

# JavaScript Libraries

Future of Web Design  
NYC08

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# Roseland Ballroom

You can ...



# Roseland Ballroom

You can ...

Be like Glenn

# Why Use JavaScript?

- Keep HTML squeaky clean
- User Interaction & immediate feedback
- Server interaction without page refresh

# Why Not Use Flash?

- Flash is great!
- You *should* use it.
- But it's not the answer to every question, or the solution to every problem

# Why Use a JavaScript Library?

- Crazy fast development
- Cross-browser solutions without the mess
- Leverage what you already know about HTML & CSS
- Better CSS support than CSS  
(cf. [www.quirksmode.org](http://www.quirksmode.org))

# Why Use a JavaScript Library?

- Animation, movement, effects with ease
- Painlessly Unobtrusive
- Encourages Progressive Enhancement

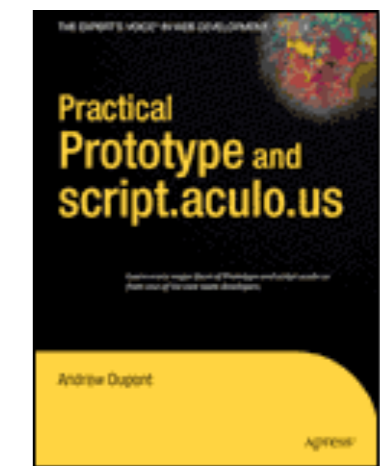
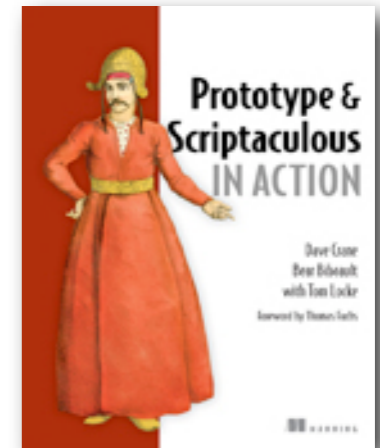
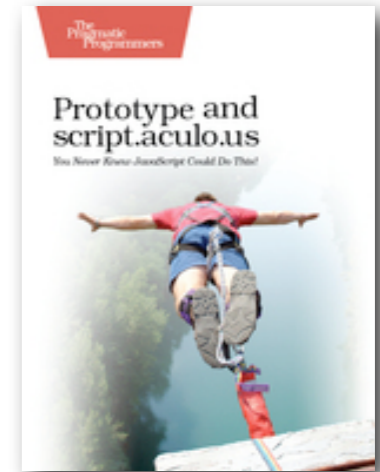
# What's Available?

## The Big Five:

- Prototype / Scriptaculous
- Dojo Toolkit
- Mootools
- YUI :Yahoo! User Interface
- jQuery

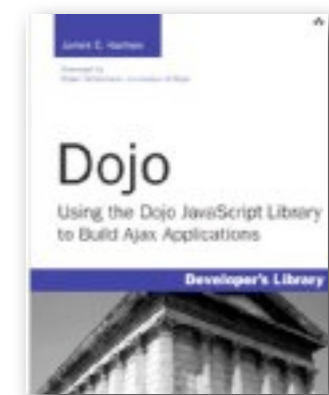
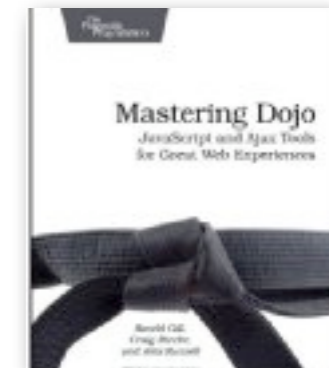
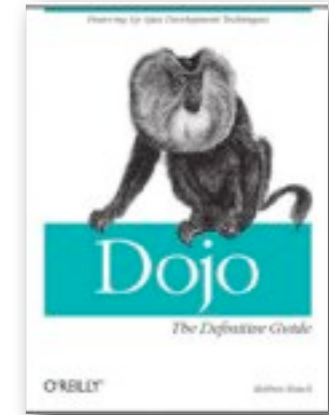
# Prototype

- [www.prototypejs.org](http://www.prototypejs.org)
- [script.aculo.us](http://script.aculo.us)
- Extensions: [scripteka.com](http://scripteka.com)

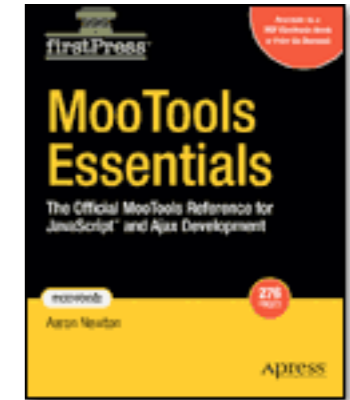


# Dojo

- [www.dojotoolkit.org](http://www.dojotoolkit.org)
- Dojo Core
- Dijit
- DojoX



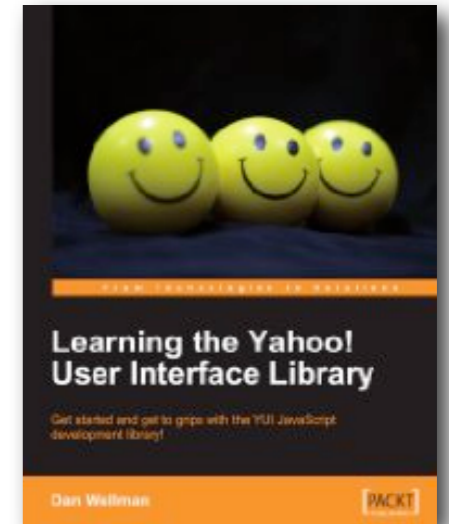
# Mootools



- [mootools.net](http://mootools.net)
- [mootorial.com](http://mootorial.com)
- Extensions:
  - [clientcide.com](http://clientcide.com)
  - [mooforum.net](http://mooforum.net)
  - [esteak.net](http://esteak.net)

# Yahoo! User Interface

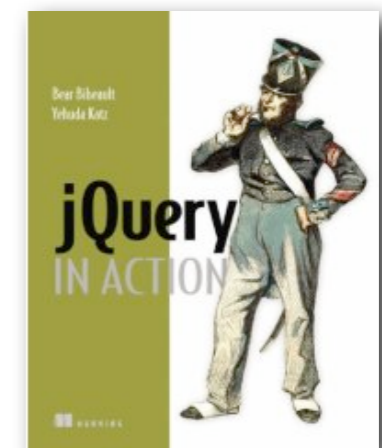
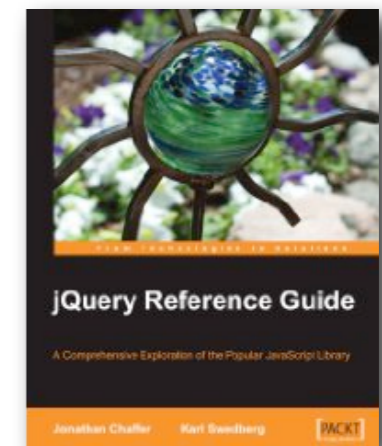
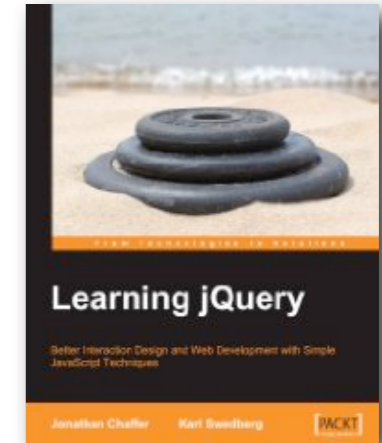
## YUI



- [developer.yahoo.com/yui](http://developer.yahoo.com/yui)

# jQuery

- [jquery.com](http://jquery.com)
- Plugins: [plugins.jquery.com](http://plugins.jquery.com)
- jQuery UI: [ui.jquery.com](http://ui.jquery.com)



# What's Available?

## Others:

- Mochikit
- Adobe Spry
- SproutCore
- Cappuccino
- ExtJS
- DOMAssistant
- base2
- DED|Chain
- JavaScriptMVC
- qooxdoo
- midori
- June
- UIZE
- SimpleJS
- fleegix.js
- Foundation
- GWT
- and many more!

# What Can They Do For Me?

- Find elements on a web page.
- Do something with them.

# What Can They Do For Me?

- Insert, copy, move, remove elements.
- Change their attributes, their appearance.
- Animate them – with slides, fades, scales, and all manner of movement.

# What Can They Do For Me?

- Incorporate “widgets” (date pickers, dialogs, data grids, sliders, etc.)
- Send information to the server.
- And receive information from the server.
- And do stuff with that information.
- Help with more “programmery” things.

# What Do they look like?

- A lot more familiar than you might expect.

# A lot like CSS

<http://www.w3.org/TR/css3-selectors/>

- element `{ }` div: `<div>`
- #id `{ }` #myid: `<h2 id="myid">`
- .class `{ }` .myclass: `<p class="myclass">`
- selector1, selector2 `{ }` p, a: `<p></p><a></a>`
- ancestor descendant `{ }` p span: `<p><span><span>`
- parent > child `{ }` p > span: `<p><span><span>`
- :nth-child() `{ }` li:nth-child(2): `<ul><li><li>`

# A lot like CSS

<http://docs.jquery.com/Selectors>

- `$( 'element' )`      `div: <div>`
- `$( '#id' )`      `#myid: <h2 id="myid">`
- `$( '.class' )`      `.myclass: <p class="myclass">`
- `$( 'selector1, selector2' )`      `p, a: <p></p><a></a>`
- `$( 'ancestor descendant' )`      `p span: <p><span><span>`
- `$( 'parent > child' )`      `p > span: <p><span><span>`
- `$( ':nth-child()' )`      `li:nth-child(2): <ul><li><li>`

# A lot like real words

```
$( '#myid span' )  
  .addClass( 'newclass' )  
  .parents( 'div:first' )  
  .fadeIn( 'slow' )  
  .find( 'a' )  
  .click( function() {  
    confirm( 'You really wanna go there?' );  
  } );
```

# A lot like real words

```
$('#policy-cta a')  
.media({  
  width: 500,  
  height: 300,  
  flashVars: {  
    autostart: 'true',  
    controlbar: 'none',  
    flvPath: '/assets/videos/intro.flv'  
  }  
});
```

# Basic Example I

## Table row striping

- **jQuery**

```
$('#tr:nth-child(odd)').addClass('alt');
```

- **Mootools**

```
$$('tr:odd').addClass('alt');
```

- **Dojo**

```
dojo.query('tr:nth-child(odd)').addClass('alt');
```

# Basic Example 2

## Hover

- Dojo

```
dojo.query('tr')
.onmouseenter(function(e) {
  e.target.className += ' highlight';
})
.onmouseleave(function(e) {
  e.target.className = e.target.className
    .replace(/ highlight/, "");
});
```

# Basic Example 2

## Hover

- Mootools

```
$$('tr').addEvents({  
  mouseover: function() {  
    this.addClass('highlight');  
  },  
  mouseout: function() {  
    this.removeClass('highlight');  
  }  
});
```

# Basic Example 2

## Hover

- jQuery

```
$('#tr')  
.mouseover(function() {  
    $(this).addClass('highlight');  
})  
.mouseout( function() {  
    $(this).removeClass('highlight');  
});
```

# Basic Example 2

## Hover

- jQuery

```
$('#tr').hover(function() {  
    $(this).addClass('highlight');  
}, function() {  
    $(this).removeClass('highlight');  
});
```

# Let's See It

- Demo

# How Do I Choose?

- **Library Maturity** (alpha, beta, number of releases? Unit tests?)
- **Documentation** (official, unofficial, online, offline, books?)
- **Community** (Forums, Google groups, blogs, IRC, Twitter? Tone, helpfulness, responsiveness?)
- **Project requirements** (web site or application? ajax, effects, events?)
- **Performance** (benchmarks?)

# How Do I Choose?

- **Server-side Framework** (Does it come bundled with a JS library?)
- **Extensibility** (Plugins, widgets, components available and easy to find? Create your own easily?)
- **Style** (What does the code look like? Is it easy to figure out what's going on? Does it look familiar at all?)
- **Commitment to Unobtrusive JavaScript and Accessibility**
- **Cost and Licensing** (fee? open source? MIT, GNU, GPL, LGPL, BSD, etc.)

# How Do I Get Them?

- Go to their websites

The screenshot shows the Yahoo! Developer Network website. At the top, there's a navigation bar with "Developer Network Home" and "Help" links, and a search box. Below that is the "YAHOO! DEVELOPER NETWORK" logo. The main heading is "The Yahoo! User Interface Library (YUI)".

**Left Sidebar:**

- Yahoo! UI Library
- Home
- YUI Blog
- YUI Discussion Forum
- YUI on Sourceforge
- API Documentation
- YUI Examples Gallery
- Community & Contributions
- Powered by YUI
- YUI Theater
- YUI License
- YUI 3.x Preview
- YUI Articles
  - YUI FAQ
  - Bug Reports/Feature Requests
  - Building Custom Widgets
  - Configuration and Hosting
  - Graded Browser Support
  - Skinning YUI
  - Security Best Practices
  - YUI Roadmap
- YUI Components
  - Animation
  - AutoComplete
  - Browser History Manager
  - Button
  - Calendar
  - Carousel BETA

**Main Content Area:**

### The Yahoo! User Interface Library (YUI)

The Yahoo! User Interface (YUI) Library is a set of utilities and controls, written in JavaScript, for building richly interactive web applications using techniques such as DOM scripting, DHTML and AJAX. The YUI Library also includes several core CSS resources. All components in the YUI Library have been released as open source under a [BSD license](#) and are free for all uses.

**Download YUI** Download YUI version 2.6.0, including [full API documentation](#) and [more than 290 functional examples](#) from Sourceforge.

A preview release of YUI's next-generation 3.x codeline is also available. YUI 3.x is not production-ready, but we're looking forward to your feedback [on the YUI 3 forum](#) as we prepare this new codeline for a 2009 GA release.

The library's developers blog [at the YUI Blog](#) and the YUI Library community exchanges ideas at [YDN-JavaScript on Yahoo! Groups](#).

**Using YUI:**

- [FAQ](#)
- [Getting Started](#)
- [Licensing](#)
- [Cheat Sheets](#)
- [Support & Community](#)
- [Filing Bugs & Feature Requests](#)

**Searchable API Documentation:**  
API docs are available for

**YUI Core:**

- [The YAHOO Global Object](#) (base requirement for all YUI components)
- [DOM Collection](#) (convenience methods for DOM interactions)
- [Event Utility](#) (event normalization and custom events)

**YUI Library Controls/Widgets:**

- [AutoComplete](#)
- [Button](#)
- [Calendar](#)
- [Carousel](#) BETA
- [Charts](#) [experimental]
- [Color Picker](#)
- [Container](#) (including [Module](#), [Overlay](#), [Panel](#), [Tooltip](#), [Dialog](#), [SimpleDialog](#))

**Right Sidebar:**

**YUI Theater** RSS [\[more videos\]](#)

### Eric Miraglia and Matt Sweeney — "YUI 3: A Look Ahead"

Eric Miraglia and Matt Sweeney provide an overview of the forthcoming YUI 3 release.

**Yahoo! User Interface Blog** RSS

[In the Wild for October 30, 2008](#)  
Eric Miraglia 10/30/08 09:17:31

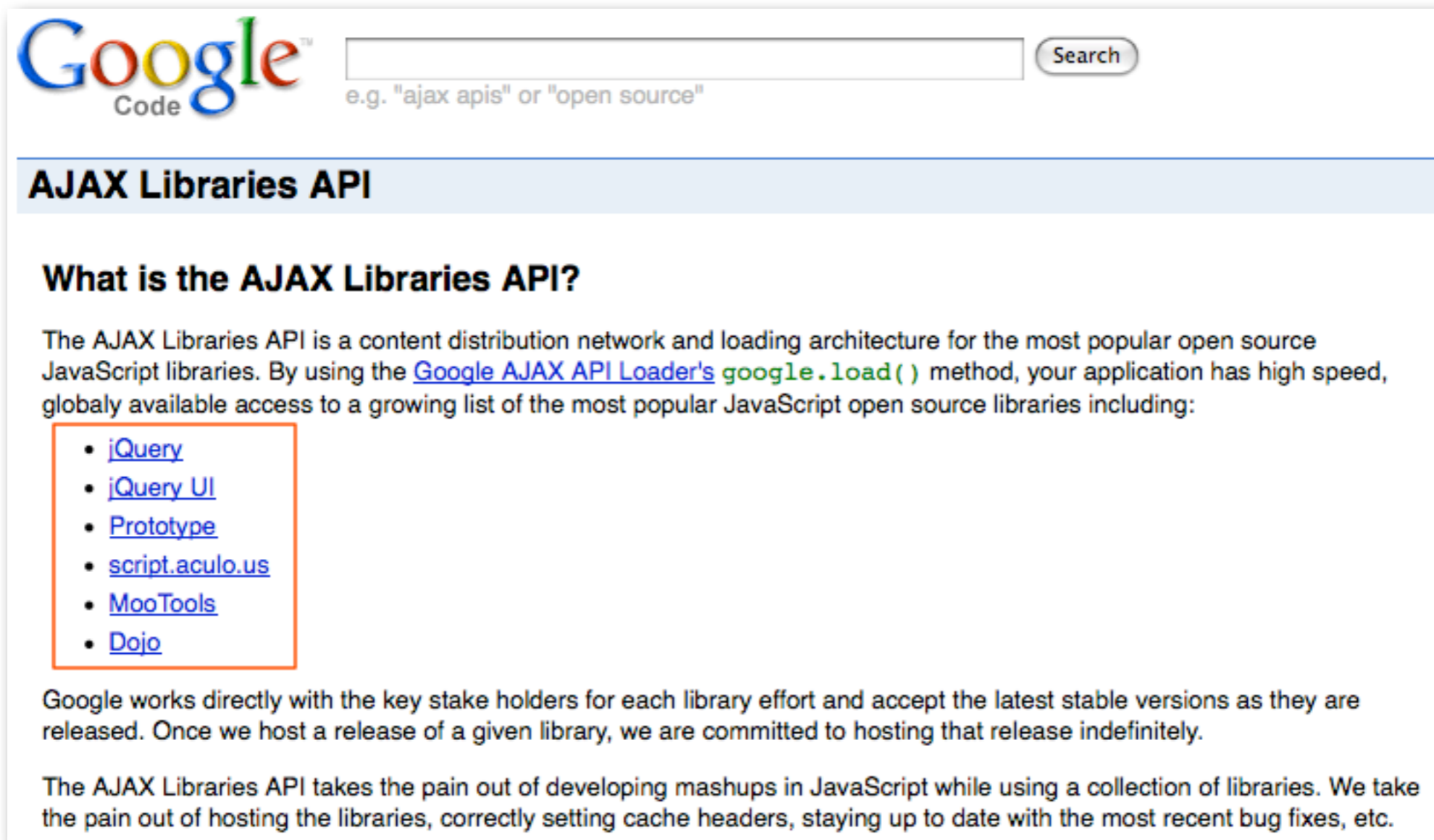
[Image Optimization Part 1: The Importance of Images](#)

# How Do I Get Them?

- Go to their websites
  - [dojotoolkit.org](http://dojotoolkit.org)
  - [jquery.com](http://jquery.com)
  - [mootools.net](http://mootools.net)
  - [prototypejs.org](http://prototypejs.org)
  - [developer.yahoo.com/yui](http://developer.yahoo.com/yui)

# How Do I Get Them?

- Go to the Google AJAX Libraries API  
[code.google.com/apis/ajaxlibs/](http://code.google.com/apis/ajaxlibs/)



The screenshot shows the Google AJAX Libraries API page. At the top, there is the Google logo with the word "Code" underneath it. To the right of the logo is a search bar with the placeholder text "e.g. 'ajax apis' or 'open source'" and a "Search" button. Below the search bar is a blue header bar with the text "AJAX Libraries API". Underneath the header bar is the section "What is the AJAX Libraries API?". The text below this section explains that the AJAX Libraries API is a content distribution network and loading architecture for the most popular open source JavaScript libraries. It mentions that by using the `google.load()` method, applications can have high speed, globally available access to a growing list of the most popular JavaScript open source libraries including:

- [jQuery](#)
- [jQuery UI](#)
- [Prototype](#)
- [script.aculo.us](#)
- [MooTools](#)
- [Dojo](#)

Below the list, the text states that Google works directly with the key stake holders for each library effort and accept the latest stable versions as they are released. Once we host a release of a given library, we are committed to hosting that release indefinitely. At the bottom, it says that the AJAX Libraries API takes the pain out of developing mashups in JavaScript while using a collection of libraries. We take the pain out of hosting the libraries, correctly setting cache headers, staying up to date with the most recent bug fixes, etc.

**Thank You!**