

# Perceived Speed and Optimization

Eric Binnion  
@ebinnion

```
reply:func
147      xCoors = _.map( [ .2, .4, .6, .8 ], function( num, key ) { return num * viewPortWidth; } ),
148      yCoords = _.map( [ .1, .2, .3, .4, .5 ], function( num, key ) { return num * viewPortHeight; } );
149
150      /*
151       * For each coordinate pair (x,y), get element at point,
152       * traverse up to find a post, and add post ID to elems.
153       */
154      var elems = [];
155      _.each( yCoords, function( y ){
156          _.each( xCoors, function( x ){
157              var element = $( document.elementFromPoint( x, y ) ),
158                  closest = element.closest( threadContainer + '.post' );
159
160              if ( closest.length > 0 ) {
161                  elems.push( closest.attr( 'id' ) );
162              }
163          });
164      });
165
166      // Find most frequent (mode) post ID in elems array
167      // Thanks Matthew Hall for this snippet: http://jsbeautifier.org/paste/10848
168      if ( elems.length > 0 ) {
169          var modeMap = {};
170
171          var maxEl = elems[0],
172              maxCount = 1;
173
174          _.each( elems, function( el ){
175              if ( modeMap[ el ] == null ) {
176                  modeMap[ el ] = 1;
177              } else {
178                  modeMap[ el ]++;
179              }
180
181              if ( modeMap[ el ] > maxCount ) {
182                  maxEl = el;
183                  maxCount = modeMap[ el ];
184              }
185          });
186
187          $( '.o2-posts #' + maxEl ).find( 'a.o2-post-reply:first' ).click();
188
189      }
190
191      e.preventDefault();
192  },
```

**wcorl2014.ericbinnion.com**

# Eric Binnion

WordPress Core Contributor

Code Wrangler at Automattic

BA in Computer Science at  
MSU

@ebinnion

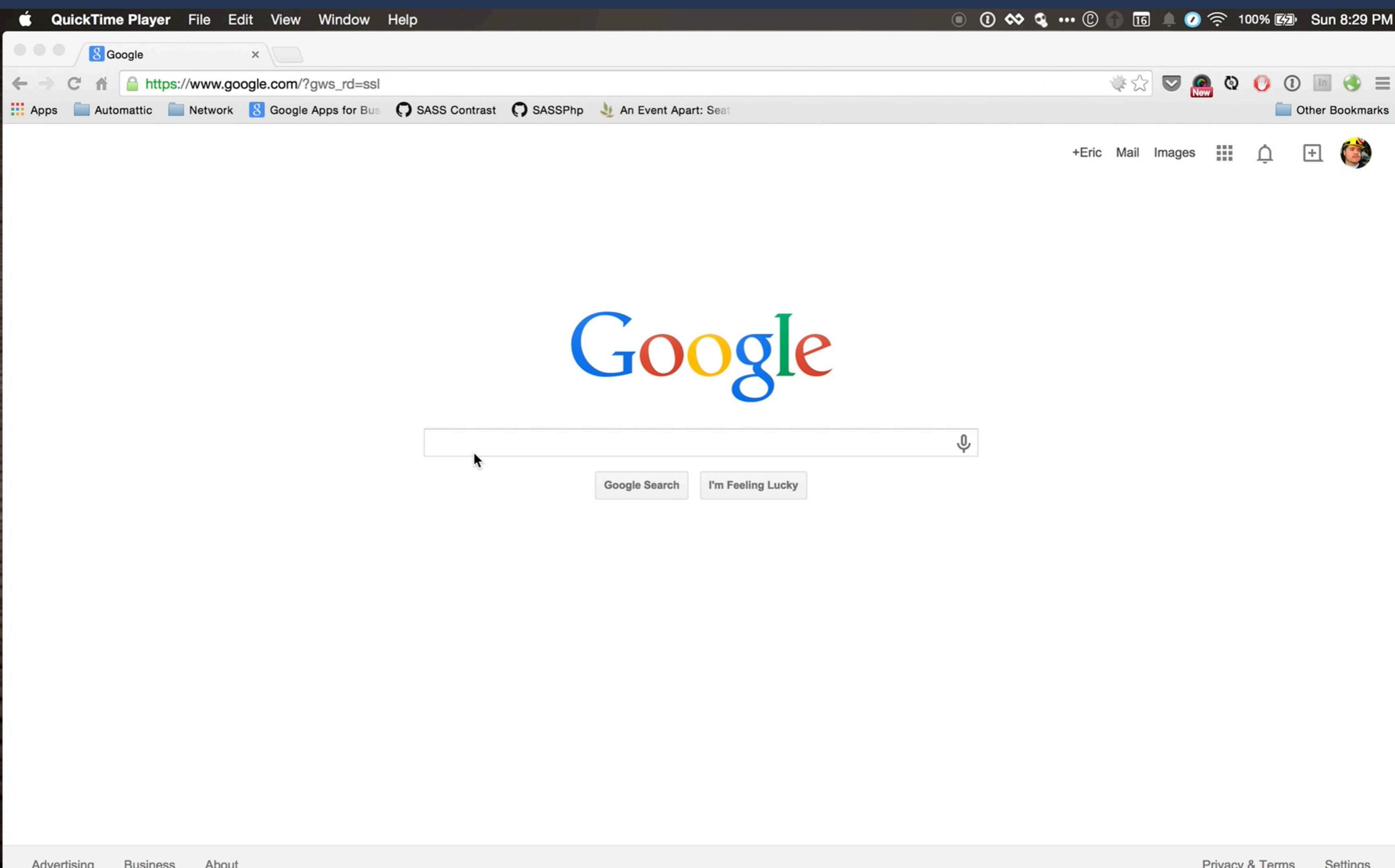


# Overview of this Session

- What is perceived speed?
- Examples
- Why is it so important?
- Implementation
- Questions?

# Perceived Speed

How quickly software **appears** to perform its task.



g Google

https://www.google.com/?gws\_rd=ssl



New

Other Bookmarks

+Eric Mail Images



# Google



Google Search

I'm Feeling Lucky

# Eric Binnion

Just another WordPress site

 Status Update  Blog Post  Quote  Link



Hi, ebinnion. Whatcha up to?

I

Add Media 

Tag it

Post it

## Recent Updates



[ebinnion](#) 1:03 am on November 18, 2014

[Toggle Comment Threads](#) | [Keyboard Shortcuts](#)

[Permalink](#) | [Reply](#) | [Edit](#)

## Hello world!

Welcome to WordPress. This is your first post. Edit or delete it, then start blogging!

Like this:

 Like

Be the first to like this.

 [Mr WordPress](#)

1:03 am on November 18, 2014

[Permalink](#) | [Reply](#) | [Edit](#)

[Search](#)

## Recent Posts

- [Hello world!](#)
- [Markup: HTML Tags and Formatting](#)
- [Markup: Image Alignment](#)
- [Markup: Text Alignment](#)
- [Markup: Title With Special Characters](#)

## Recent Comments

- [Mr WordPress](#) on [Hello world!](#)
- [John Doe](#) on [Edge Case: No Content](#)
- [Jane Doe](#) on [Protected: Template: Password Protected \(the password is "enter"\)](#)
- [Jane Doe](#) on [Template: Comments](#)
- [John Doe](#) on [Template: Comments](#)

## Archives

- [November 2014](#)
- [January 2013](#)
- [March 2012](#)
- [January 2012](#)

B I 0 ¶ “ ”

Hi, Eric! What's happening? 

[Edit](#) [Preview](#)

Notify me of new comments via email. [Post](#)

**ERIC BINNION'S TESTING SANDBOX** [Keyboard Shortcuts](#) | [Hide comment threads](#)

 **ebinnion** an hour ago

Test Post

Here is some content

[Reply](#) [Follow](#)

 **ebinnion** 12:42 pm on October 15, 2014

Another Test Post

Hello world

[Reply 11](#) [Follow](#)

## Eric Binnion's Testing Sandbox

### Welcome to o2

Looking for answers? Check out the [Field Guide](#).

### Search

Search ...

# Eric Binnion

Just another WordPress site

[Status Update](#) [Blog Post](#) [Quote](#) [Link](#)



Hi, ebinnion. Whatcha up to?

I

Add Media

## Recent Updates

[Toggle Comment Threads](#) | [Keyboard Shortcuts](#)

**ebinnion** 1:03 am on November 18, 2014

[Permalink](#) | [Reply](#) | [Edit](#)

**Hello world!**

Welcome to WordPress. This is your first post. Edit or delete it, then start blogging!

Like this:

Like

Be the first to like this.

**Mr WordPress** 1:03 am on November 18, 2014

[Permalink](#) | [Reply](#) | [Edit](#)

Search

## Recent Posts

[Hello world!](#)  
[Markup: HTML Tags and Formatting](#)  
[Markup: Image Alignment](#)  
[Markup: Text Alignment](#)  
[Markup: Title With Special Characters](#)

## Recent Comments

[Mr WordPress](#) on [Hello world!](#)  
[John Doe](#) on [Edge Case: No Content](#)  
[Jane Doe](#) on [Protected: Template: Password Protected \(the password is "enter"\)](#)  
[Jane Doe](#) on [Template: Comments](#)  
[John Doe](#) on [Template: Comments](#)

## Archives

[November 2014](#)  
[January 2013](#)  
[March 2012](#)  
[January 2012](#)

Hi, Eric! What's happening?

[Edit](#) [Preview](#)

Notify me of new comments via email. [Post](#)

**ERIC BINNION'S TESTING SANDBOX**

[Keyboard Shortcuts](#) | [Hide comment threads](#)

**ebinnion** an hour ago

### Test Post

Here is some content

[Reply](#) [Follow](#)

**ebinnion** 12:42 pm on October 15, 2014

### Another Test Post

Hello world

[Reply 1](#) [Follow](#)

## Eric Binnion's Testing Sandbox

### Welcome to o2

Looking for answers? Check out the [Field Guide](#).

### Search

Search ...

# **Which is Faster?**

**why?**

*Perception is Reality*

**– Lee Atwater**

# Perceived Speed

*It's not about how fast your site is; it's about how fast your users think it is.*

– Kyle Peatt<sup>1</sup>

---

<sup>1</sup> Quote from <http://www.mobify.com/blog/beginners-guide-to-perceived-performance>

# **How do I Increase Perceived Speed?**

# Optimistic Interfaces

A method of improving  
**perceived speed** of  
applications by **assuming** that  
interactions with the server will  
succeed.

# Assume Success

- Emulate while waiting
- Makes use of:
  - AJAX
  - Backbone, React, etc.

The screenshot shows a web application interface titled "ERIC BINNION'S TESTING SANDBOX". On the left, there is a rich text editor with a toolbar. A cursor is hovering over the text area, which contains the placeholder "Hi, Eric! What's happening?". Below the editor, there are "Edit" and "Preview" buttons, and a checkbox for "Notify me of new comments via email" followed by a "Post" button. To the right of the editor, the page title "ERIC BINNION'S TESTING SANDBOX" is displayed, along with "Keyboard Shortcuts | Hide comment threads". There are two posts listed:

- Test Post** by **ebinnion** (posted an hour ago). The post content is "Here is some content" and includes "Reply" and "Follow" buttons.
- Another Test Post** by **ebinnion** (posted 12:42 pm on October 15, 2014). The post content is "Hello world" and includes "Reply 11" and "Follow" buttons.

On the far right, there is a sidebar with the text "Eric Binnion's Testing Sandbox", "Welcome to o2", "Looking for answers? Check out the [Field Guide](#)", and a search bar labeled "Search ...".

# But, Check Success

- How do we check that a request succeeded?
- How do we display failures?
- How do we recover?
  - Do we automatically retry?

# Examples

- JetPack
- ROHO Sports / AppPresser
- O2

Eric Binnion | Lessons Learnt

manofhustle.com

Eric Binnion Reader Following

MENU

SEARCH

ERIC

November 12, 2014

## Photo 101, Landmark

For the [Photo 101 Landmark](#) theme, I decided that I would visit the Christmas display at Midwestern State University.



EDIT THIS

**POSTS I LIKE**

 Landmark on Victim to Charm

 Disney and Universal Studios i... on Jackie Loves

**YOU ARE FOLLOWING THIS BLOG**

You are following this blog, along with 1,242 other amazing people (manage).

# Roho Sports

- AppPresser
- High School booster club
- Each sport had a separate site (multisite)
- Each site had to allow subscriptions

The screenshot shows a mobile application for Roho Sports. At the top, there's a navigation bar with icons for menu, back, and settings, along with the Sprint network logo and the time 10:13 PM. The header features the "ROHO" logo with a horse and rider. Below the header is a large image of a football team in black uniforms. A horizontal navigation bar below the image has four dots, with the first one being black. The main content area has a dark header with the text "Upcoming Games". Below the header, there are three game entries, each with a date and time, a team name, and a location. Each entry includes a "Directions" link. At the bottom of the screen, there's a red banner for State Farm with the text "Morris Stone (940) 322-2241".

Upcoming Games

12/30 11:00 AM  
Soccer - Girls - JV2 Lady Raiders -  
at Springtown

Directions

1/2 10:00 AM  
Soccer - Girls - JV2 Lady Raiders -  
at Intersquad

Directions

1/2 12:00 PM  
Soccer - Girls - Varsity Lady  
Raiders - vs Alumni Lady Raiders

State Farm

Morris Stone  
(940) 322-2241

# Subscribe AJAX Example (PHP)

```
add_action( 'wp_ajax_nopriv_register_device', 'register_device' );
add_action( 'wp_ajax_register_device', 'register_device' );
function register_device() {
    $blog_id = $_POST['blog_id'];
    $device  = $_POST['uuid'];

    $sport_devices = get_blog_option( $blog_id, 'registered_devices' );

    if ( is_array( $sport_devices ) ) {
        if ( ! in_array( $device, $sport_devices ) ) {
            $sport_devices[] = $device;
        }
    } else {
        $sport_devices = array( $device );
    }

    if ( ! update_blog_option( $blog_id, 'registered_devices', $sport_devices ) ) {
        wp_die( 'Registering device failed.' );
    }

    exit;
}
```

# Subscribe AJAX Example (JS)

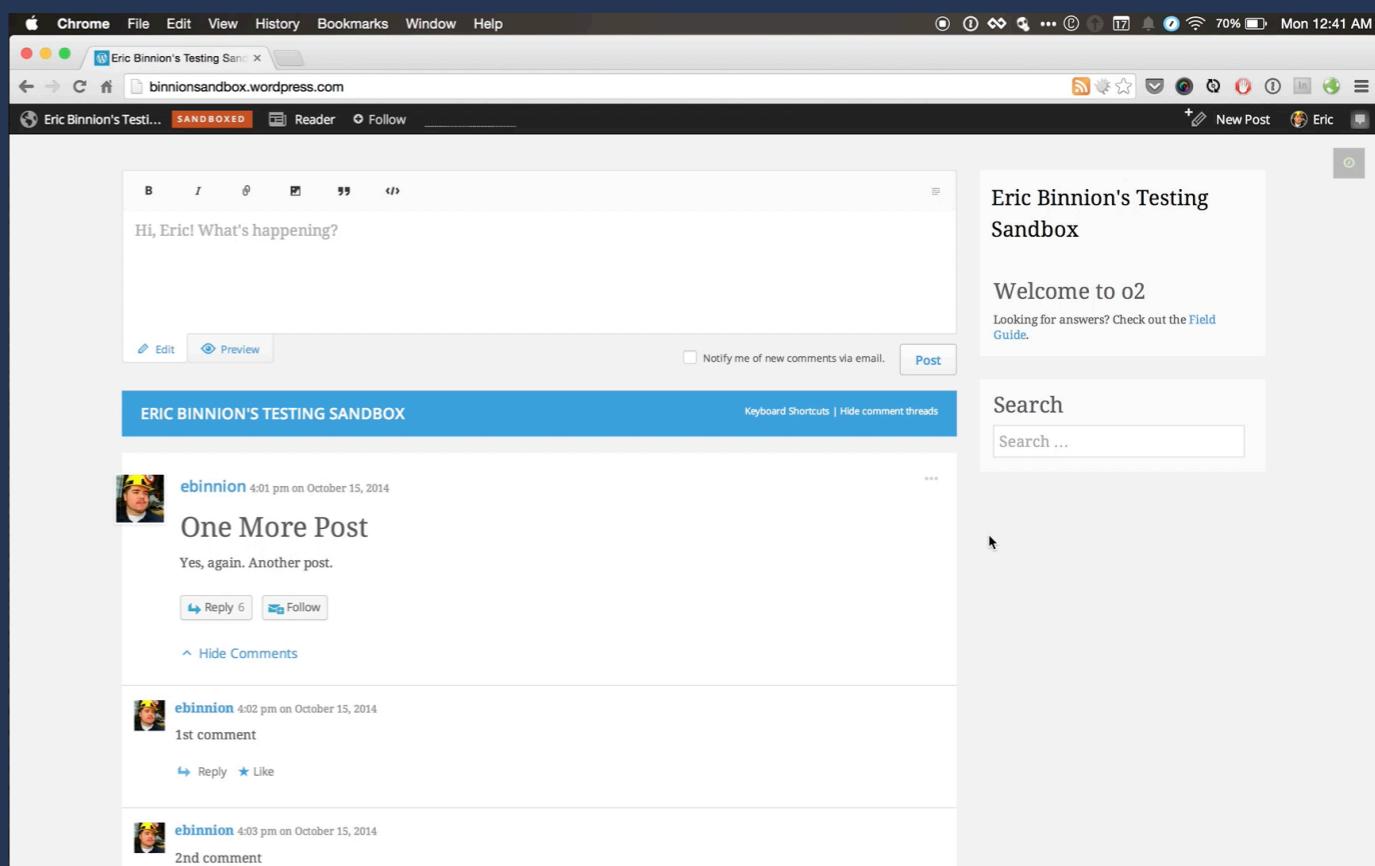
```
$(' .register-push' ).change(
  function( e ) {
    state = $( this ).is( ':checked' );
    target = $( this ).attr( 'data-site' );
    if ( 'undefined' !== typeof device && null !== device.uuid ) {
      var action = ( false == state ) ? 'deregister_device' : 'register_device';

      jQuery.post(
        appCore.ajaxurl,
        {
          'action': action,
          'uuid': device.uuid,
          'blog_id': target
        },
        function( response ){
          console.log( response );
        }
      ).fail( function( xhr, textStatus, errorThrown ) {

        // If the Ajax fails, then handle it
        alert( xhr.responseText );
      });
    }
  );
);
```

# O2 Trash Post

- slideUp Post (hide)
- Attempt to destroy/delete post
- If successful, remove post from DOM
- Else, slideDown post and show notice



# O2 Trash Post

```
onTrash: function( event ) {
  event.preventDefault();
  event.stopPropagation();

  var postId = parseInt( o2.options.postId, 10 );

  if ( 0 == postId ) {

    // If currently on a list view, slide the post up then proceed with the destroy.
    this.$el.slideUp( this.destroyViewModel( this, postId ) );
  } else {

    // Check if there is a postTrashedFailed notification and remove if so
    o2.Notifications.notifications.findFirstAndDestroy( 'postTrashedFailed' );

    var trashString = ( 'page' == o2.options.viewType ) ? 'pageBeingTrashed' : 'postBeingTrashed';

    o2.Notifications.add( {
      text: o2.strings.trashString,
      url: false,
      type: 'postBeingTrashed',
      sticky: false,
      popup: false,
      dismissable: true
    } );
  }

  this.destroyViewModel( this, postId );
},
},
```

# O2 Trash Post

```
destroyViewModel: function( view, postId ) {
  view.model.destroy({
    wait: true,
    success: function( model, response ) {
      // Commented out for presentation
    },
    error: function( model, response ) {

      // Remove any actions menus that are currently open.
      view.closeOpenDisclosures();

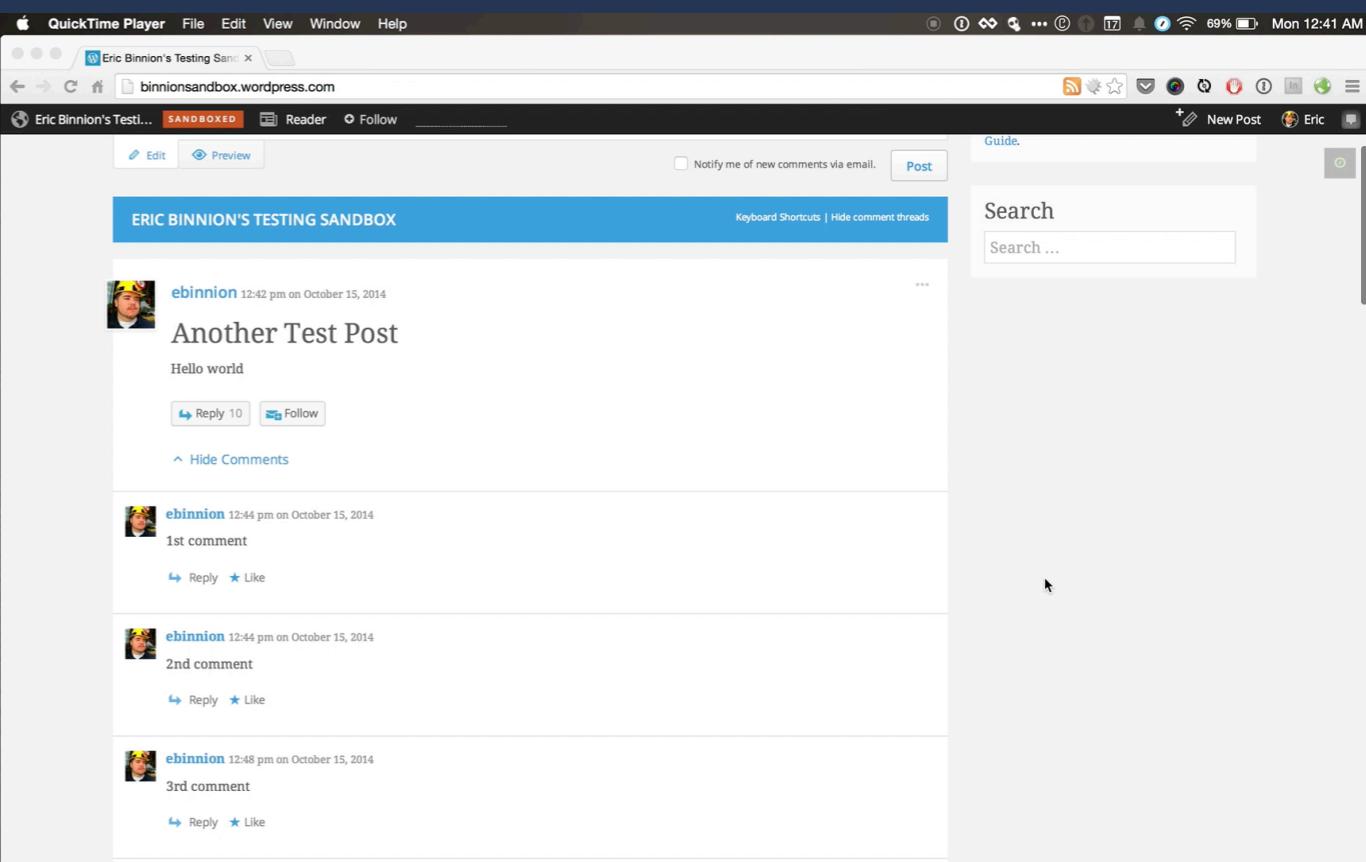
      // Check if there is a postBeingTrashed notification and remove if so
      o2.Notifications.notifications.findFirstAndDestroy( 'postBeingTrashed' );

      var trashFailedString = ( 'page' == o2.options.viewType ) ? 'pageTrashedFailed' : 'postTrashedFailed';

      // If the destroy failed, show the post again.
      view.$el.slideDown();
      o2.Notifications.add( {
        text: o2.strings.trashFailedString,
        url: false,
        type: 'postTrashedFailed',
        sticky: false,
        popup: true,
        dismissable: true
      } );
    }
  });
},
```

# O2 Trash Comment

- Change comment content
- If successful, do nothing
- Else, change comment content back



# O2 Trash Comment

```
onTrash: function( event ) {
  event.preventDefault();
  event.stopImmediatePropagation();

  this.options.isSaving = true;
  this.options.isTrashedAction = true;

  o2.Events.dispatcher.trigger( 'notify-app.o2', { saveInProgress: true } );

  var updates = {
    isTrashed:      true,
    trashedSession: true
  };

  this.model.save( updates, { success: this.onSaveSuccess, error: this.onSaveError } );
},
```

# O2 Trash Comment

```
onSaveError: function( model, xhr ) {
  o2.Events.dispatcher.trigger( 'notify-app.o2', { saveInProgress: false } );

  var responseText = '';
  var errorText = '';
  try {
    // See if the XHR responseText is actually a JSONified object
    var responseObject = $.parseJSON( xhr.responseText );
    if ( ( 'undefined' !== typeof responseObject.data.errorText ) ) {
      errorText = responseObject.data.errorText;
    }
  } catch ( e ) {
    // Not JSON - use the responseText directly
    // e.g. this occurs if you attempt to post the same comment twice - you get
    // a non JSON error back in the response
    errorText = xhr.responseText;
  }

  o2.Notifications.add( {
    model: model,
    type: 'error',
    text: errorText,
    sticky: true
  });

  // Turn editing back on
  this.options.isSaving = false;
  this.options.isEditing = true;
  this.render();

  o2.Events.doAction( 'post-comment-save.o2' );
},
} ,
```

# Questions?

# Credits

Perceived Speed Photo Credit: [Loïc Lagarde](#) - cc

Instagram screenshots: <https://speakerdeck.com/mikeyk/secrets-to-lightning-fast-mobile-design>