



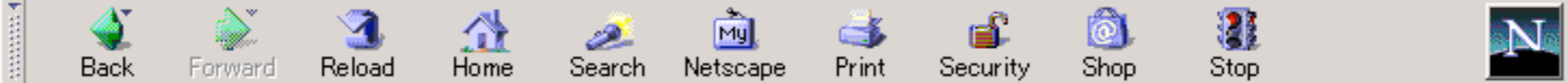
Future of the Web

Ben Galbraith and Dion Almaer

Directors of Developer Relations, Palm







Netscape® Communicator 4.79



NETSCAPE

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technology from [Sun Microsystems, Inc.](#)
Copyright © 1992-1997 Sun



Contains VisiBroker for Java software, copyright © 1996-1998 [Borland Software Corporation](#).

Firefox Start



Google™

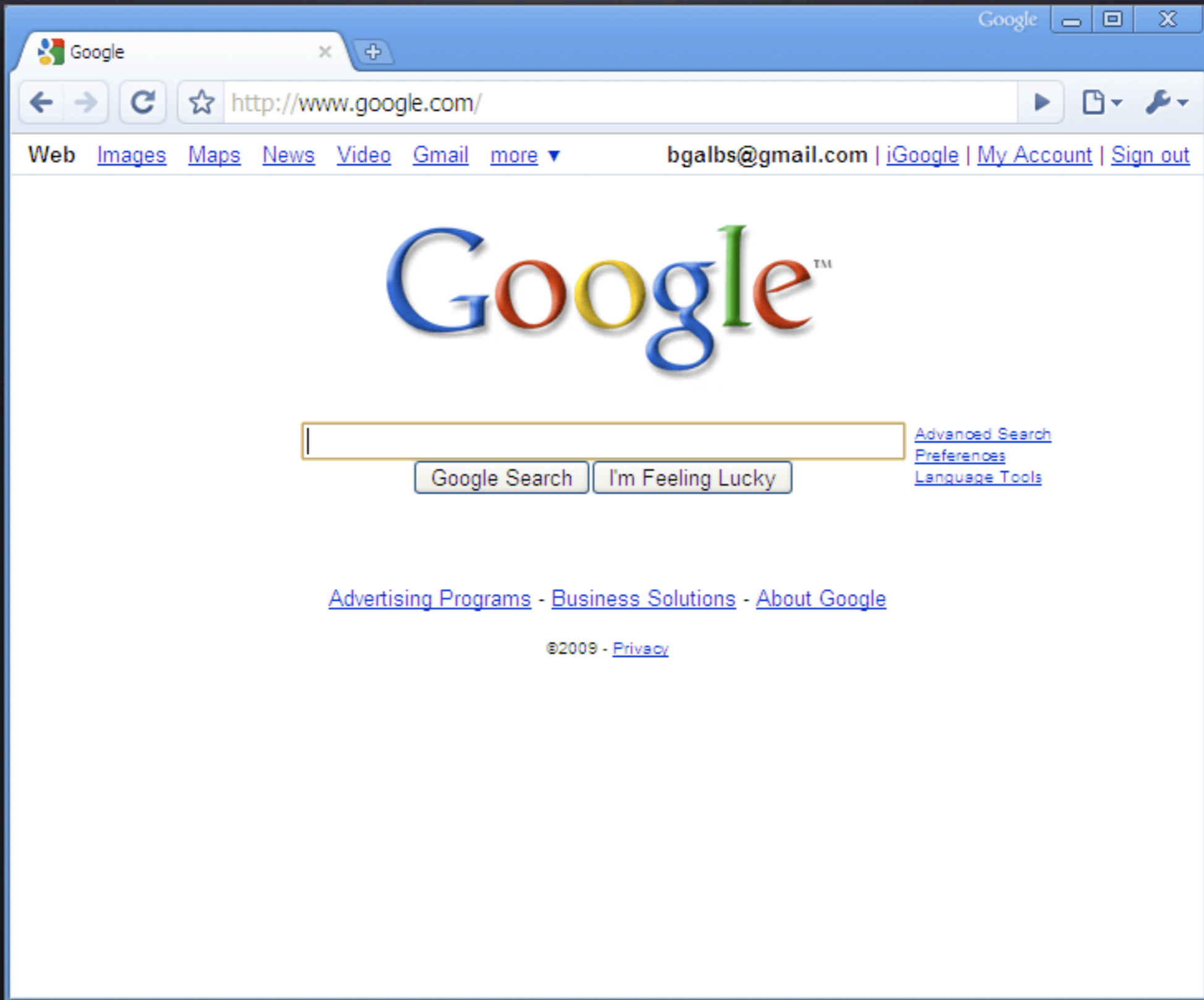
Google Search

[Advanced Search](#)
[Preferences](#)



Experience the Web the way you want it: our add-ons wizard will [customize Firefox to your exact interests.](#)

[About Mozilla](#)



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Google Search

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CSS
IS
AWESOME


```
var xhr = new XMLHttpRequest();
xhr.onreadystatechange = function() {
    if (xhr.readyState == 4) {
        processChange();
    }
}
xhr.open("GET", "/foo/bar");
xhr.send(null);
```

dōjō

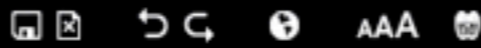
 **jQuery**
write less. do more.

prototype



Bespin >

bespin : frontend/js/be...itor/editor.js



Version tip "DEVELOPMENT MODE"



```
151     this.y2 = y + h;
152 },
153
154 // inclusive of bounding lines
155 contains: function(point) {
156     if (!this.x) return false;
157     return ((this.x <= point.x) && ((this.x + this.w) >= point.x) && (this.y <= point.y) && ((this.y + this.h) >= point.y));
158 }
159 });
160
161 // TODO: Code up selection helper
162
163
164
165 // ** {{{ bespin.editor.utils }}} **
166 //
167 // Mess with positions mainly
168 dojo.mixin(bespin.editor, { utils: {
169     buildArgs: function(oldPos) {
170         return { pos: bespin.editor.utils.copyPos(oldPos || bespin.get('editor').getCursorPos()) };
171     },
172
173     changePos: function(args, pos) {
174         return { pos: bespin.editor.utils.copyPos(oldPos || bespin.get('editor').getCursorPos()) };
175     },
176
177     copyPos: function(oldPos) {
178         return { row: oldPos.row, col: oldPos.col };
179     },
```

Revolutionary Technologies



Graphics



Fast JavaScript



Web Workers

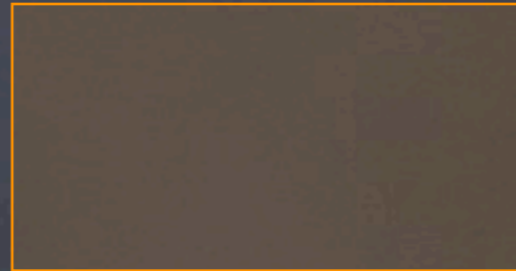


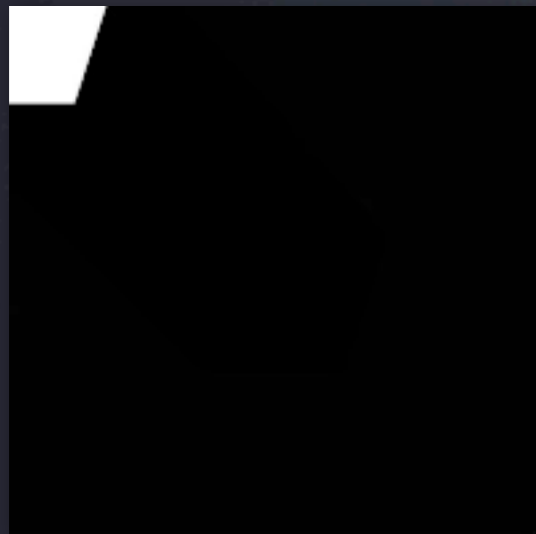
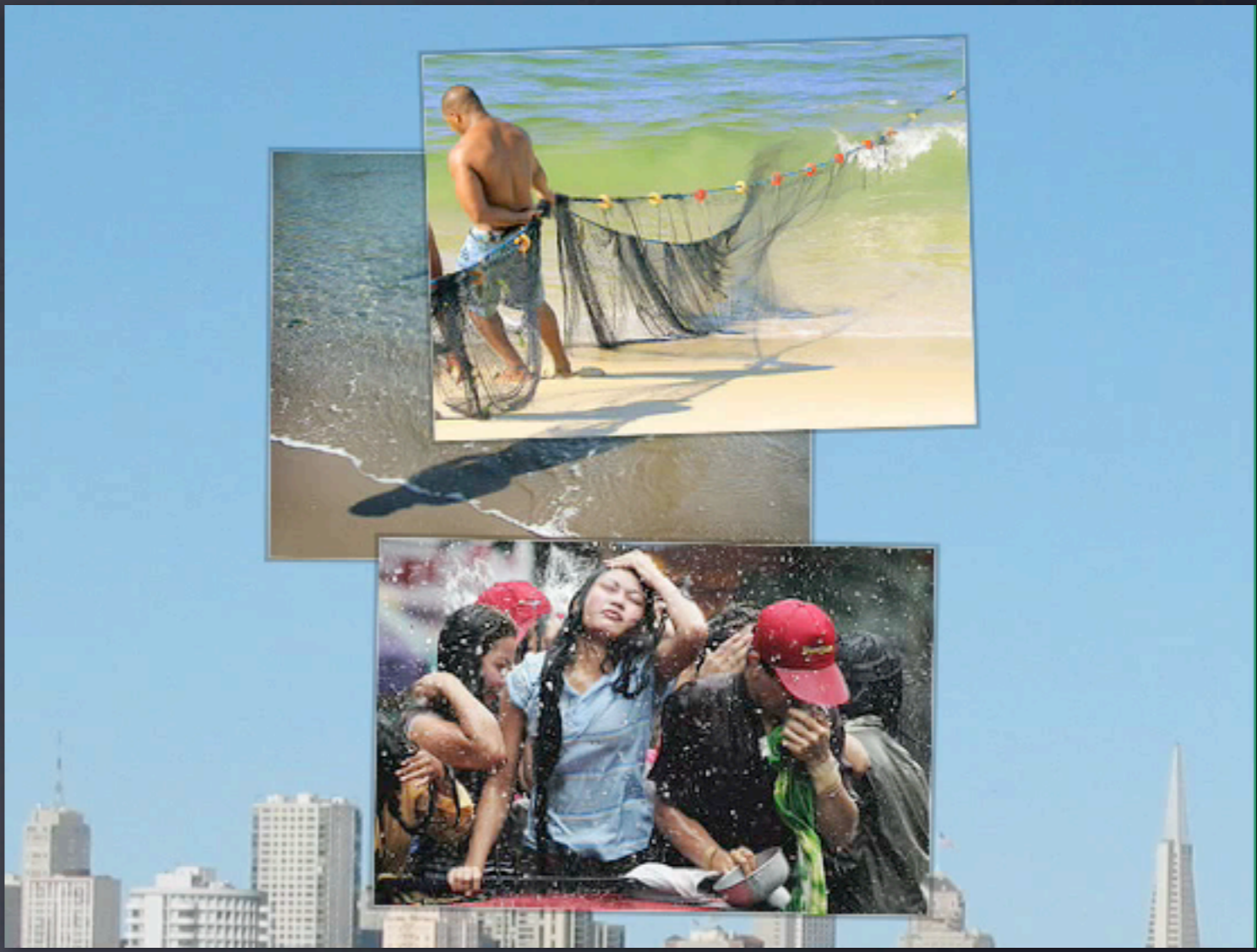
Breaking through the sandbox

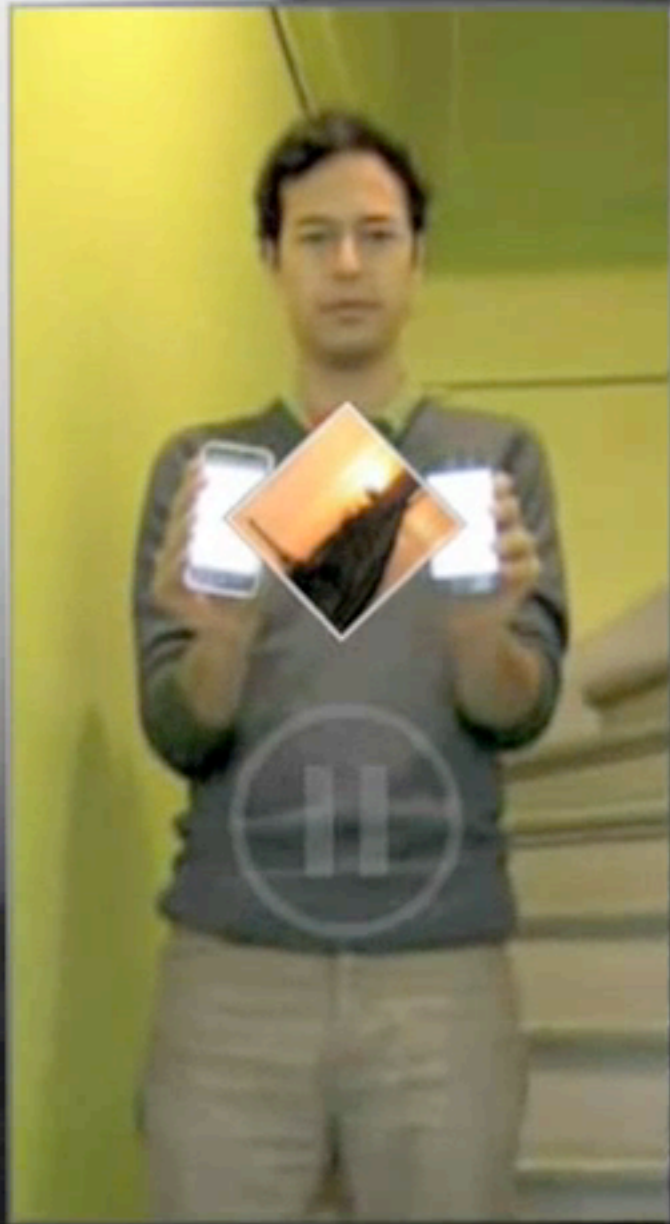


Beyond the desktop

Text







Video:



Image:

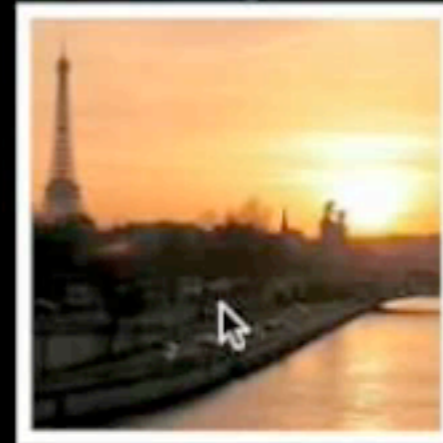
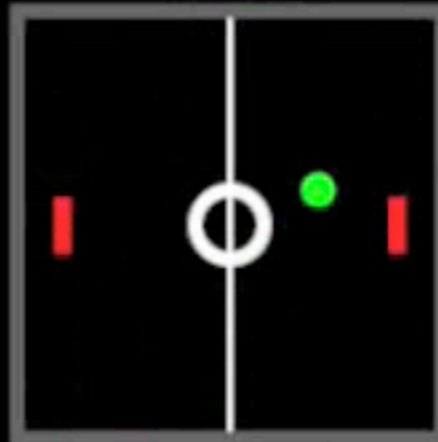


Image:



Canvas:



Your text:



Your drawing:



clear



No start-up delay



Available on mobile devices today



Rendering fidelity with browser
(especially important for typography)



No bridges necessary



Not a plug-in



```
var canvas = document.getElementById("canvas");  
var ctx = canvas.getContext("2d");  
ctx.fillStyle = "blue";  
ctx.fillRect(0, 0, 50, 50);
```

<canvas>

Mozilla Firefox

http://codinginparadise.org/projects/svgweb/samples/c svgweb

Most Visited +Delicious My Delicious

Welcome to the SVG Web Demo! [SVG rendering for common web browsers using Flash.](#)


Select SVG:

Select Display Mode:

Select Renderer:

Show Demos Known to Fail:

viewBox:



Done

```
<svg xmlns="http://www.w3.org/2000/svg"
      xmlns:xlink="http://www.w3.org/1999/xlink"
      height="800">
  <g transform="translate(200,200)" style="fill-opacity:1;
fill:none;">
  <g style="fill: #ffffff; stroke:#000000; stroke-width:0.172">
    <path d="M-122.304 84.285C-122.304 84.285 -122.203 86.179
-123.027 86.16C-123.851 86.141 -140.305 38.066 -160.833
40.309C-160.833 40.309 -143.05 32.956 -122.304 84.285z"/>
  </g>
  <g style="fill: #ffffff; stroke:#000000; stroke-width:0.172">
    <path d="M-118.774 81.262C-118.774 81.262 -119.323 83.078
-120.092 82.779C-120.86 82.481 -119.977 31.675 -140.043
26.801C-140.043 26.801 -120.82 25.937 -118.774 81.262z"/>
  </g>
  <g style="fill: #ffffff; stroke:#000000; stroke-width:0.172">
    <path d="M-91.284 123.59C-91.284 123.59 -89.648 124.55 -90.118
125.227C-90.589 125.904 -139.763 113.102 -149.218
131.459C-149.218 131.459 -145.539 112.572 -91.284 123.59z"/>
  </g>
  ...

```

CSS ZEN The Beauty of CSS Design GARDEN

The Road to Enlightenment

Littering a dark and dreary road lay the past relics of browser-specific tags, incompatible DOMs, and broken CSS support. Today, we must clear the mind of past practices. Web enlightenment has been achieved thanks to the tireless efforts of folk like the W3C, WaSP and the major browser creators. The css Zen Garden invites you to relax and meditate on the important lessons of the masters. Begin to see with clarity. Learn to use the (yet to be) time-honored techniques in new and invigorating fashion. Become one with the web.

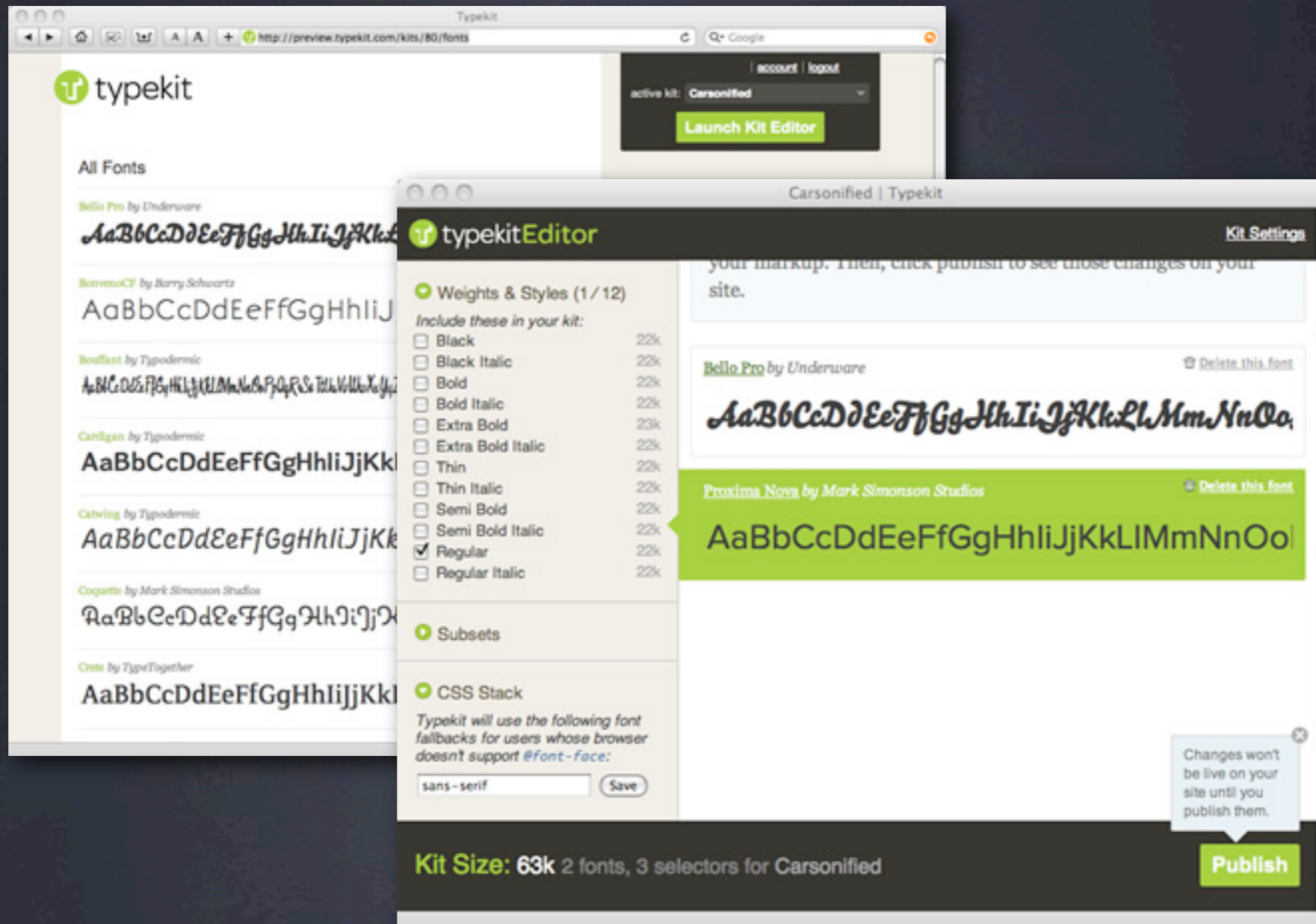
CSS ZEN

THE BEAUTY OF CSS DESIGN

GARDEN

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TypeKit



Chrome's V8



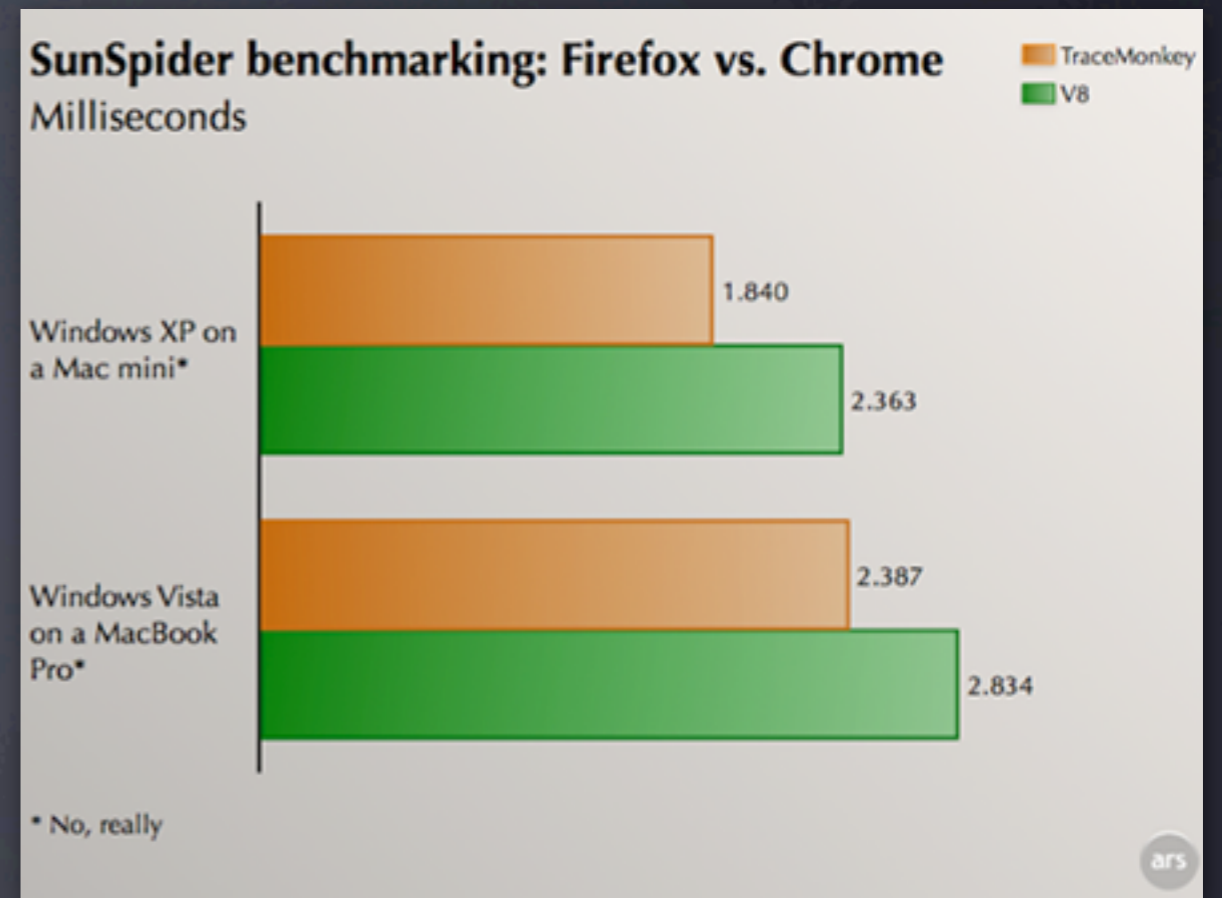
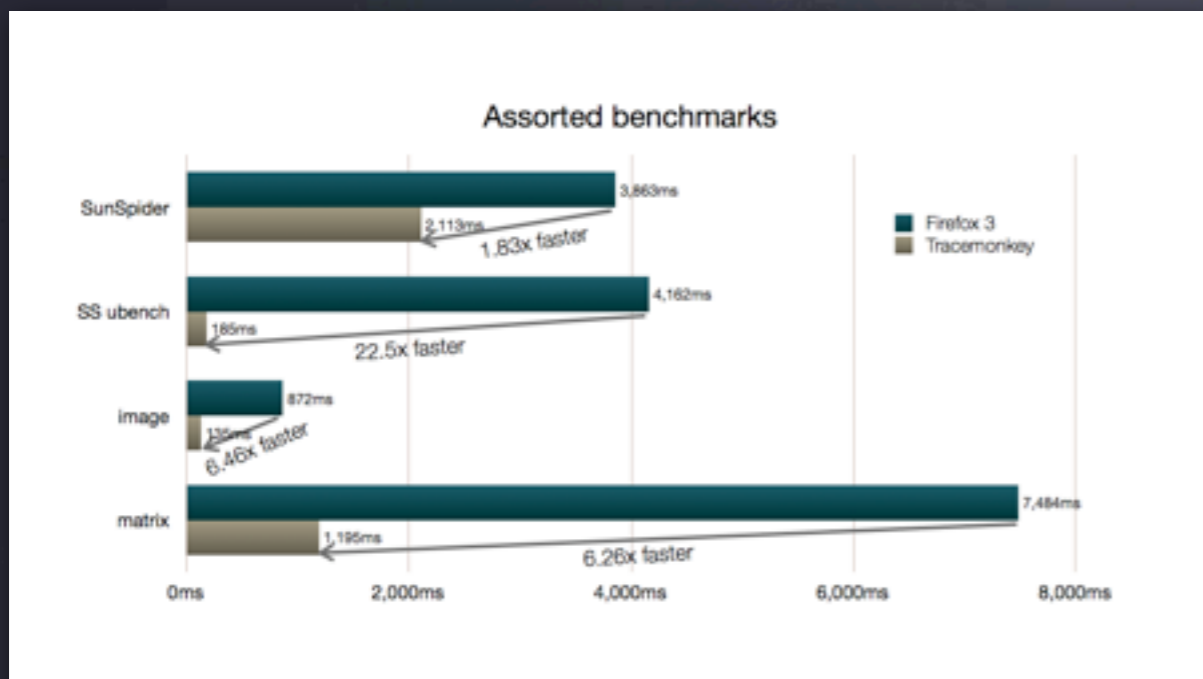
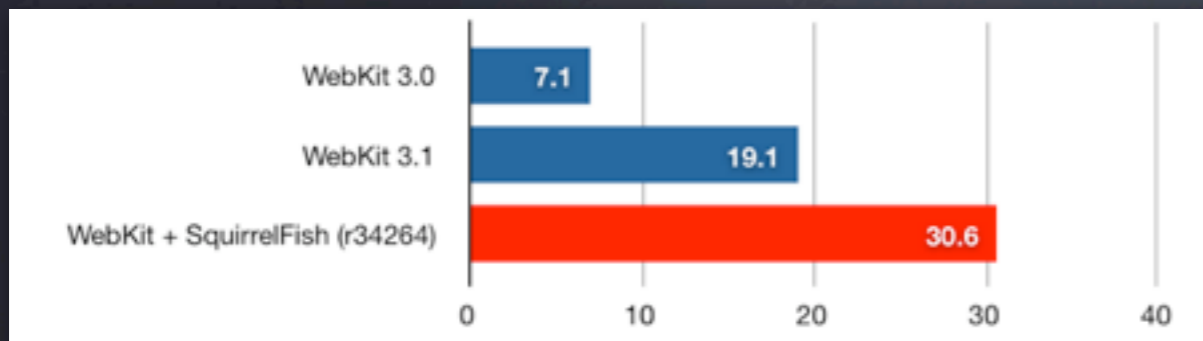
Safari's SquirrelFish Extreme



Firefox's TraceMonkey



Opera's Carakan









e?

PIXAST [beta]

JavaScript/Canvas Photo Editing

FILE

EDIT

TRANSFORM

ADJUST



Desaturate



Bright/Contrast

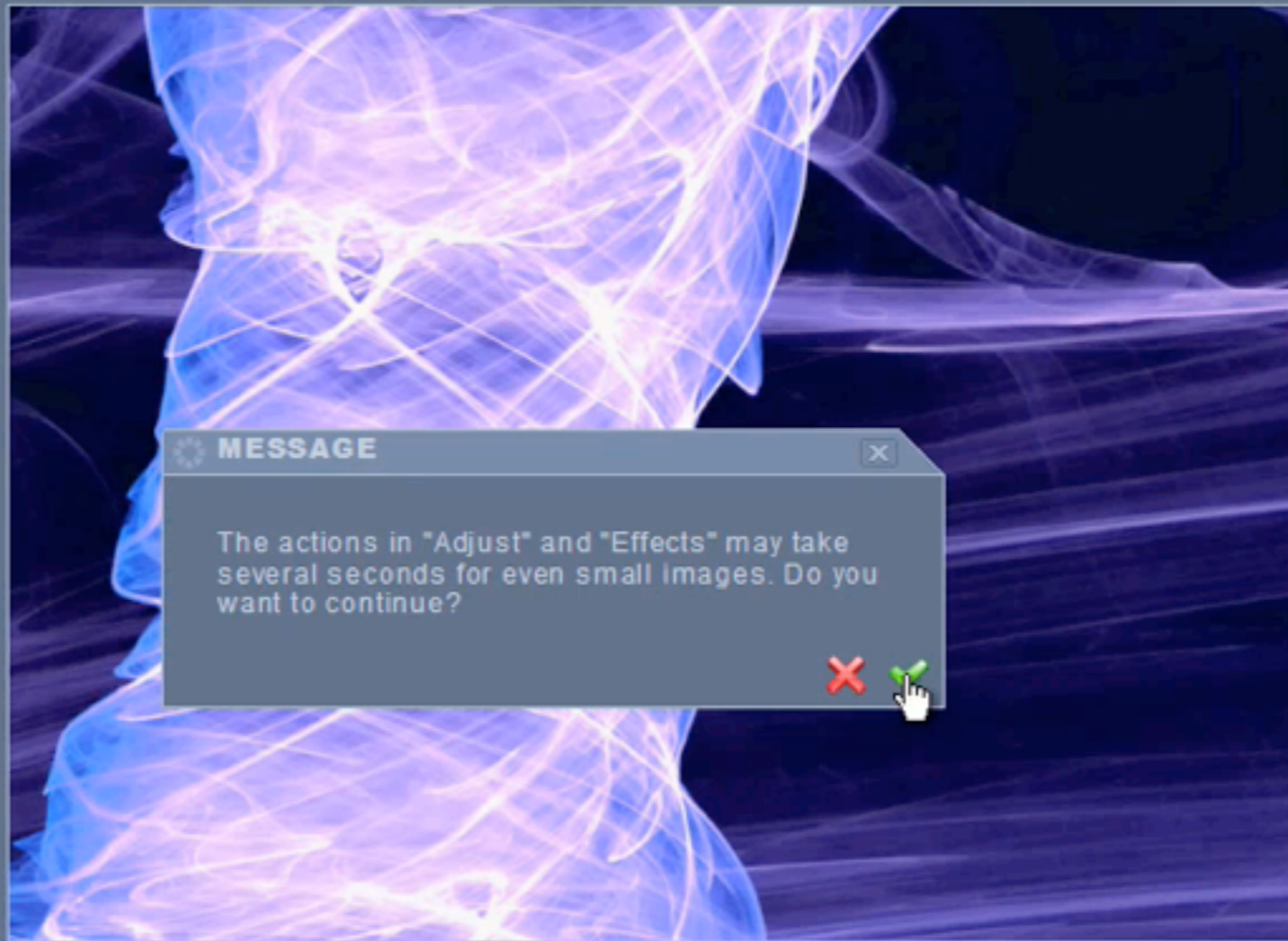


Hue/Saturation

EFFECTS

ABOUT

IMAGE



MESSAGE

The actions in "Adjust" and "Effects" may take several seconds for even small images. Do you want to continue?



Width: 2048px

Height: 1280px

X: 753

Y: 632

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Announcing new
Photoshop® Lightroom® 2.
Import, organize,
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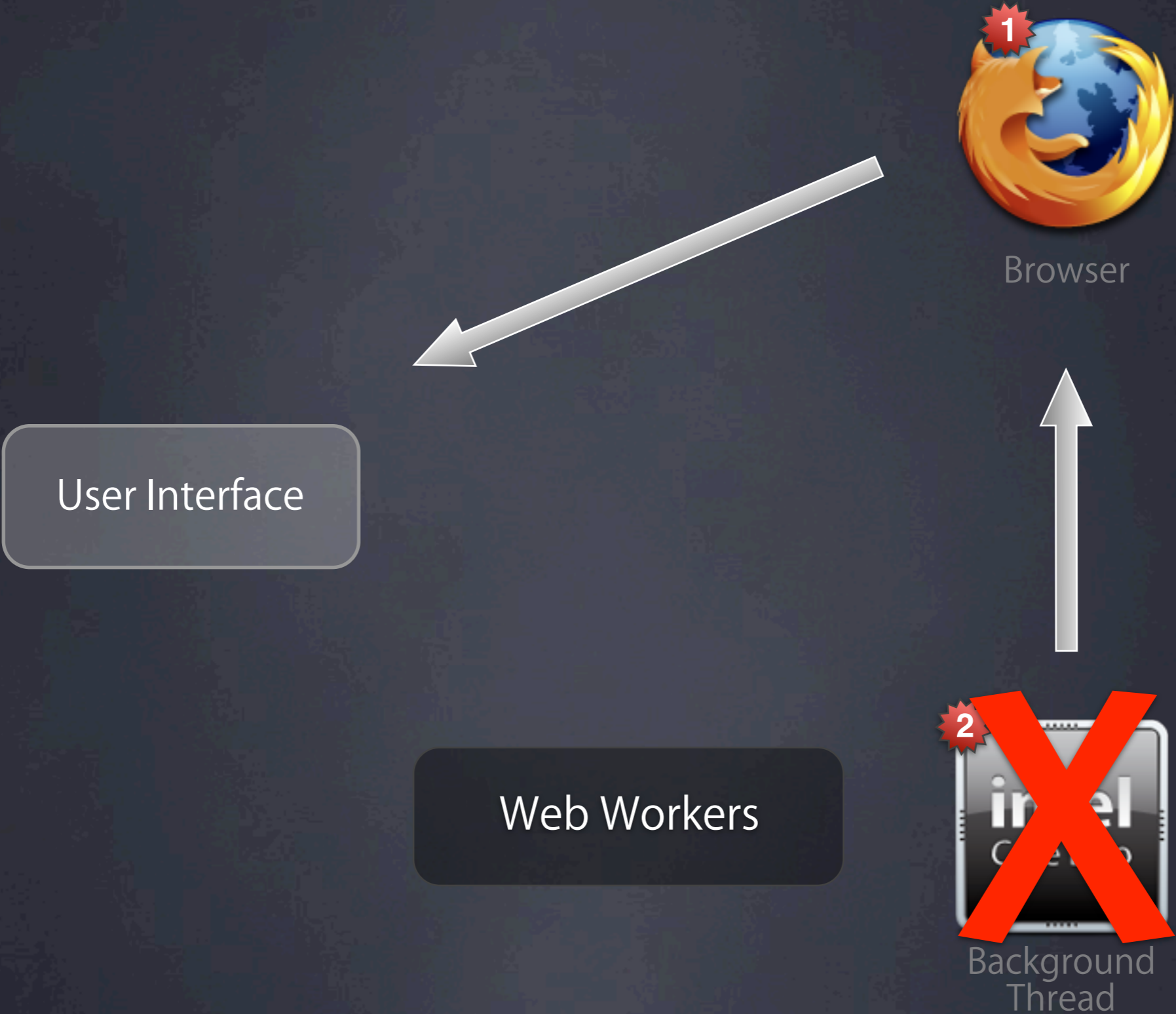
User Interface



Browser



Background Thread



Simulated annealing

Args:

Worker

go



Web Inspector — file:///Volumes/Data/databasetest.html

Navigation: CuteAnimals ↕ ↻ Search

DOCUMENTS

- databasetest.html /Volumes/Data

DATABASES

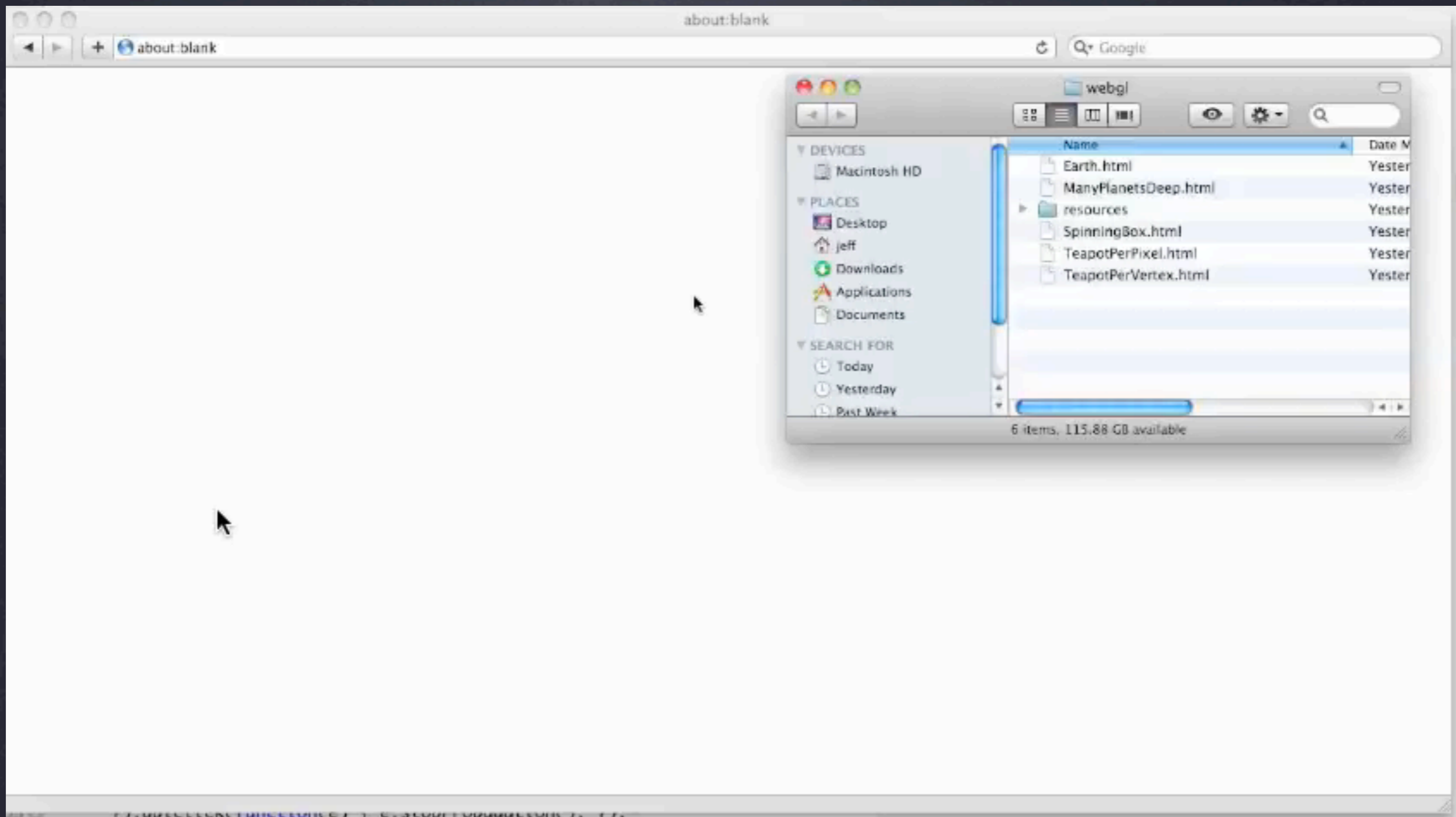
- Test Database

name	cuteness
Puppy	8.3
Kitten	8.42
Bunny	7.2
Chinchilla	4.8
Hedgehog	6.5
KittenPuppyBunny Hybrid	9.982

SQL Console: `INSERT INTO WebKit VALUES ("ClientSideDatabaseStorage");`







Animations, Transitions and 3D Transforms

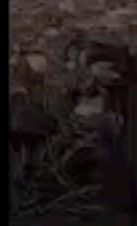
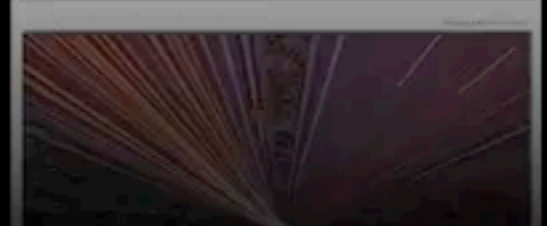
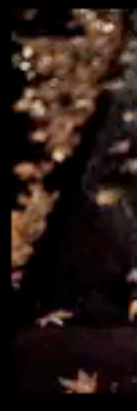
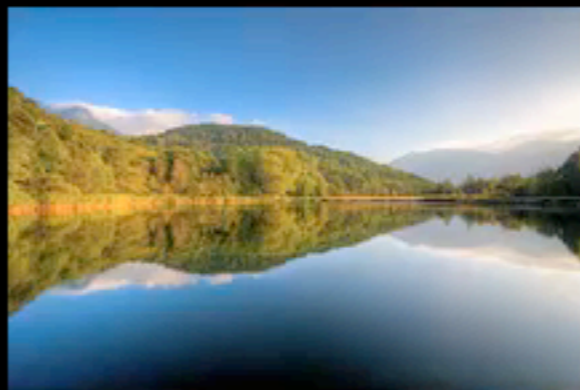
This demo shows some more interesting content using 3D transforms, animations and transitions. Note that you can still select the text on the the elements, even while they are rotating. Transforms elements remain fully interactive.

Click Toggle Shape to switch between nested cubes and one big ring. Note how the planes move smoothly to their new locations, even while the whole shape is rotating. You can even interrupt this transition by clicking again, and they move back smoothly.

Toggle the Backfaces Visible checkbox to turn backfaces on and off using `-webkit-backface-visibility`.

Backfaces visible





HTML 5



Ian (Hixie) Hickson
Standards Editor, Google Employee

<video>

<audio>

<canvas>

<time>

<progress>

<meter>

<menu>

<input type="email | date |
min | max | required"... >

AppCache (offline)

postMessage

Drag and drop


```
class settingsServlet extends HttpServlet {
    private File users;
    static final long serialVersionUID = 1;

    public settingsServlet() {
        users = Activator.bundleContext.getDataFile("users");
        users.mkdir();
    }
}
```

Double-click

Double-click

Gmail - Inbox (1) - bgalbs@gmail.com

Search results for: torajaxians

1 - 15 of thousands

Label: list-bespin

1 - 15 of 275

Jerik, Kevin (8) [bespin] Using Bespin to replace my remote SSH/SVN/VIM setup - I currently use PuTTY to

deepflame, Kevin [bespin] problem to open or create files - Hi everyone, today I wanted to give Bespin a try on

Cory, Kevin - Rob [bespin] Registration/Home Page Broken - Hi Cory, So far, I've seen no other reports of this.

Jon, Kevin (2) [bespin] Files not showing in File Explorer - Hi, Yesterday I installed bespin-5850d9b621b5 c

Google Groups [bespin] Google Groups: Message Pending - A message has been sent to the Bespin group

Google Groups [bespin] Google Groups: Message Pending - A message has been sent to the Bespin group

TravelCenter

People Search Permissions

New to-do list

Show to-dos assigned to: Anyone

Current to-do lists

Completed to-do lists

Spreadsheet grid with columns D, E, F, G, H, I

Sheet1 Sheet2 Sheet3

Google Maps

Search the map Find businesses Get directions

Search Results My Maps

Monte Orvieto Abbey

This is a cool abbey that you can check out in about 30 minutes. It's got some nice views and some actual remaining monks!



Macintosh HD



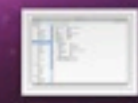
VERBATIM



Keyspan USA19H CD A6



MyBook



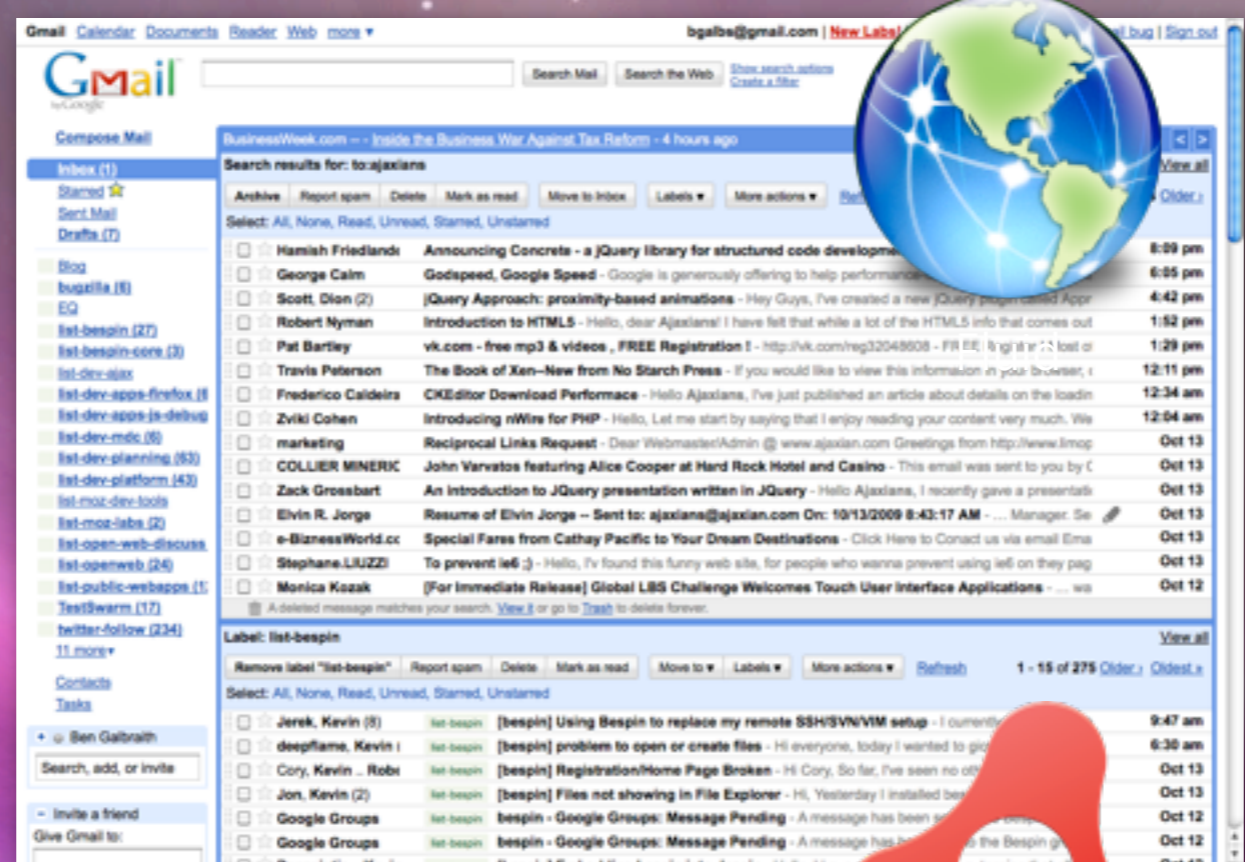
Picture 1

Gmail interface showing search results for 'to:ajaxians'. The interface includes a sidebar with folders like 'Inbox (1)', 'Blog', and 'list-bespin (27)'. The main content area displays a list of search results with columns for sender, subject, and time. The results include messages from Hamish Friedland, George Calm, Scott Dion, Robert Nyman, Pat Bartley, Travis Peterson, Frederico Caldeira, Zviki Cohen, marketing, COLLIER MINERIK, Zack Grossbart, Elvin R. Jorge, e-BiznessWorld.cc, Stephane LUZZI, and Monica Kozak. The interface also shows a 'Label: list-bespin' section with a list of messages related to that label.





Macintosh HD



Mozilla Prism



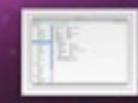
VERBATIM



Keyspan USA19H CD A6



MyBook



Picture 1



Adobe AIR



Appcelerator Titanium









NOKIA



NOKIA

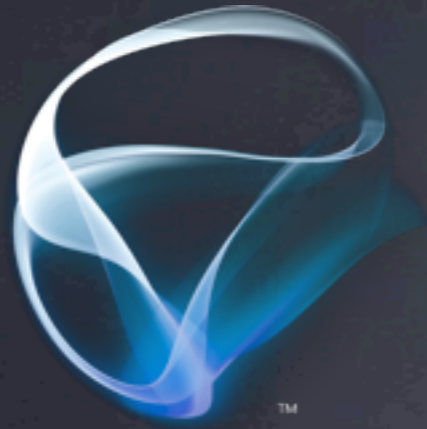
1 aa | 2 abc | def 3
4 ghi | 5 jkl | mno 6
7 pqrs | 8 tuv | wxyz 9
* + | 0 _ | o #







The Web?



Microsoft®
Silverlight™





1,500,000,000+

Huge Deployment

Huge Developer Base

No Vendor Control



Palm webOS

PhoneGap

Titanium Mobile



Firebug

By Joe Hewitt

Yes, that Joe Hewitt

Inspect Performance Stats Components Tools Help

Console HTML CSS Script DOM Net YSlow Options

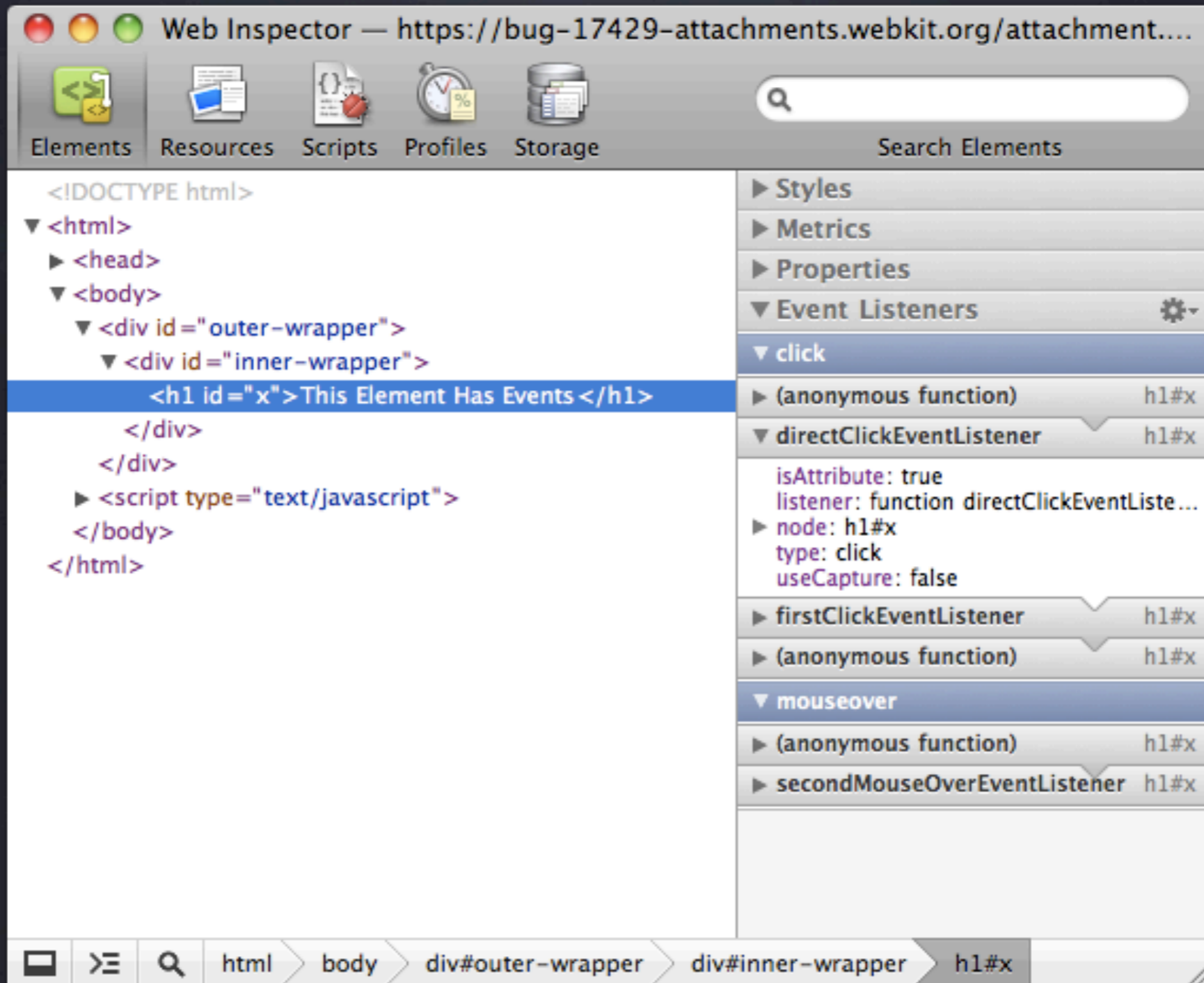
Performance Grade: A (92) Expand All Collapse All

- C** 1. Make fewer HTTP requests
This page has 6 external JavaScript files.
This page has 11 CSS background images.
- A** 2. Use a CDN
- B** 3. Add an Expires header
- A** 4. Gzip components
- B** 5. Put CSS at the top
- A** 6. Move scripts to the bottom
- A** 7. Avoid CSS expressions
- n/a** 8. Make JS and CSS external
- B** 9. Reduce DNS lookups
- A** 10. Minify JS
- A** 11. Avoid redirects
- B** 12. Remove duplicate scripts
- A** 13. Configure ETags

Done A 189.7K 1.594s

Firebug Plug-ins

YSlow, FirePHP, Pixel Perfect, Firebug Code Coverage, FireUnit



WebKit Inspector

Now with event listeners, show colors, and much more

chrome://devtools/devtools.html

Elements Resources Scripts Profiles **Heap** Search Heap

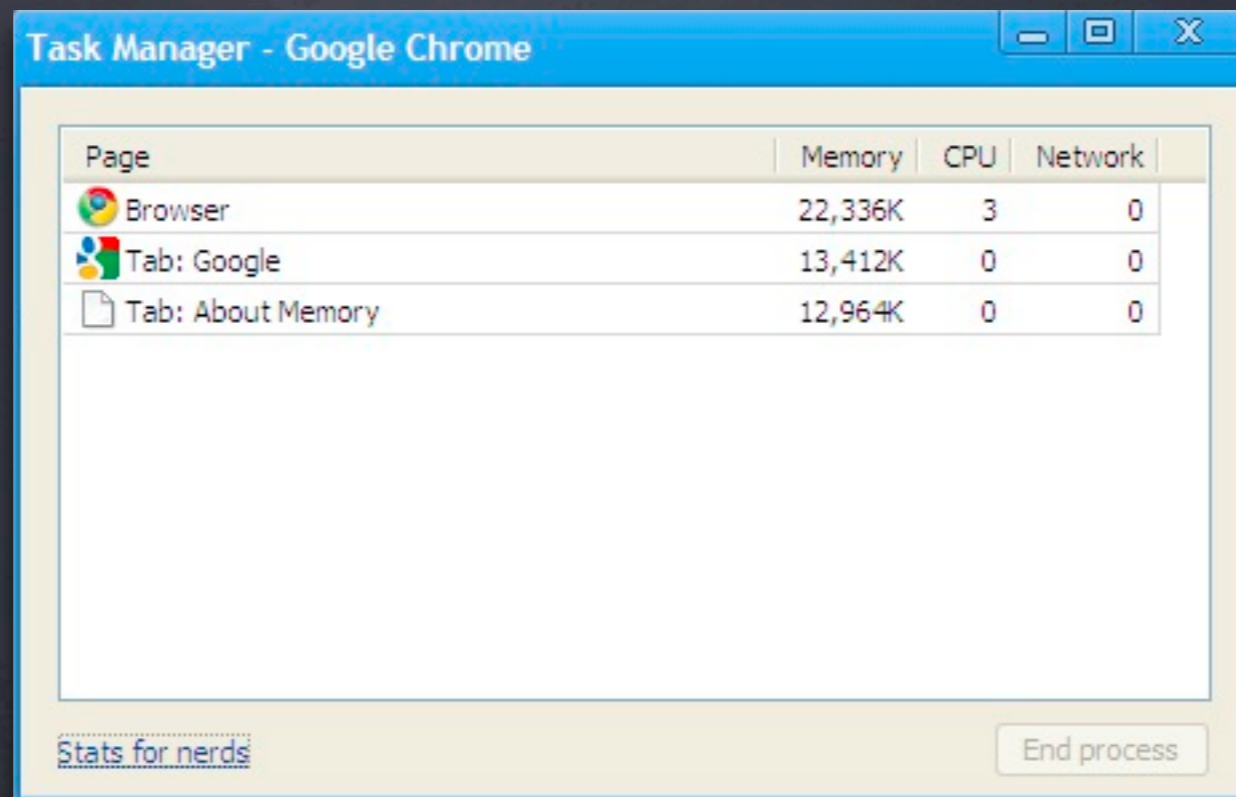
Snapshot 1
Used 2MB of 11MB (17%)

Code 27.10% Objects and Data 68.12% Other 4.79%




Constructor	Count	Size	± Count	± Size
Function	77.62%	39.42%	0%	0%
(anonymous)	0.44%	24.55%	0%	0%
Array	3.49%	22.83%	0%	0%
Object	11.68%	6.50%	0%	0%
(no_constructor)	2.16%	4.39%	0%	0%
Script	0.53%	0.36%	0%	0%
Error	0.67%	0.27%	0%	0%
RangeError	0.11%	0.16%	0%	0%
tempCtor	0.40%	0.14%	0%	0%
CSSStyleDeclaration	0.24%	0.14%	0%	0%
MathConstructor	0.11%	0.10%	0%	0%
Attr	0.20%	0.08%	0%	0%
RegExp	0.09%	0.08%	0%	0%
Boolean	0.11%	0.08%	0%	0%
String	0.11%	0.08%	0%	0%
Arguments	0.20%	0.07%	0%	0%
CSSRuleList	0.20%	0.07%	0%	0%
Date	0.09%	0.06%	0%	0%
ErrorPrototype	0.11%	0.05%	0%	0%
HTMLImageElement	0.11%	0.05%	0%	0%
HTMLInputElement	0.09%	0.04%	0%	0%
CSSStyleSheet	0.09%	0.04%	0%	0%
Number	0.11%	0.03%	0%	0%
CSSStyleRule	0.07%	0.03%	0%	0%
HTMLDocument	0.04%	0.03%	0%	0%
HTMLTableElement	0.07%	0.03%	0%	0%

Compared to Snapshot 1 %

Heap Explorer



The image shows a screenshot of the Google Chrome Task Manager window. The window title is "Task Manager - Google Chrome". It displays a table with the following data:

Page	Memory	CPU	Network
 Browser	22,336K	3	0
 Tab: Google	13,412K	0	0
 Tab: About Memory	12,964K	0	0

At the bottom left of the window, there is a link labeled "Stats for nerds". At the bottom right, there is a button labeled "End process".

Task Manager



V8 JSON Debugging Protocol

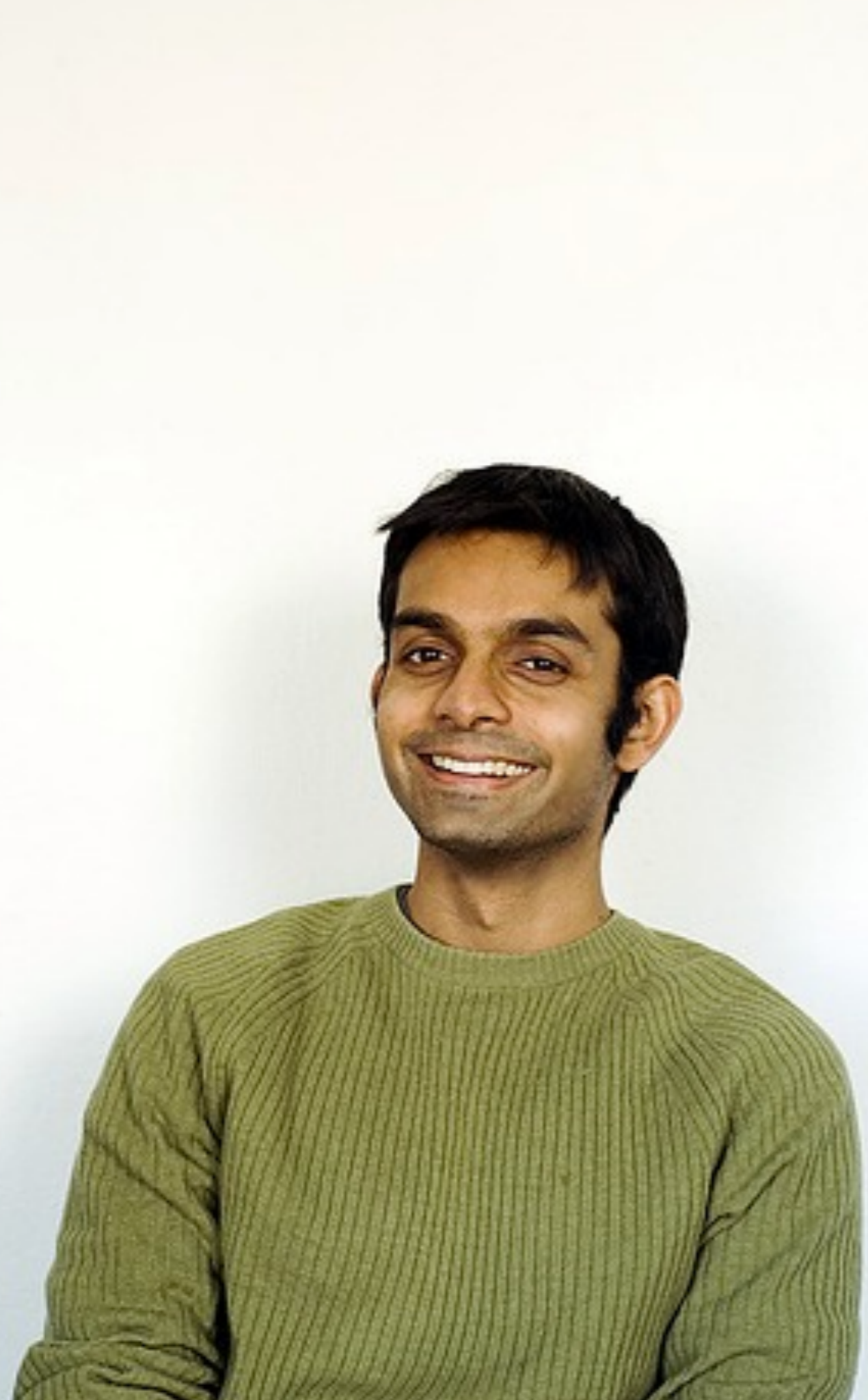


“Scope” Debugging Protocol



“Crossfire” Debugging Protocol

Google Group: [WebDebugProtocol](#)



Atul Varma's Memory Profiler:

Memory Profiler

Please click on a tab below to profile its memory use.

- [file:///Users/varmaa/Documents/blah.html](#)
- [Memory Profiler](#)

Or, click on a snapshot below to view a previous profile.

- [Snapshot of "file:///Users/varmaa/Documents/blah.html" at 14:12:44](#)
- [Snapshot of "file:///Users/varmaa/Documents/blah.html" at 14:12:47](#)

Window Information

This list includes the page itself and any iframes contained within it.

	Window	References	Re
1		28	65
2		21	47

Object Information

The "shape" of an object is just a list of its properties. Because JavaScript doesn't have a concrete notion of classes, shape detection is the most we can do to categorize objects.

Shape
(no properties)
hi/bye
blarg
yoyo

Native Class Information

The native class of a JavaScript object is the name given to the C/C++ structure that



Atlas

