Open Source Success: jQuery

John Resig
http://ejohn.org/ - http://twitter.com/jeresig

jQuery

- A JavaScript library designed to hide painful cross-browser compatibility issues while presenting a solid, usable, API.

Simple API

✦ $("div > span").addClass("foo");
  ✦ "Find some elements"
  ✦ "Do something with them"

✦ Makes complex manipulation of web pages simple

Points of Concern

✦ Primary issues:
  ✦ Quality of API
  ✦ Quality of browser-issue-hiding

✦ Other issues:
  ✦ Speed, community, licensing, development team, openness, test coverage, API documentation, tutorials, books, demos
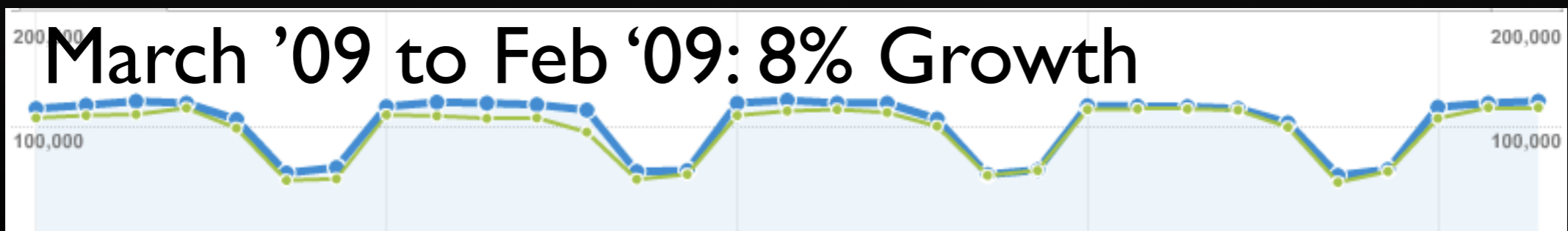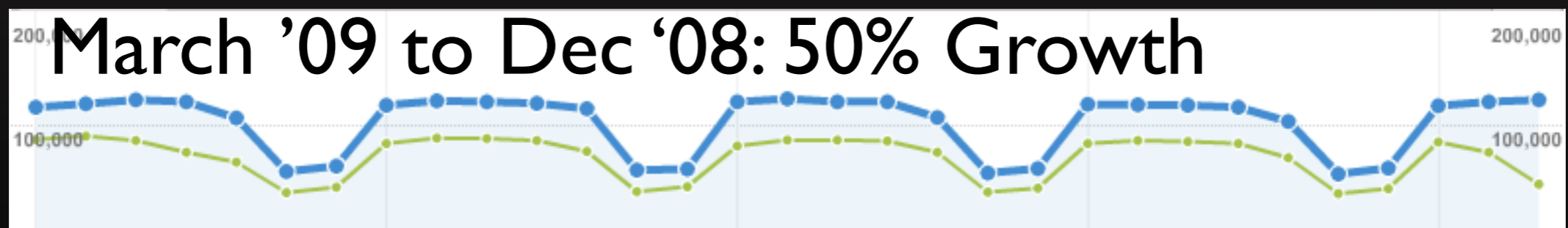
Space

- Highly competitive space

- Released Jan. 2006 - already a dominant player: Prototype JavaScript Library

- (Bundled with Ruby on Rails, had some nice coattail growth.)

- Other libraries: Dojo, Yahoo UI, MooTools

Success?

- Personal Success vs. External Success

- Personal Success (for me)
  - Someone else uses the project and finds it useful

- Some Numbers:
  - Downloads
    - jQuery 1.2.6: 40+ million downloads
    - (People probably include it directly in their pages)
    - Total: Over 180+ million downloads
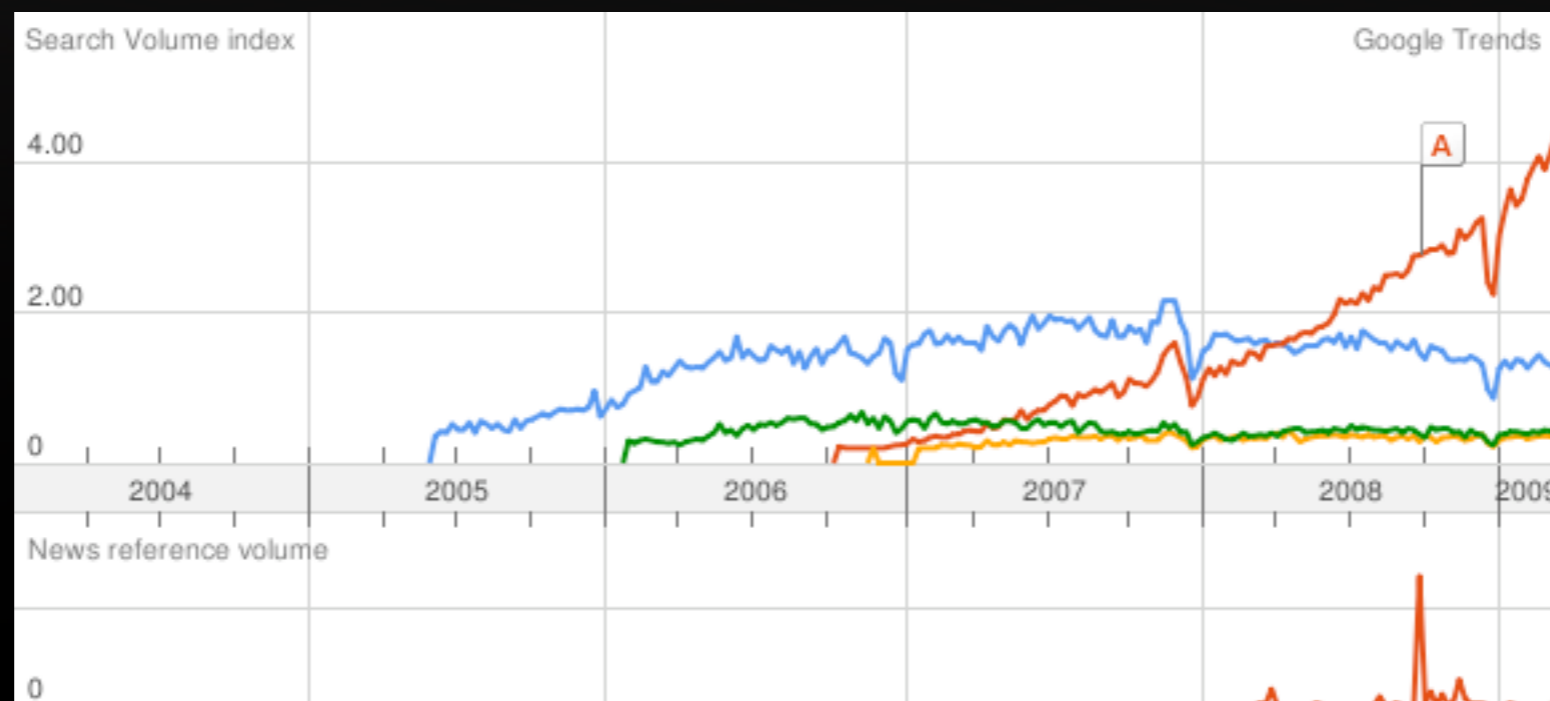
Personal Success

- Google Analytics
  - 1.5 million+ unique monthly visitors
  - 125,000+ per day

March '09 to Dec '08: 50% Growth

March '09 to Feb '09: 8% Growth

External Success

- No solid numbers for JS Libraries
  - Scripts not indexed by Google
  - Sites behind intranets

- A couple tools:
  - Google Trends (Google searches for a term)

External Success

- ✦ MAMA Opera
  - ✦ An HTML search engine built by Opera
  - ✦ Can search through script files

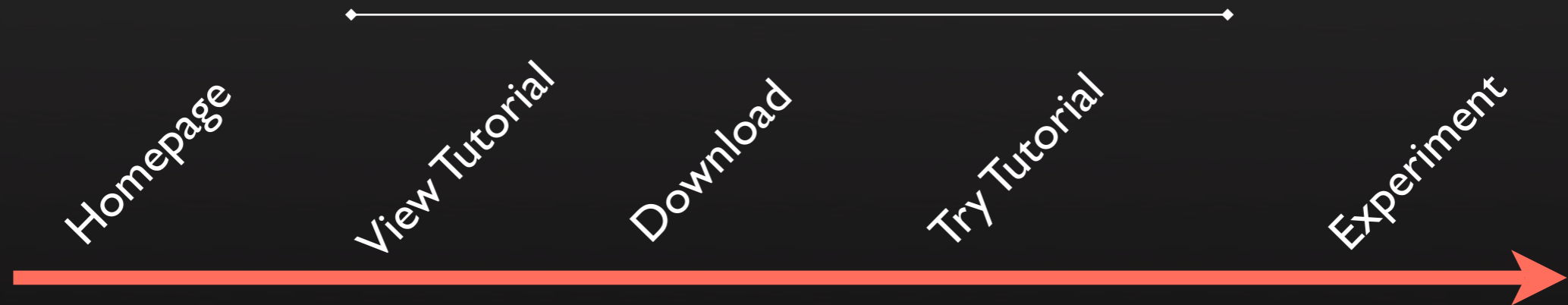| DHTML menu/library name	Search criteria (regexp)	Frequency
Macromedia functions from Dreamweaver/Fireworks	Script: / MM_/	682,019
Google Analytics/Urchin Tracker	Script: /function\s+urchinTracker/ Filename: /^urchin\.js$/	384,756
Prototype JavaScript Framework	Script: /var\s+Prototype\s+=\s+ {\s+Version:\s+/	31,423
SoThink DHTML Menu	Script: /stm_/, / st_/	20,481
Omniture/SiteCatalyst Analytics	Script: /SiteCatalyst/, /Omniture/ Filename: /^s_code\.js$/	18,468
JQuery Library	Script: /jQuery./ Filename: /^jquery.*?\.js$/	17,027
Dynamic Drive HV Menu	Script: /MbrSetUp/, /ChildVerticalOverlap/	15,111
Milonic DHTML Menu	Script: /closeMenusByArray/, /milonic/	13,585
WebSideStory/HitBox Analytics	Script: /function\s+_hbEvent/ Filename: /^hbx\.js$/	10,963
DHTML Central CoolMenus	Script: /.bratta./, /cm_check/	9,248
Yahoo YUI! Library	Script: /YAHOO.namespace/	7,953

Things That Are Important

- Technical
  - API Design
  (Usability, documentation)
  - Code Quality
  (Licensing, openness, test coverage)

- Non-technical
  - Community
  (Resources, responsiveness)
  - Learning Aides
  (Tutorials, books, demos)

What it all boils down to...

✦ How quickly can you get your user hooked - and are you giving them room, and the resources, to grow?
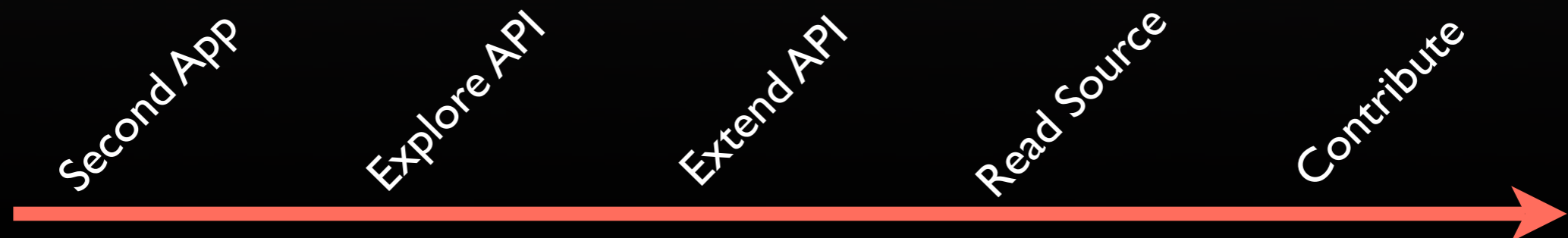

✦ Put yourself in your user's shoes.

Watch the full process

Homepage · View Tutorial · Download · Try Tutorial · Experiment

The First Day: Can this help me?

Integration · API Docs · Community · Tutorials · Experiment

The First Month: Learning

Second App · Explore API · Extend API · Read Source · Contribute

The First Year: Growth

Attrition

Failure at any step costs your project another user.

Your project is your own worst enemy.

The First Day

"After spending less than 3 hours reading blog posts and perusing the documentation I was able to do a lot more in a lot less time then ever before. The huge community and neatly organized jQuery plugins make me feel like a sucker for not having jQuery for my pet-project."

http://aleembawany.com/2009/01/16/switching-from-prototype-to-jquery/

Homepage

✦ Set a good first impression

✦ Answer the questions:
  ✦ What is this?
  ✦ What can it do for me?
  ✦ Where can I go to learn more?

jQuery
write less, do more.

jQuery is a new kind of JavaScript Library.

jQuery is a fast and concise JavaScript Library that simplifies HTML document traversing, event handling, animating, and Ajax interactions for rapid web development. jQuery is designed to change the way that you write JavaScript.

✔ **Lightweight Footprint**   ✔ **CSS3 Compliant**   ✔ **Cross-browser**

GRAB THE LATEST VERSION!

CHOOSE YOUR COMPRESSION LEVEL:

☐ PRODUCTION *(18kb, Minified and Gzipped)*
☐ DEVELOPMENT *(114kb, Uncompressed Code)*

⬇ Download(*jQuery*);

Current Release: v.1.3.0

WHO'S USING JQUERY?   Google   DELL   ...   MLB   digg   NBC   CBS   NETFLIX   Technorati   mozilla.org   W   ...

LEARN JQUERY NOW!

What does jQuery code look like? Here's the quick and dirty:

```
$("p.neat").addClass("ohmy").show("slow");
```

RUN CODE

JQUERY RESOURCES

Getting Started With jQuery

- How jQuery Works
- Tutorials
- Using jQuery with other libraries
- jQuery Documentation

Developer Resources

- Mailing List
- Source code / SVN
- Plugin Authoring
- Submit a New Bug Report

Getting Started Tutorial

- ✦ Clear, focused

- ✦ Assume no background knowledge

THE BASICS

This is a basic tutorial, designed to help you get started using jQuery. If you don't have a test page setup yet, start by creating a new HTML page with the following contents:

```html
<html>
<head>
  <script type="text/javascript" src="jquery.js"></script>
  <script type="text/javascript">
    // Your code goes here
  </script>
</head>
<body>
  <a href="http://jquery.com/">jQuery</a>
</body>
</html>
```

Edit the `src` attribute in the script tag to point to your copy of jquery.js. For example, if jquery.js is in the same directory as your HTML file, you can use:

```html
<script type="text/javascript" src="jquery.js"></script>
```

You can download your own copy of jQuery from the Downloading jQuery page.

Download

- ✦ Make it super-easy, remove any barriers
- ✦ (We link straight to the source, no .zip)

Licensing

- Not a concern for some of people

- A huge concern for a lot of corporate users

- Use the most-open license possible
    - Fewest number of restrictions gives you the largest possible market

- We use the MIT license for jQuery
    - "Leave my name on the source file"

Try the Tutorial

- ✦ ...and subsequent Experimentation

- ✦ All about code quality
  - ✦ For JavaScript libraries: Make sure your code is seamless across browsers
  - ✦ For desktop apps: Is it truly cross-platform? Are there dependencies?

- ✦ The user should never be forced to ask for help in order to get started
  - ✦ Asking for help "getting started" is a failure case on your end

Simplicity

- Simple APIs are king

- Users understand quicker

- Get started faster

- Become advanced quicker

The First Month

"Alright I am now really really into jQuery. I used to hate javascript. WHAT HAS HAPPENED HERE? Javascript people, speak to me."

http://twitter.com/_ralph/status/1123503553

Community Resources

✦ Provide places for users to ask questions

✦ jQuery:
   ✦ Mailing list
   ✦ IRC Channel

✦ External:
   ✦ jQueryHelp.com Forum
   ✦ StackOverflow.com
   ✦ Twitter
   ✦ Blogs

Monitor Your Community

✦ Make sure that everyone is getting the help that they need

✦ Evangelism Team, run by Rey Bango

✦ Track all of the services they use
  ✦ Mailing List - Subscribe to the mailing list
  ✦ IRC - Sit in the IRC channel
  ✦ Blogs - Use Technorati and Google Blog Search
  ✦ Twitter - Use Twitter Search

Service

Treat every user as a potential, future, contributor.

Service

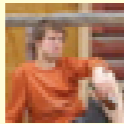| Mike Alsup | I'm seeing some odd behavior with event binding (IE6, IE7b2, FF1.5). Given the following HTML: <input id="bindTes | Mar 8 2006, 11:45 am |
Michael Geary	Mike, what you're seeing happens because the $().after() method clones the node you pass it instead of insertin	Mar 8 2006, 12:21 pm
John Resig	Ah - it took me a little while to figure it out, but I think I've got it: Every element that I add to the DOM using before, a	Mar 8 2006, 12:21 pm
John Resig	Mike: Maybe it would make sense, then, to check and see if: 1) There's only one matched element and 2) That you	Mar 8 2006, 12:24 pm
Mike Alsup	Binding the event to the element before it's added to the DOM does not work either. Given the following document,	Mar 8 2006, 12:41 pm
Mike Alsup	Binding the event to the element before it's added to the DOM does not work either. Given the following document,	Mar 8 2006, 12:41 pm
Michael Geary	BTW, Mike, you ought to go get my DOM creation plugin: http://mg.to/2006/02/27/easy-dom-creation-for-jquery-	Mar 8 2006, 12:41 pm
Michael Geary	That would work, but I believe it would result in a memory leak in IE: http://msdn.microsoft.com/library/default.as	Mar 8 2006, 12:47 pm
John Resig	Mike: I'm not entirely sure, but I'm wondering now if events are stripped from elements when you run a cloneNode	Mar 8 2006, 12:56 pm
Mike Alsup	Sweet. Thanks, Mike. - Hide quoted text -- Show quoted text -> BTW, Mike, you ought to go get my DOM creation pl	Mar 8 2006, 1:15 pm
John Resig	I'm not sure if it has to be that complex, probably something like: append: function() { var clone = this.size() > 1;	Mar 8 2006, 1:44 pm
Michael Geary	> From: John Resig > I'm not entirely sure, but I'm wondering now if events are > stripped from elements when yc	Mar 8 2006, 1:43 pm
Michael Geary	I like your version better. It's probably faster too. While playing with this code, I noticed that this.size() goes to mol	Mar 8 2006, 2:23 pm
Michael Geary	That almost sounds a little too automagical, but I don't have any better ideas off the top of my head. I guess you'r	Mar 8 2006, 1:30 pm
John Resig	Just to clear up this thread - I've fixed the clonenode issue so that you can now create a DOM Element, attach an e	Mar 11 2006, 2:29 am
Michael Geary	> From: John Resig > Just to clear up this thread - I've fixed the clonenode issue > so that you can now create a	Mar 11 2006, 3:27 am
John Resig	Psh, I can't do anything to please you, can I? ;-) On 3/11/06, Michael Geary <Mike at geary.com> wrote: - Hide quol	Mar 11 2006, 3:35 am
Michael Geary	> From: John Resig > Psh, I can't do anything to please you, can I? ;-) It's the price you pay for doing such brillia	Mar 11 2006, 3:49 am
Mike Alsup	Speaking of memory leaks, how does the $.remove() method avoid them?	Mar 11 2006, 1:32 pm
Michael Geary	> From: John Resig > Just to clear up this thread - I've fixed the clonenode issue > so that you can now create a	Mar 11 2006, 3:27 am

✦ Today Mike Alsup and Michael Geary are part of the jQuery team

Twitter Tracking

- Track people talking about the code:
  - http://search.twitter.com/

- Look for people having trouble, asking questions

Answer Questions

✦ It takes a lot of time, but sometimes it's really worth it

✦ You never know who could be having trouble

Follow-up With Large Users

✦ Maintain a list of contacts with your large users

✦ Ping them every once in a while

✦ Make sure that they're having a good experience

✦ They frequently forget to file bugs - make sure that happens

API Documentation

- ✦ jQuery had API docs from the start (2006)

- ✦ Two other major libraries: Dojo, Prototype didn't have any until 2007+

- ✦ Clarity and usability of documentation is huge

API Example

find(expr)

Overview | **Examples**

Searches for all elements that match the specified expression. This method is a good way to find additional descendant elements with which to process.

All searching is done using a jQuery expression. The expression can be written using CSS 1-3 Selector syntax.

Demo | **View Source**

Starts with all paragraphs and searches for descendant span elements, same as $("p span")

```
$("p").find("span").css('color','red');
```

Hello, how are you?

Me? I'm good.

Arguments:

expr	String

An expression to search with.

Alternative Views

jQuery
write less, do more.

Traversing

Finding

siblings(expr)

find(expr)

nextAll(expr)

offsetParent()

parent(expr)

parents(expr)

add(expr)

children(expr)

closest(expr)

contents()

prev(expr)

prevAll(expr)

next(expr)

find(expr) function ★

Category: Traversing/Finding (added 1.0)

All searching is done using a [jQuery expression](#). The expression can be written using CSS 1-3 Selector syntax.

Returns

jQuery

Parameters

- **expr** (String): An expression to search with.

Example

Starts with all paragraphs and searches for descendant span elements, same as $("p span")

jQuery Code

```
$("p").find("span").css('color','red');
```

Learn More

- Tutorials and Books

- Tutorials are short and drive home a point or single topic

- "Books" are more holistic and lead the reader from start to finish

Tutorials

Tutorials

[edit]

ENGLISH TUTORIALS

[edit]

General Tutorials

These tutorials cover the fundamentals of the jQuery library - covering a diverse number of topics.

- **How jQuery Works** by John Resig.
  A basic introduction to jQuery and the concepts that you need to know to use it.
  Tags: jQuery Core, Selectors, CSS, Traversing, Manipulation, Events, Effects

- **Getting Started with jQuery** by Jörn Zaefferer
  Goes through the basics of jQuery, all the way up to building plugins.
  Tags: jQuery Core, Selectors, Attributes, Traversing, Manipulation, Events, Effects, Ajax, Plugins

- **jQuery For Designers** by Mark Panay
  Examples of writing Unobtrusive JavaScript to add simple behavior to a web page.
  Tags: Selectors, Manipulation, Effects, Events

- **Live Examples of jQuery** by Cody Lindley
  An interactive demonstration of the basics behind jQuery.
  Tags: Selectors, Attributes, Traversing, Effects, Manipulation

Browse Tutorials by Language:

- English Tutorials
- O jQuery po polsku
- Tutoriaux en Français
- Tutoriales en español
- Tutorials auf Deutsch
- Türkçe eğitseller
- 简体中文辅导
- 繁體中文教學
- 日本語チュートリアル
- Guide in italiano
- Tutorial Bahasa Indonesia
- Учебники по-русски
- Tutoriais em português
- Hướng dẫn bằng tiếng Việt
- สอน jQuery ภาษาไทย
- Slovak jQuery Tutorials

The First Year

API Buy-in

✦ Once users start using an API for an application they generally stick with it

✦ Every new application is an opportunity to snag, or lose, a user

✦ All boils down to attrition: Did your user have a good experience building the first application?

Growth

You need to give users some place to grow to.

Open Process

- Open Source is easy (just release the code and be done with it)

- Open Process is hard (open source control, easy bug tracking)

- A good process helps users learn

01/14/09:

- 23:09 Changeset [6116] by aflesler
  jquery fx: sync animations were being left on jQuery.timers (double ...

- 22:43 Changeset [6115] by joern.zaefferer
  core: Ant target to generate openAjaxMetadata; uses ...

- 22:42 Changeset [6114] by joern.zaefferer
  core: removed newline from version.txt, easier to use it via Ant then

- 22:42 Changeset [6113] by joern.zaefferer
  core: removed outdated docs target from makefile

- 22:27 Changesets [6111-6112] by joern.zaefferer
  openAjaxMetaData: removed generated files

01/13/09:

- 22:21 Changeset [6110] by joern.zaefferer
  validate: prepare 1.5.1 release

- 22:13 Changeset [6109] by joern.zaefferer
  validate: testsuite fixes

- 21:37 Changeset [6108] by joern.zaefferer
  validate: testing

- 21:35 Changeset [6107] by joern.zaefferer
  validate: updating jquery for testing

- 21:31 Changeset [6106] by joern.zaefferer
  validate: mime-type for test files

- 17:52 Changeset [6105] by jeresig
  Updating the version to 1.3.1pre.

- 17:50 Changeset [6104] by jeresig
  Tagging the 1.3 release.

- 16:40 Changeset [6103] by jeresig
  Merged Sizzle changes back into jQuery.

- 15:47 Changeset [6102] by davidserduke
  Added APIOptionsExample as a possible token which puts in an <example> ...

- 15:08 Changeset [6101] by jeresig
  Added a trailing / in the innerHTML support test to allow it to not throw ...

- 00:11 Changeset [6100] by jeresig
  Tagging the 1.3rc2 release.

Extensibility

- Your API isn't perfect - it can't include everything for everyone

- Give users the ability to add their own functionality

- jQuery has a healthy plugin community with hundreds of plugins.

- Gives jQuery a huge leg up on other libraries.

Ajax (99)

Animation and Effects (120)

Browser Tweaks (42)

Data (64)

DOM (72)

Drag-and-Drop (15)

Events (67)

Forms (162)

Integration (35)

JavaScript (73)

jQuery Extensions (121)

Layout (83)

Media (55)

Menus (49)

Metaplugin (16)

Navigation (81)

Tables (38)

User Interface (306)

Utilities (141)

Widgets (117)

Windows and Overlays (41)

Complex Applications

✦ Users will attempt to build increasingly complex applications

✦ Need to be there to help, otherwise they'll leave for something else

✦ jQuery UI - A set of complex User Interface components.

jQuery UI

jQuery
user interface

Download | Documentation | Demos | Themes | Development | Support

jQuery UI provides abstractions for low-level interaction and animation, advanced effects and high-level, themeable widgets, built on top of the jQuery JavaScript Library, that you can use to build highly interactive web applications.

Download jQuery UI

Build custom download

Latest (1.5.3)   Preview (1.6rc5)

Recent activity

We're thrilled to announce the latest release candidate for jQuery UI version 1.6. Read post ○

New CSS framework and ThemeRoller app coming in final 1.6 release. Preview changes ○

New Design & Planning wiki launched to help us coordinate upcoming plugins. Visit wiki ○

Rich effects and UI widgets

jQuery UI features low-level effect and interaction API's as well as full-featured and highly configurable ready-to-use widgets. Supports IE 6.0+, FF 2+, Safari 3.1+, Opera 9.0+ and Chrome 1.0.

○ **Browse all effects & widgets**

Powerful theme framework

Unique CSS framework, ThemeRoller tool and theme gallery makes creating a custom look and feel for your application fast and easy.

○ **Explore the theme gallery**
○ **Design a custom theme**

Flexible & easy to learn

Leverages the power of jQuery, making it easy to start right away with detailed documentation, tutorials and a vibrant community.

○ **View documentation**
○ **Join the discussion**

Developer links

Latest stable dev bundle (1.5.3)
Preview release dev bundle (1.6rc5)
Subversion checkout instructions

Contributions

- How does a user become a contributor?

- Encouragement is the biggest factor
  - Encourage users to submit bug reports
  - Encourage them to build test cases
  - Encourage them to submit patches

- Praise them when something good is done.

- Communication is a huge factor here, "dead" bugs or mailing list threads cripple participation.

Overview

✦ Help your users at every step of the way

✦ Track them and help the stragglers

✦ Help them grow and flourish

✦ Questions?
  ✦ jeresig@gmail.com
  ✦ http://ejohn.org/
  ✦ http://twitter.com/jeresig