

the ASSET PIPELINE AND OUR POST-MODERN, HYBRID, Javascript Future



@rohdesign

THE PROBLEM

THE PAIN

```
Envy27:javascripts david$ ls
account_invoice.js
application.js
autolabel.js
calendar_date.js
calendar_date_format.js
calendar_date_select.js
categories.js
color.js
color_picker.js
color_scheme.js
comments.js
common.js
companies.js
custom.js
date.js
easing.js
fancyboxzoom.js
files.js
flash_support.js
layout.js
locations.js
login.js
milestone_quick_window.js
milestone_templates.js
milestone_writing_activity.js
milestones.js
move_operation.js
msg.js
nubbins.js
participants.js
pending_attachments.js
people.js
privacy.js
project_templates.js
search.js
settings.js
templates.js
time.js
todo_dates.js
todo_shortcuts.js
todos.js
touch_support.js
upload_debugging.js
upload_preference.js
widget.js
writeboards.js
```

```
Envy27:javascripts david$ ls
account_invoice.js
application.js
autolabel.js
calendar_date.js
calendar_date_format.js
calendar_date_select.js
categories.js
color.js
color_picker.js
color_scheme.js
comments.js
common.js
companies.js
custom.js
date.js
easing.js
fancyboxzoom.js
files.js
flash_support.js
layout.js
locations.js
login.js
milestone_quick_window.js
milestone_templates.js
milestone_writing_activity.js
milestones.js
move_operation.js
msg.js
nubbins.js
participants.js
pending_attachments.js
people.js
privacy.js
project_templates.js
search.js
settings.js
templates.js
time.js
todo_dates.js
todo_shortcuts.js
todos.js
touch_support.js
upload_debugging.js
upload_preference.js
widget.js
writeboards.js
```

```
Envy27:javascripts david$ ls
account_invoice.js
application.js
autolabel.js
calendar_date.js
calendar_date_format.js
calendar_date_select.js
categories.js
color.js
color_picker.js
color_scheme.js
comments.js
common.js
companies.js
custom.js
date.js
easing.js
fancyzoom.js
files.js
flash_support.js
layout.js
locations.js
login.js
milestone_quick_window.js
 milestone_templates.js
 milestone_writing_activity.js
 milestones.js
 move_operation.js
 msg.js
 nubbins.js
 participants.js
 pending_attachments.js
 people.js
 privacy.js
 project_templates.js
 search.js
 settings.js
 templates.js
 time.js
 todo_dates.js
 todo_shortcuts.js
 todos.js
 touch_support.js
 upload_debugging.js
 upload_preference.js
 widget.js
 writeboards.js
```

```
Envy27:javascripts david$ ls
account_invoice.js
application.js
autolabel.js
calendar_date.js
calendar_date_format.js
calendar_date_select.js
categories.js
color.js
color_picker.js
color_scheme.js
comments.js
common.js
companies.js
custom.js
date.js
easing.js
fancyzoom.js
files.js
flash_support.js
layout.js
locations.js
login.js
milestone_quick_window.js
milestone_templates.js
milestone_writing_activity.js
milestones.js
move_operation.js
msg.js
nubbins.js
participants.js
pending_attachments.js
people.js
privacy.js
project_templates.js
search.js
settings.js
templates.js
time.js
todo_dates.js
todo_shortcuts.js
todos.js
touch_support.js
upload_debugging.js
upload_preference.js
widget.js
writeboards.js
```



>13 =



>13 =



```
class PeopleController
  def index()      end
  def show()       end
  def create()     end
  def edit()       end
  def update()     end
  def destroy()    end
end
```



```
        return $('remove_' + id).style.display != "none"
    },

    before: function(id) {
        Element.show("remove_spinner_" + id)
    },

    failure: function(request, id) {
        Element.hide("remove_spinner_" + id)
        alert("An error prevented the writeboard being deleted. Please try again.")
    },

    success: function(request, id) {
        new Effect.Fade("writeboard_" + id, {
            afterFinish: function() {
                Element.remove("writeboard_" + id)
                writeboards.hideQuotaBlock()
                writeboards.checkEmpty() }})
    }
},

privacy: {
    toggle: function(id) {
        this.visible(id) ? this.hide(id) : this.show(id)
    },

    show: function(id) {
        Element.hideIf('remove_' + id, 'show_' + id)
        new Effect.BlindDown('privacy_' + id, {duration: 0.2})
    },

    hide: function(id) {
        new Effect.BlindUp('privacy_' + id, {duration: 0.2,
            afterFinish: function() {
                Element.show('show_' + id) }})
    },

    visible: function(id) {
        return $('privacy_' + id).style.display != "none"
    },

    before: function(id) {
        Element.show("privacy_spinner_" + id)
        Element.hide("public_" + id)
    },

    failure: function(request, id) {
        Element.hide("privacy_spinner_" + id)
        Element.show("public_" + id)
        $('public_' + id).checked = !($('public_' + id).checked)
        alert("An error prevented your request from completing. Please try again.")
    }
}
```



```
<%= javascript_include_tag :all,  
  :cache => true %>
```

People do what's easy



THE SOLUTION

A green street sign with white, bold, sans-serif lettering that reads "INNOVATION". The sign is mounted on a metal pole and is set against a clear blue sky. In the bottom left corner, the top edge of a building with horizontal stripes is visible.

INNOVATION



models

```
module ApplicationHelper  
end
```

A place for everything
and everything in
its place

app/assets, lib/assets, vendor/assets



images



stylesheets



javascripts

```
config.assets.paths << "disneyland"
```

```
# GET /assets/goofy.gif  
# => disneyland/goofy.gif
```

```
# signal_id.gem
$ cat /app/assets/javascripts/signal_id/index.js
//= require ./identity_validation
//= require ./launchbar
//= require ./toggle_credentials
```

```
# basecamp
$ cat /app/assets/javascripts/application.js
//= require signal_id
```


The best way to manage your
application's dependencies

Bundler



Copying assets

```
# jquery-rails.gem
$ ls vendor/assets/javascripts
jquery-ui.js      jquery.js      jquery_ujs.js

$ rails new future
$ cat app/assets/javascripts/application.js
//= require jquery
//= require jquery_ujs
//= require_tree .
```





```
# gem 'jquery-rails'  
gem 'prototype-rails'
```



*Blueprint is a **CSS framework**, which aims to cut down on your development time. It gives you a solid foundation to build your project on top of, with an easy-to-use grid, sensible typography, useful plugins, and even a stylesheet for printing.*

THE PLEASURE

Include CoffeeScript in Gemfile



josh (author)

April 13, 2011

commit 9f09aeb8273177fc2d09
tree b9c5f15db27e0ff9e39f
parent 9333ca74b37c6c242627

Showing 1 changed file with 4 additions and 2 deletions.



railties/lib/rails/generators/app_base.rb

6



Include CoffeeScript in Gemfile



josh (author)

April 13, 2011

commit 9f09aeb8273177fc2d09

tree b9c5f15db27e0ff9e39f

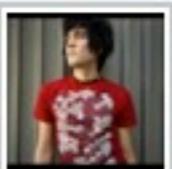
parent 9333ca74b37c6c242627

Showing 1 changed file with 4 additions and 2 deletions.

• railties/lib/rails/generators/app_base.rb

6 ▾





visionmedia added a note to 9f09aeb

@perfectline I agree.

Coffeescript is a *toy*, it is nothing more than an aggregation of features from a few languages, and in fact complicates an extremely simplistic language. If I wrote a layer on top of Ruby, took out the **end** keywords etc, it would be a huuuuuugely newbish thing to do, however it seems that this is "the thing to do" with JavaScript. So lame



latortuga added a note to 9f09aeb

This is not a sane default by any stretch of the imagination. Just because 37signals built a webserver with coffeescript does not mean everyone wants it to be the default. There's something to be said for leading people in the right direction a la the switch to bundler, and it's another thing entirely to pick a ridiculous default that nobody uses. Thanks but no thanks.



augustl added a note to 9f09aeb

I smell a fork.

(I wish I could be constructive, but CofffeScript makes me nerdrage.)

RAILS DEFAULT CHANGES

A black and white line drawing of a dog, possibly a Shih Tzu or Lhasa Apso, sitting and looking slightly to the left. The dog is surrounded by stylized, jagged flames in shades of red, orange, and yellow, suggesting it is on fire.

**FREAK THE FUCK
OUT**

memegenerator.net

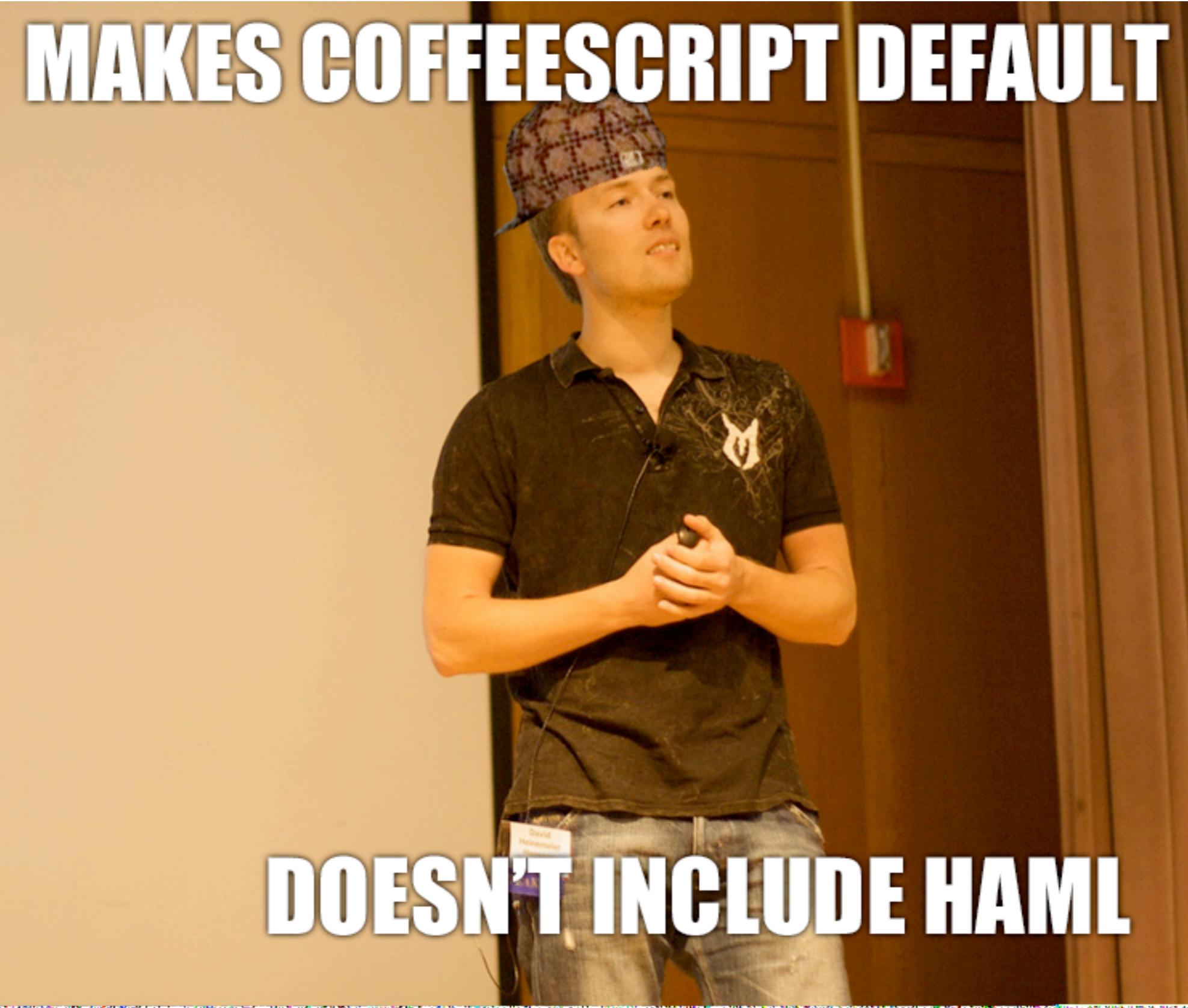
COFFEESCRIPT BY DEFAULT ON RAILS



NOT FUNNY DHH

memagenerator.net

MAKES COFFEESCRIPT DEFAULT



DOESN'T INCLUDE HAML

**“CoffeeScript is well done and
more convenient to use
than JavaScript”**

**“CoffeeScript is well done and
more convenient to use
than JavaScript”**

- Brendan Eich, inventor of JavaScript

**“We should continue to grow
the language, keeping support
for old forms while adding new
forms to help users themselves
grow the language”**

Active Support

```
$(document).bind 'pageUpdated', ->
  $('li[data-subscriber-id]').each ->
    if $(this).attr('data-subscriber-id') is $.cookie('user_id')
      $(this).hide()
```

```
$(document).bind 'pageUpdated' , ->
  $('li[data-subscriber-id]').each ->
    if $(this).attr('data-subscriber-id') is $.cookie('user_id')
      $(this).hide()

$(document).bind('pageUpdated', function() {
  return $('li[data-subscriber-id]').each(function() {
    if ($(this).attr('data-subscriber-id') === $.cookie('user_id')) {
      return $(this).hide();
    }
  });
});
```

```
for filename in list
  do (filename) ->
    fs.readFile filename, (err, contents) ->
      compile filename, contents.toString()
```

```
var filename, _fn, _i, _len;
_fn = function(filename) {
  return fs.readFile(filename, function(err, contents) {
    return compile(filename, contents.toString());
  });
};
for (_i = 0, _len = list.length; _i < _len; _i++) {
  filename = list[_i];
  _fn(filename);
}
```

launch() if ignition is on

volume = 10 if band isnt SpinalTap

letTheWildRumpusBegin() unless answer is no

if car.speed < limit then accelerate()

winner = yes if pick in [47, 92, 13]

```
class Animal
constructor: (@name) ->
move: (meters) ->
  alert @name + " moved " + meters + "m."
```



2011

MAY 16–19

BALTIMORE, MARYLAND

END-TO-END COFFEESCRIPT

10:45am Wednesday, 05/18/2011

General

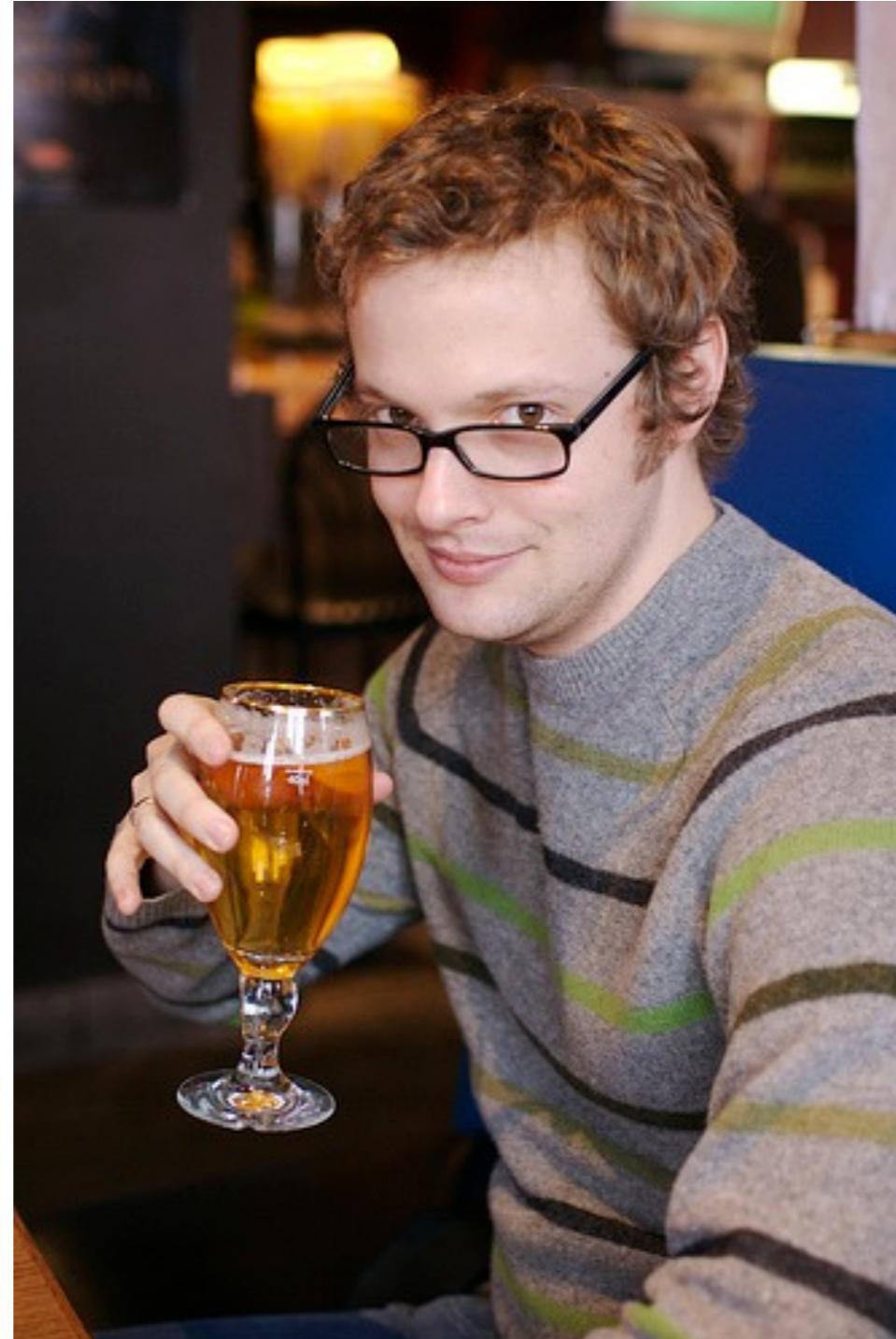
Location: Room 347

- Presented by Trevor Burnham



Sass.

{style with attitude}

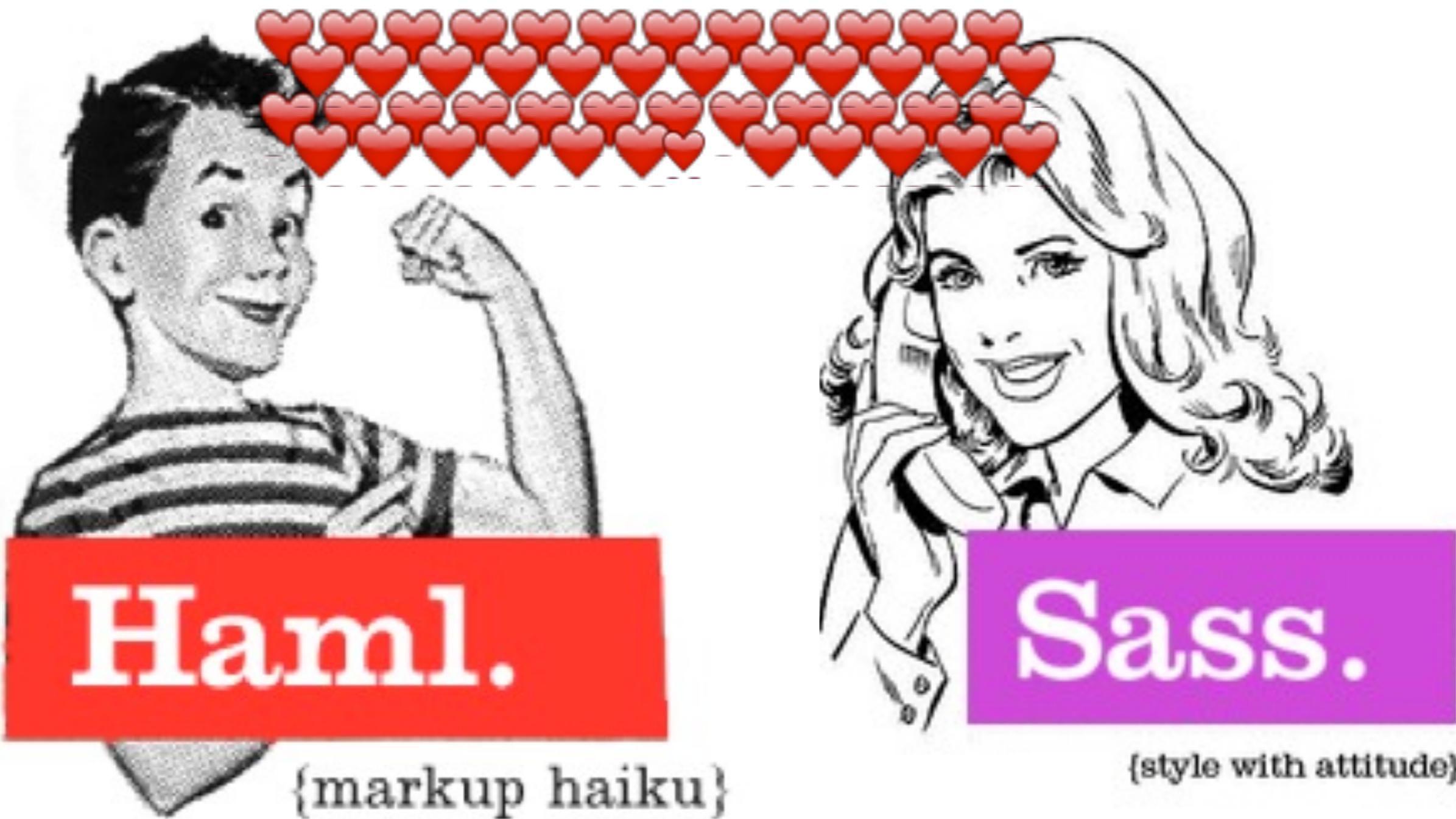


Hampton Catlin



Haml.

{markup haiku}



Haml.

{markup haiku}

Sass.

{style with attitude}



@rjs

Ryan Singer

Requiring Haml to use SCSS feels like
inviting somebody you don't like over to
your house because they have a cute friend.



@rjs

Ryan Singer

Requiring Haml to use SCSS feels like
inviting somebody you don't like over to
your house because they have a cute friend.



@rjs

Ryan Singer

Requiring Haml to use SCSS feels like inviting somebody you don't like over to your house because they have a cute friend.



@rjs

Ryan Singer

I hope the haml topic didn't overshadow the important points of the talk. Thanks for the feedback so far. #wcr10



Nesting

.scss .sass

```
table.h1 {  
  margin: 2em 0;  
  td.ln {  
    text-align: right;  
  }  
}  
  
li {  
  font: {  
    family: serif;  
    weight: bold;  
    size: 1.2em;  
  }  
}
```

```
/* CSS */  
  
table.h1 {  
  margin: 2em 0;  
}  
table.h1 td.ln {  
  text-align: right;  
}  
  
li {  
  font-family: serif;  
  font-weight: bold;  
  font-size: 1.2em;  
}
```



Variables

.scss .sass

```
$blue: #3bbfce;  
$margin: 16px;  
  
.content-navigation {  
    border-color: $blue;  
    color:  
        darken($blue, 9%);  
}  
  
.border {  
    padding: $margin / 2;  
    margin: $margin / 2;  
    border-color: $blue;  
}
```

```
/* CSS */  
  
.content-navigation {  
    border-color: #3bbfce;  
    color: #2b9eab;  
}  
  
.border {  
    padding: 8px;  
    margin: 8px;  
    border-color: #3bbfce;  
}
```



2011

MAY 16–19

BALTIMORE, MARYLAND

SASS: THE FUTURE OF STYLESHEETS

10:45am Wednesday, 05/18/2011

General

Location: Ballroom II

- Presented by Chris Eppstein

```
$ rails g resource post  
invoke assets  
create app/assets/javascripts/posts.js.coffee  
create app/assets/stylesheets/posts.css.scss
```

**app/assets/stylesheets/
posts.css.scss.erb**

app/assets/stylesheets/ posts.css.scss.erb

```
a.delete {  
  width: 10px;  
  background: url(<%= asset_path "trash.gif" %>);  
}
```



The dynamic stylesheet language.

Write some LESS:

```
.box-shadow (@x: 0, @y: 0, @blur: 1px, @alpha) {  
  @val: @x @y @blur rgba(0, 0, 0, @alpha);  
  
  box-shadow:          @val;  
  -webkit-box-shadow: @val;  
  -moz-box-shadow:    @val;  
}  
.box { @base: #f938ab;  
  color:      saturate(@base, 5%);  
  border-color: lighten(@base, 30%);  
  div { .box-shadow(0, 0, 5px, 0.4) }  
}
```







```
# Asset template engines
gem 'sass'
gem 'coffee-script'
```

```
# Asset template engines
# gem 'sass'
# gem 'coffee-script'
```

THE SCALES





```
$ rake assets:precompile  
# public/assets/application.js  
# public/assets/application.css  
# public/assets/*.gif|jpg|png
```

```
$ ls public/assets/  
application-109dccf4633654a1ed7232bf4faf1e23.css  
application-2e8ef48961e28640c5b6e4e7c0388d16.js
```

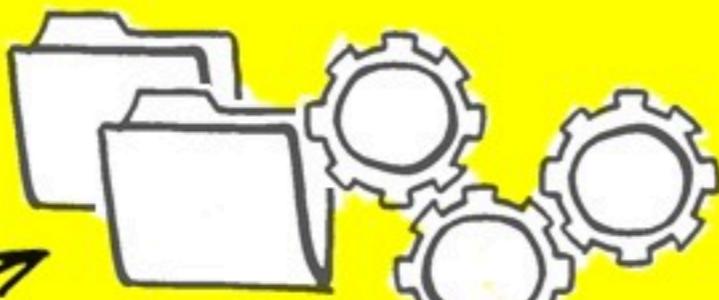
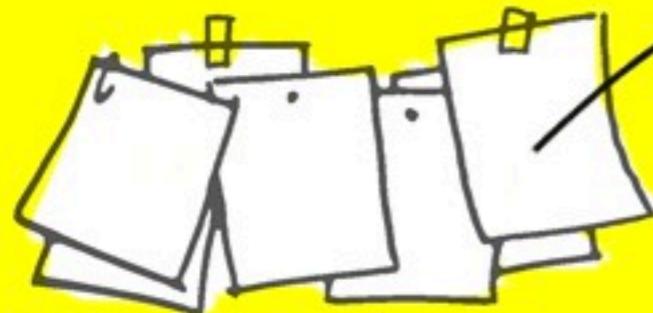
```
<%= javascript_include_tag "application" %>
<script
src="/assets/application-2e8ef48961e28640c5b6e4e7c0388d16.js"
type="text/javascript"></script>
```

- ✓ File-based, not params-based
- ✓ MD5, not timestamp

```
# Compress both stylesheets and JavaScripts
config.assets.js_compressor = :uglifier
config.assets.css_compressor = :scss
```

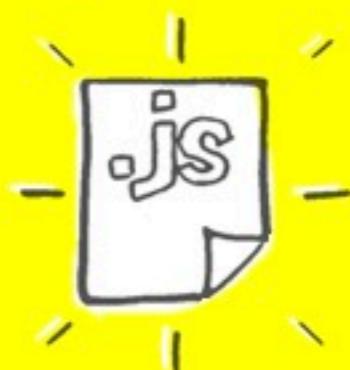
SPROCKETS v2

helps you turn
messy JavaScript



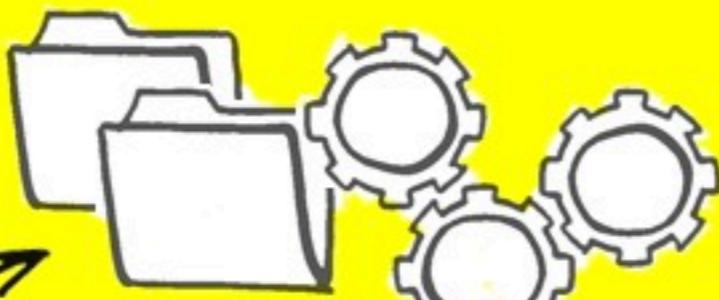
into clean modules
for development

and a single file
for deployment.



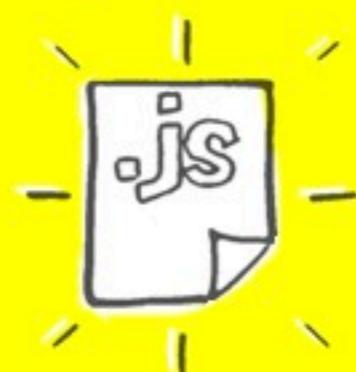
SPROCKETS v2

helps you turn
messy JavaScript



into clean modules
for development

and a single file
for deployment.



***But when can I get my
hands on this amazing
technology?!?***







Rails 3.1:
Release Candidate
THIS WEEK!



OUR

POST-MODERN, HYBRID, Javascript *FUTURE*



1000 projects in your pocket. Basecamp is now on your mobile phone.

No apps required. Simply visit basecamphq.com
on your phone's browser, and you're good to go!



Cinco

Backend
Rails
MVC
API



Frontend
JavaScript
MVC
UI

nodeJS

```
var http = require('http');
http.createServer(function (req, res) {
  res.writeHead(200, {'Content-Type': 'text/plain'});
  res.end('Hello World\n');
}).listen(1337, "127.0.0.1");
console.log('Server running at http://127.0.0.1:1337/');
```

All JavaScript
All the time

“A Modernist has to decide whether this is true OR that is true. The Modernist believes in OR more than AND. Postmodernists believe in AND more than OR.”

- Larry Wall

Things Are Going To Change Testing A Company

[Overview](#) | [Messages](#) | **To-Dos** | [Milestones](#) | [Writeboards](#) | [Time](#) | [Files](#)[People & Permissions](#) | [Search](#) |

To-do lists

Test weird IE bug

- Test one 4 May 2011
- Test two 4 May 2011
- Test three 4 May 2011
- Test four 4 May 2011
- Test five 6 May 2011

[Add an item](#)

Test refresh

- Testing some HTML

[Add an item](#) Feb 14 An item 1 Feb 2 Another item 2

Test

- New 2
- testing from pre

[Add an item](#)[Reorder lists](#)[+ New to-do list](#)

Show to-dos assigned to

Anyone

Show to-dos that are due

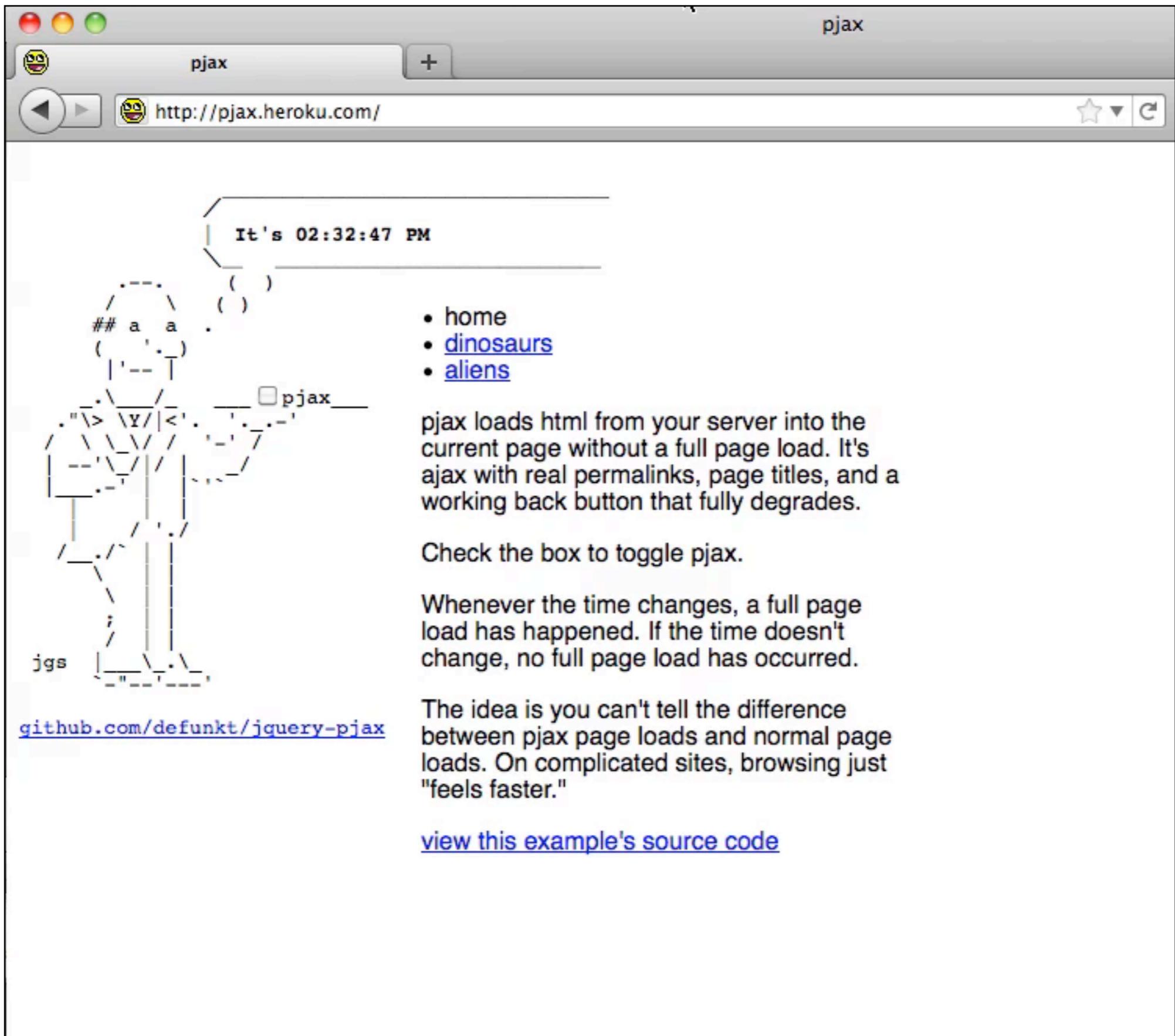
Anytime

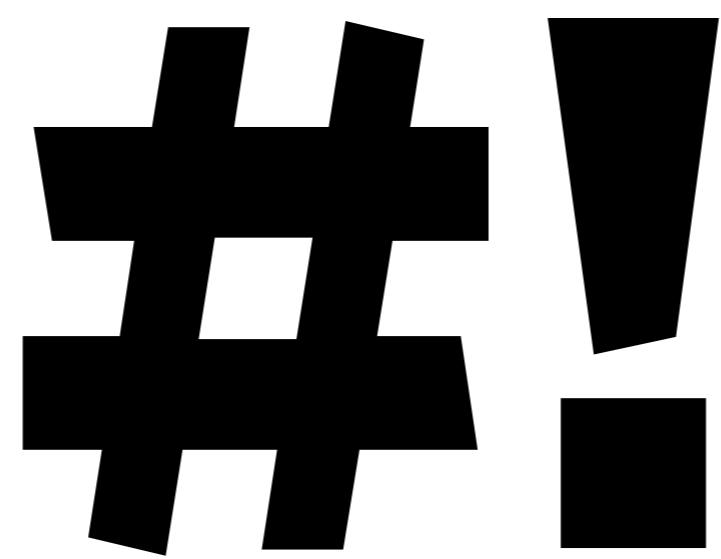
Current to-do lists

[Test weird IE bug](#)[Test refresh](#)[Test](#)[Test list](#)[Test on Palm Pre](#)[That special to-do list](#)[Reorder test #1a](#)[Reorder test #3](#)[Reorder test #4](#)

Completed to-do lists

[Test](#)[Testing in IE6](#)







Things Are Going To Change Testing A Company

[Overview](#) | [Messages](#) | **To-Dos** | [Milestones](#) | [Writeboards](#) | [Time](#) | [Files](#)[People & Permissions](#) | [Search](#) |

To-do lists

Test weird IE bug

- Test one 4 May 2011
- Test two 4 May 2011
- Test three 4 May 2011
- Test four 4 May 2011
- Test five 6 May 2011

[Add an item](#)

Test refresh

- Testing some HTML

[Add an item](#) Feb 14 An item 1 Feb 2 Another item 2

Test

- New 2
- testing from pre

[Add an item](#)[Reorder lists](#)[+ New to-do list](#)

Show to-dos assigned to

Anyone

Show to-dos that are due

Anytime

Current to-do lists

[Test weird IE bug](#)[Test refresh](#)[Test](#)[Test list](#)[Test on Palm Pre](#)[That special to-do list](#)[Reorder test #1a](#)[Reorder test #3](#)[Reorder test #4](#)

Completed to-do lists

[Test](#)[Testing in IE6](#)

Backbone.js



Backbone supplies structure to JavaScript-heavy applications by providing **models** with key-value binding and custom events, **collections** with a rich API of enumerable functions, **views** with declarative event handling, and connects it all to your existing application over a RESTful JSON interface.

```
<% if @projects.length: %>
  <% for project in @projects: %>
    <a href="<%= project.url %>"><%= project.name %></a>
    <p><%= project.description %></p>
  <% end %>
<% else: %>
  No projects
<% end %>
```

```
<%= form_for Comment.new, remote: 'true' do |form| %>

# Controller
def create
  @comment = @project.comments.create params[:comment]
end

# View/response
$('comments.new').before('<%=j render @comment %>');
$('comments.new textarea').val('');
```

the ASSET PIPELINE AND OUR POST-MODERN, HYBRID, Javascript Future



@rohdesign