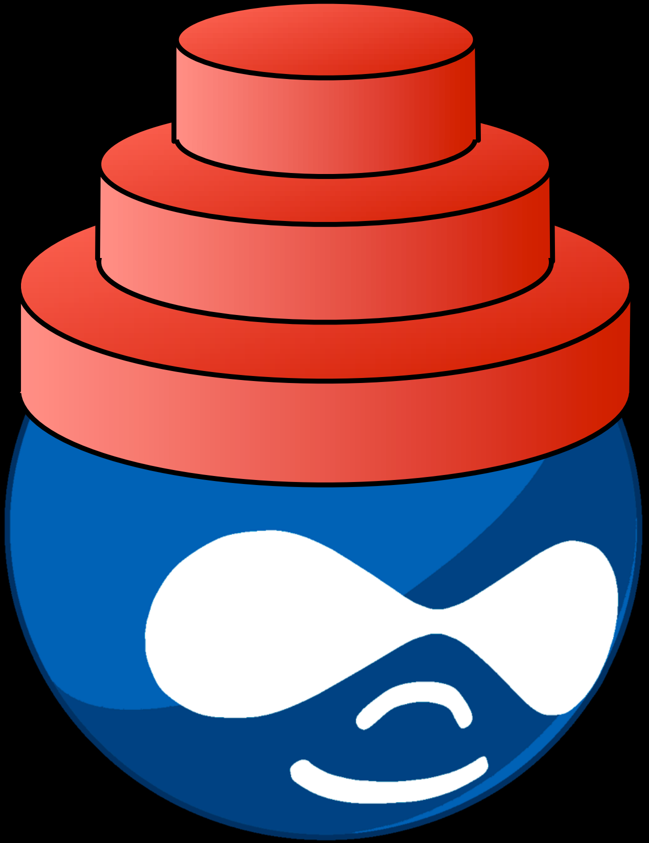

jQuery and Drupal

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JavaScript

You probably hate it.

It has nothing to do with Java.

“It’s buggy and broken”

- Browsers do suck
- Implementations of CSS, events, ... broken
  Language itself is pretty reliable
- Orders of magnitude better than in the 90’s
- Blame IE6

“Used only for annoying people”

- Usability is a problem with or without JS
- Browsers prevent worst offenses
- Use for good, not for evil

“Only use it because you have to”

- The most successful scripting environment?

  Every browser, many OSes (Windows, Dashboard), XUL (Mozilla), Flash (ActionScript), server-side (ASP, Rhino), ...

- Great for UI-coding

Flexible & Powerful

- Imperative, functional and OO
- Lexical scope and closures
  + Anonymous functions
- Everything is an object (including functions)
- Prototype-based inheritance

Learn JavaScript

You know you want to.

Essentials

```
var myInt = 1;

var myString = “foobar”;

var myArray = [ 1, ‘two’, “three” ];
assert(myArray[0] == 1);

var myHash = { foo: 1, ‘bar’: ‘two’ };
assert(myHash.foo == 1);
assert(myHash[‘foo’] == 1);
```

if(), switch(), for(), ... work like you expect them to.

Function = Primitive type

```
function myFunction() {
  ...
};

var myFunction = function () {
  ...
};

var sameFunction = myFunction;
sameFunction();

(function () { ... })();
```

Hash = Object

```
var myObject = {
  foo: 1,
  bar: ‘two’,
  spam: function () { this.foo++; }
};

myObject.spam = function () {
  this.foo += 2;
};

myObject.spam();
```

Function =
Object Constructor

```
var myClass = function (doodad) {
  this.doodad = doodad;
  this.spam = function () { ... };
  return this;
};



var myObject = new myClass(“boing”);
myObject.spam();
```

Function = Object Constructor

```
var myClass = function (doodad) {
  this.doodad = doodad;

  return this;
};

myClass.prototype.spam = function () {...};

var myObject = new myClass(“boing”);
myObject.spam();
```

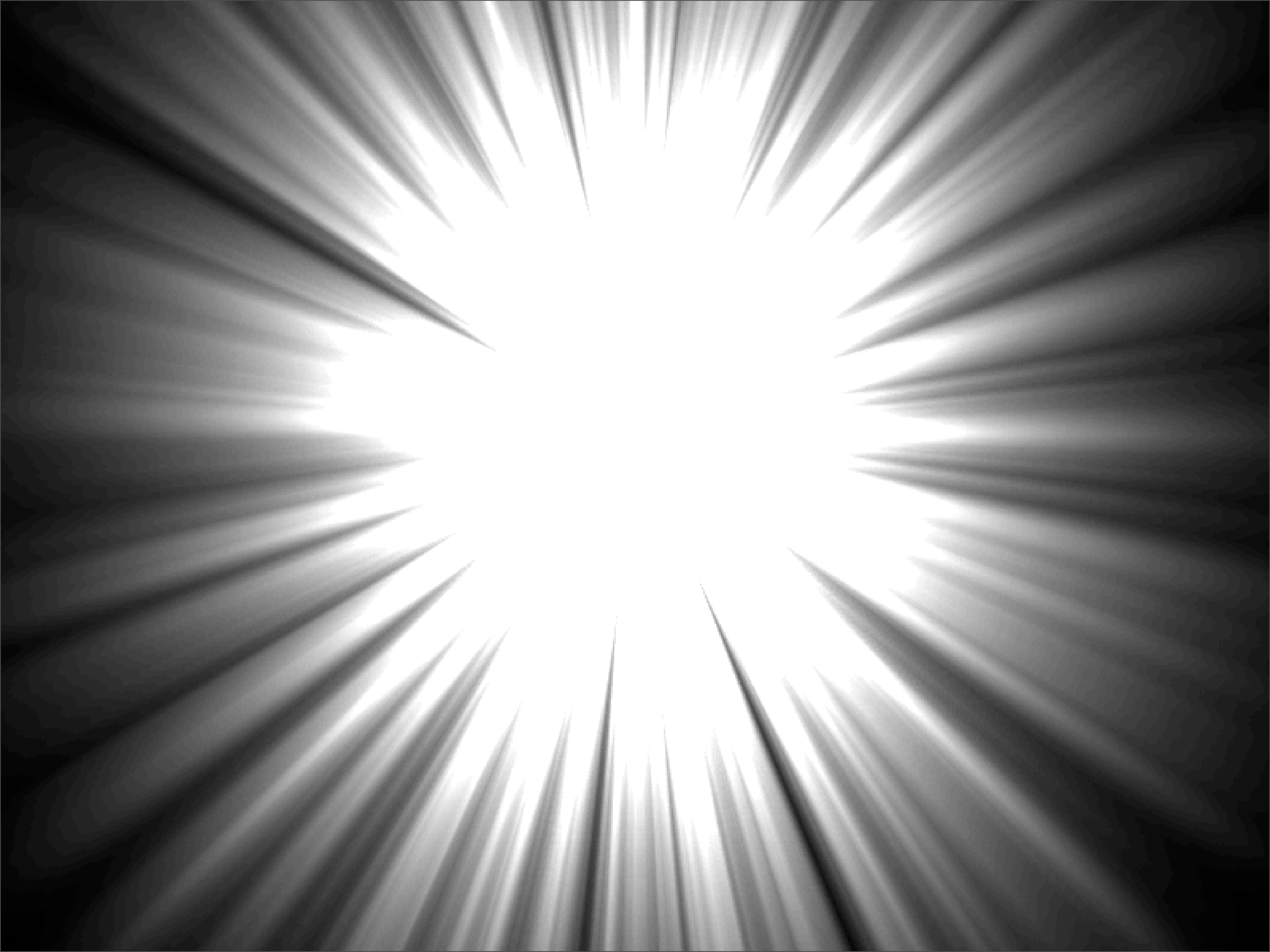
Function = Closure

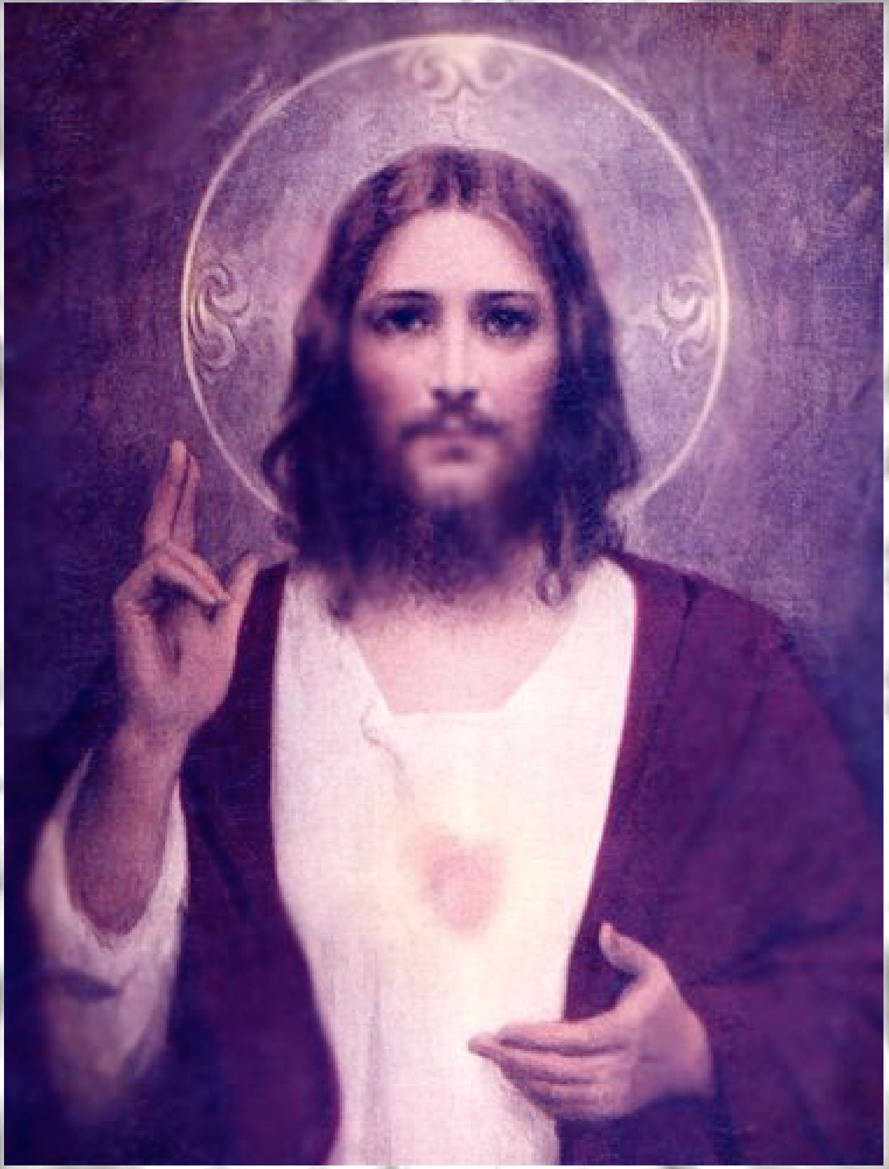
```
function myFunction() {
   var counter = 0;

   function closureFunction() {
      counter++;
      alert(counter);
   };

   closureFunction(); // shows ‘1’
   closureFunction(); // shows ‘2’
};
```

Function = Closure

```
function myFunction() {
   var counter = 0;

   function closureFunction() {
      counter++;
      alert(counter);
   };

   return closureFunction;
};

var closure = myFunction();
closure(); // shows ‘1’
closure(); // shows ‘2’
```

See the light





JavaScript is Cool.

Browser Scripting

Make IE your bitch.

Document Object Model (DOM)

- Representation of the HTML document
- DOM Node = Element or <Tag></Tag>
- Root ‘document’ object

Document Object Model (DOM)

- Navigate or query the document tree:

```
var node = document.getElementById(‘my-element’);
var child = node.nextSibling.firstChild;
```

- Alter element properties and styles:

```
node.setAttribute(‘href’) = ‘http://drupal.org/’;
node.style.backgroundColor = ‘red’;
alert(node.getAttribute(‘title’));
```

DOM Events

- Respond to user interaction: change, click, keydown, mousemove, ...
- Assign an event handler for a particular DOM Node:

```
node.onclick = function () {
  this.style.color = ‘green’;
}
```

‘AJAX’

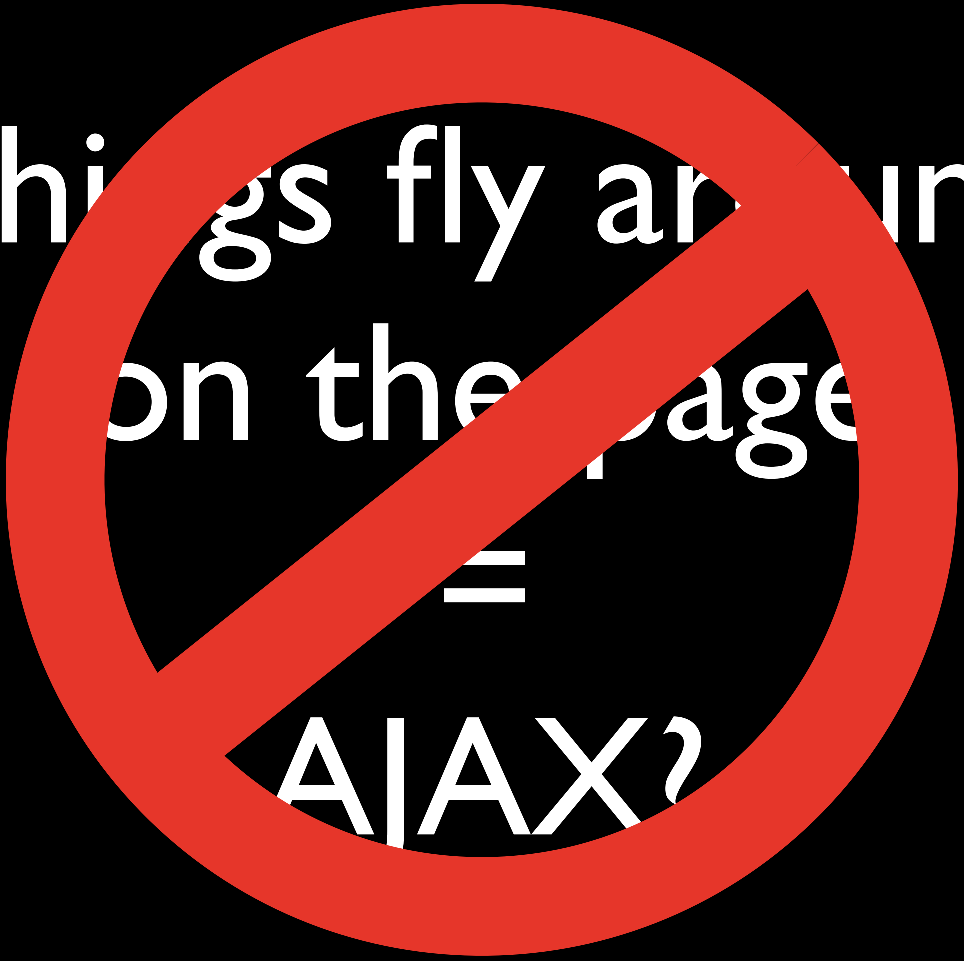
- Make HTTP GET and POST requests from within JS
    - XML
    - HTML (‘AHAH’)
    - JSON
    - JavaScript
    - Normal POST data

Things fly around

on the page

=

AJAX?



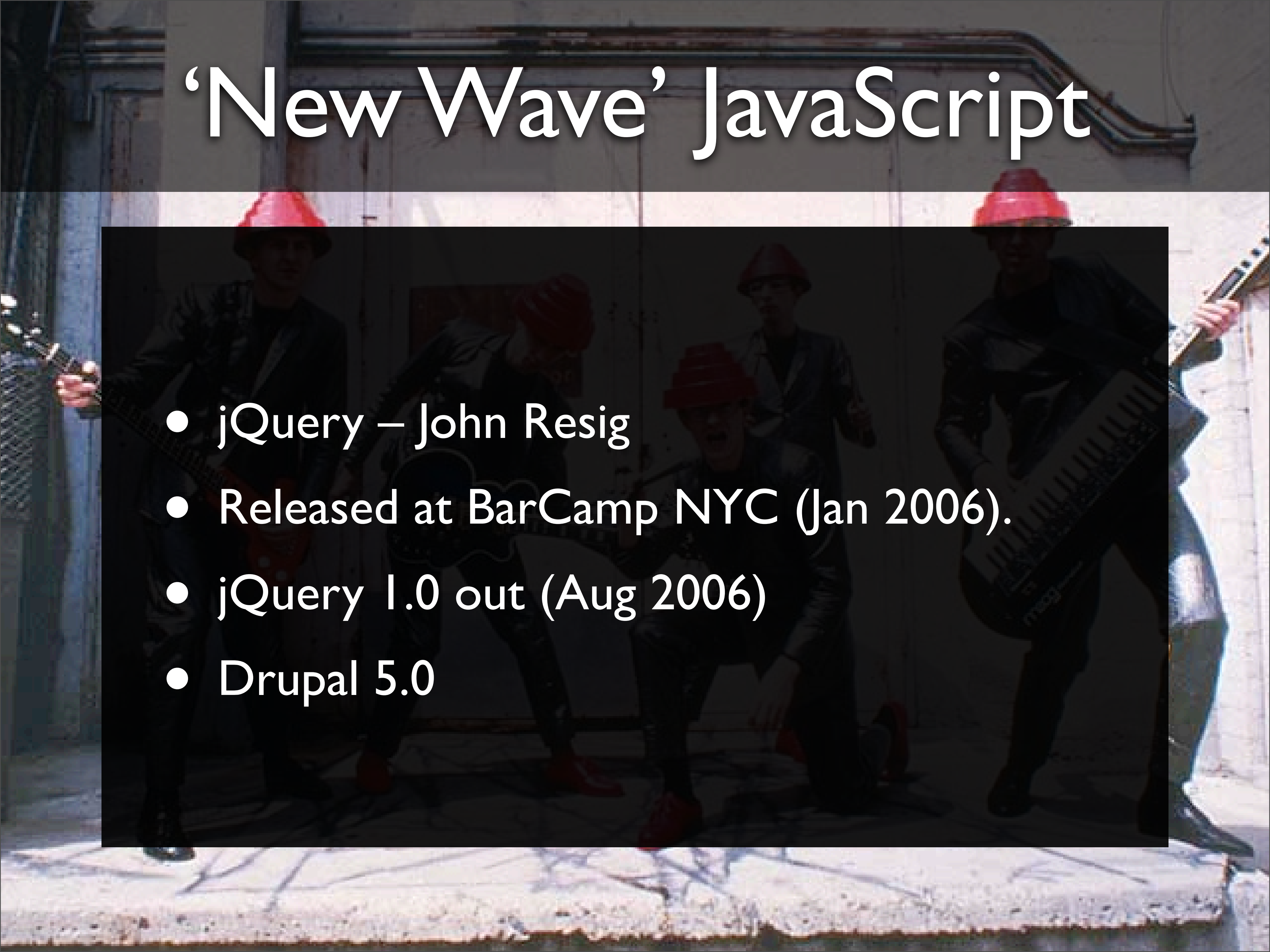
Wait, wasn’t this talk about jQuery?

Problems?

- DOM tree is clunky to use
- No multiple handlers per event
- Browser incompatibilities
- No high-level functions

= JavaScript libraries to fill the gap

‘New Wave’ JavaScript



- jQuery – John Resig
- Released at BarCamp NYC (Jan 2006).
- jQuery 1.0 out (Aug 2006)
- Drupal 5.0

jQuery

- Doesn’t mess with the language (~~Prototype~~)
- Doesn’t try to be Python (~~Mochikit~~)
- Only essentials: 15KB (~~Scriptaculous~~, ~~Dojo~~)
- More than cosmetic effects (~~Moo.fx~~)
- Makes common tasks easy

Before – Plain DOM

```
var fieldsets = document.getElementsByTagName('fieldset');
var legend, fieldset;
for (var i = 0; fieldset = fieldsets[i]; i++) {
  if (!hasClass(fieldset, 'collapsible')) {
    continue;
  }
  legend = fieldset.getElementsByTagName('legend');
  if (legend.length == 0) {
    continue;
  }
  legend = legend[0];
  ...
}
```

After – With jQuery

```
$('fieldset.collapsible legend').each(function () {...});
```

jQueries

- Use CSS3/XPath selectors to find elements

```
$(‘#my-element’)
$(‘fieldset.collapsible > legend’)
$(‘table.prices tr:last-of-type td’)
```

- Apply operations to all selected elements

```
$(‘p:hidden’).addClass(‘emphasis’);
$(‘p:hidden’).slideDown(‘fast’);
```

It Gets Better

- jQuery Methods are chainable. Query object is stateful:

```
$(‘p’).addClass(‘big’).wrap(‘<span></span>’)
.filter(‘.tagged’).css(‘background’, ‘red’).end()
.filter(‘:hidden’).slideDown(‘fast’).end();
```

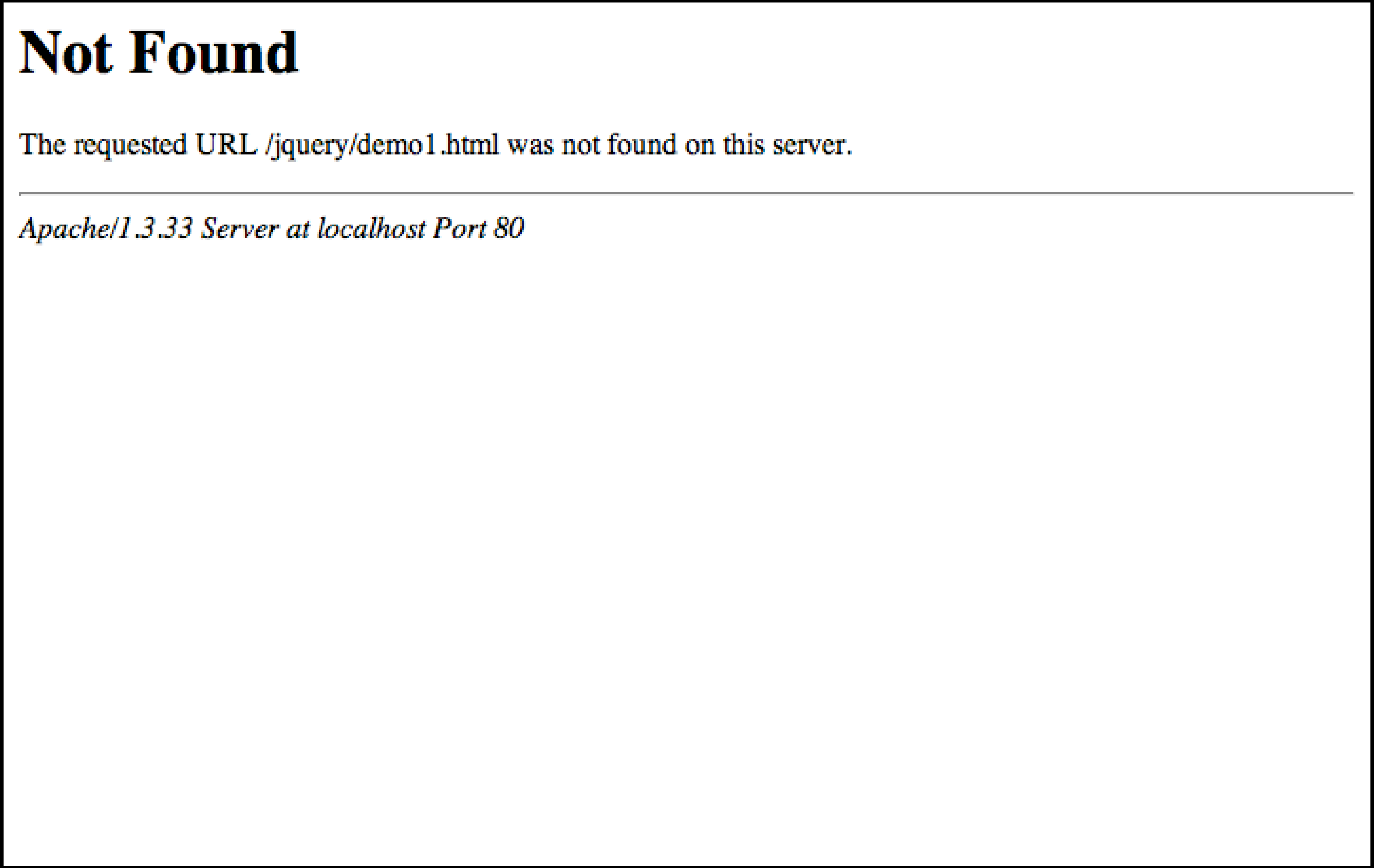
- Sensible event handling

```
$(‘span.info’)
  .mouseover(function () { ... })
  .mouseout(function () { ... });
```

“Do What I Mean”

```
$('<div id="throbber"><img src="indicator.gif"
alt=""></div>')
  .hide()
  .ajaxStart(function(){
    $(this).show();
  })
  .ajaxStop(function(){
    $(this).hide();
  })
  .appendTo("#someContainer");
```

Demo



Not Found

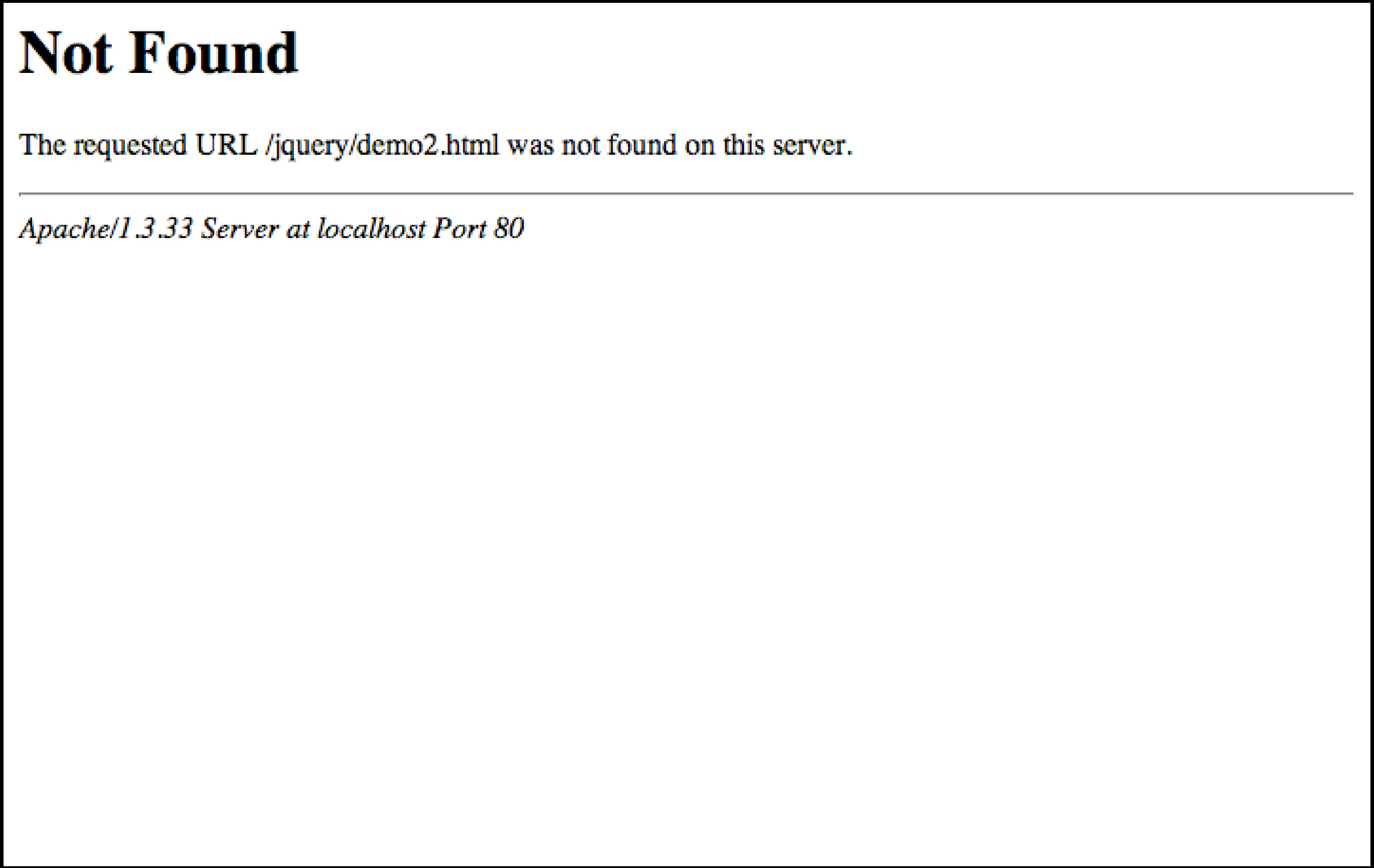
The requested URL /jquery/demo1.html was not found on this server.

Apache/1.3.33 Server at localhost Port 80

Plug-ins

- Already more than 60
- New (chainable) methods
- Additional Effects (Pause, Ease)
- New Abilities (Interface, JSON, Forms)
- Widgets (Thickbox, Farbtastic, ImagePan)

Demo



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Apache/1.3.33 Server at localhost Port 80

jQuery in Drupal

What changes in 5.0?

JS Usage in Drupal

- Lots of server-side logic
  Localization, Formatting, Theming, ...
- Stick to small, self-contained JS features
- No complete client-side applications

Still: demand for good JS library

Server-Side

- Nothing really changes
- Menu callbacks to answer AJAX calls
- Widgets integrated into Form API
- Just a .js file – unobtrusive JavaScript

Client-Side

- Drupal methods are namespaced
- jQuery is included
- Core widgets rewritten to use jQuery
- Less code!

Attractive Platform

- Satisfies demand for ‘bells and whistles’
- Solid base for core
- Dedicated jQuery community
- Huge array of plug-ins
- JS wizardry not needed

Caveats

- Must be accessible
- Must degrade
- Especially for search engines
- Slow if used badly

Questions?

jQuery.com