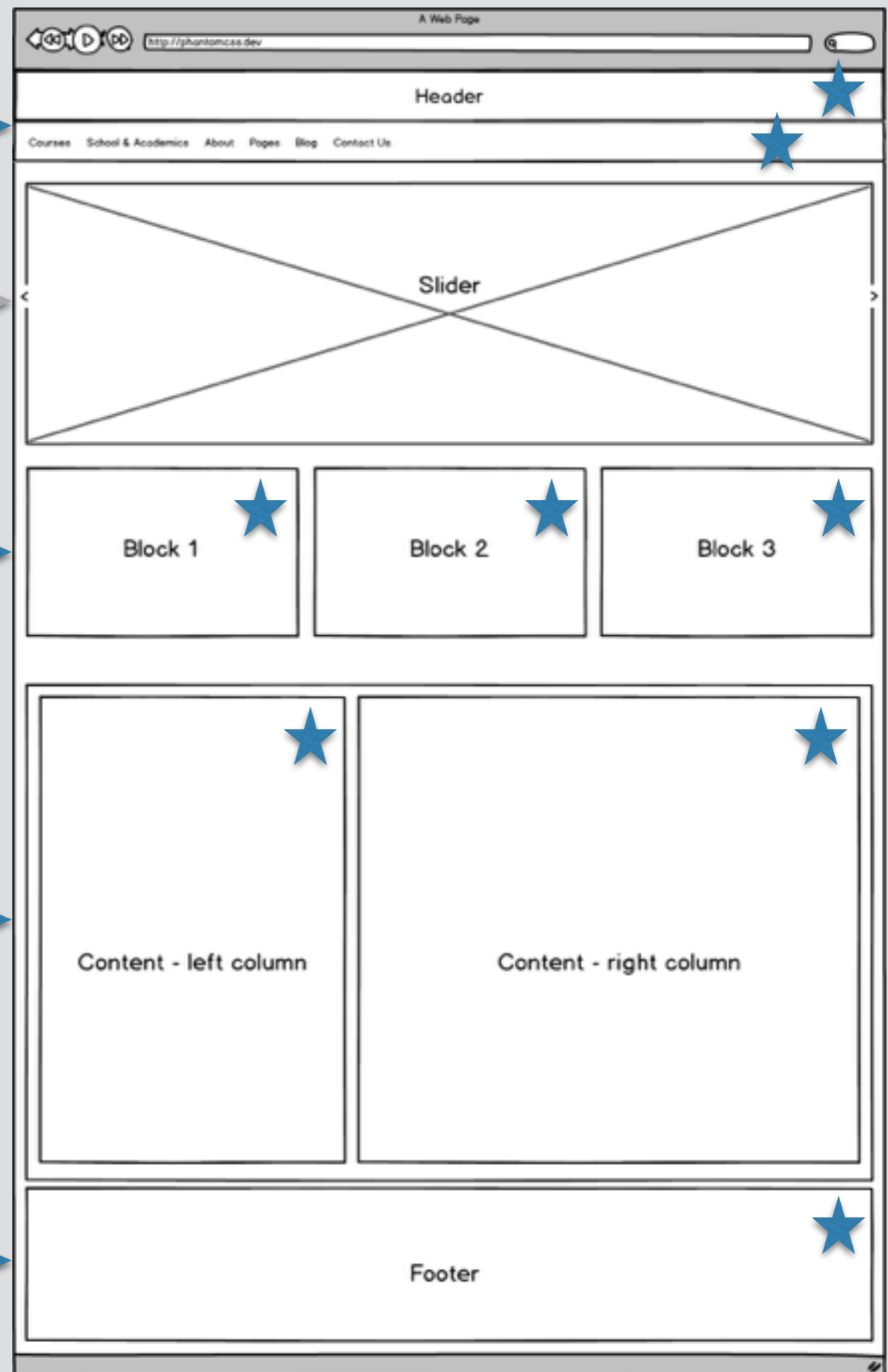
Fixed Header and Nav Bar
Nav bar Items are Mega Menus

Front Page Slider

Pre Content Blocks
Blocks have mouseover color change on background

Two column content area

Fixed Footer



Test Suite for Test Site

- Homepage
- Homepage with each Megamenu displayed
- Each Megamenu element
- Header, Nav bar, footer
- Pre-content blocks
- Pre-content blocks with each in “hover” state
- Content areas (left and right)

20 images in all

Let's switch to the actual
site and run a demo

Documentation

- casperjs.readthedocs.org
 - casperjs.readthedocs.org/en/latest/selectors.html
 - casperjs.readthedocs.org/en/latest/modules/casper.html
 - casperjs.readthedocs.org/en/latest/modules/mouse.html
 - casperjs.readthedocs.org/en/latest/modules/utils.html
- phantomjs.org/documentation/
- github.com/Huddle/PhantomCSS/blob/master/README.md

Questions?

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