

Lecture 4

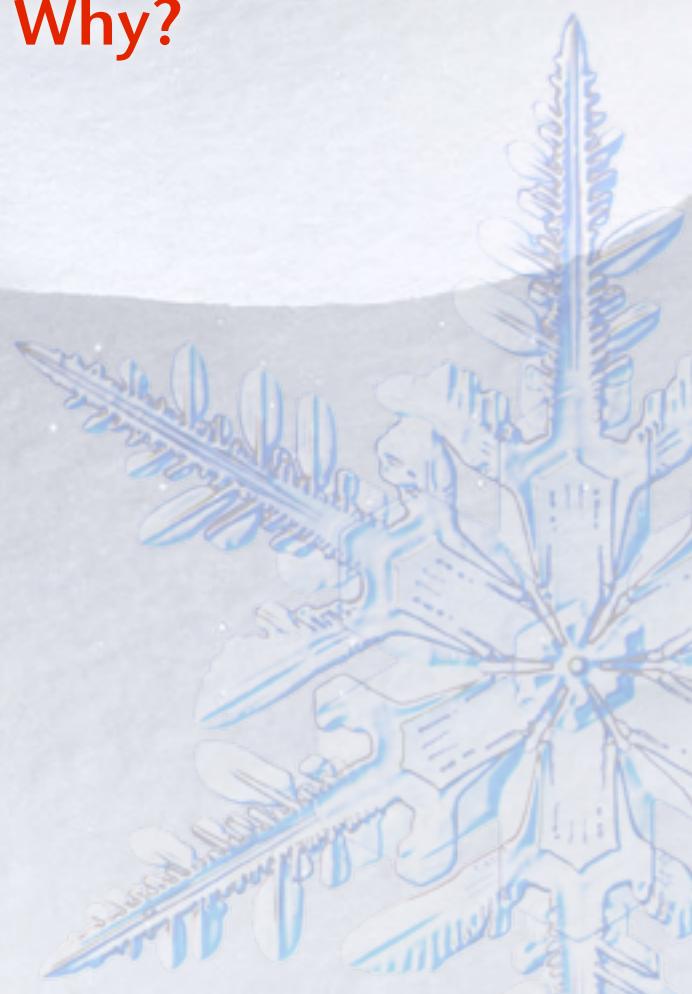
Getting Started with HTML5



Play



Outline

- ❖ **HTML5—What and Why?**
 - ❖ **HTML5 Features**
 - ❖ **HTML5 Toolkit**
- 

Word on the Street...

"The world is moving to HTML5"

—Steve Jobs, Apple

"The Web has not seen this level of transformation, this level of acceleration, in the past ten years... we're betting big on HTML5"

—Vic Gundotra, VP of Engineering, Google

"If you want to do something universal, there is no question, the world is going HTML5. That is clear...The world is just pushing down this HTML5 path and so are we."

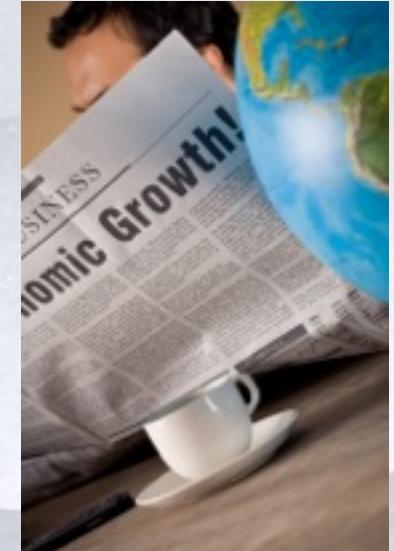
—Steve Ballmer, CEO Microsoft

"I had no idea there was so much HTML5 already in play"

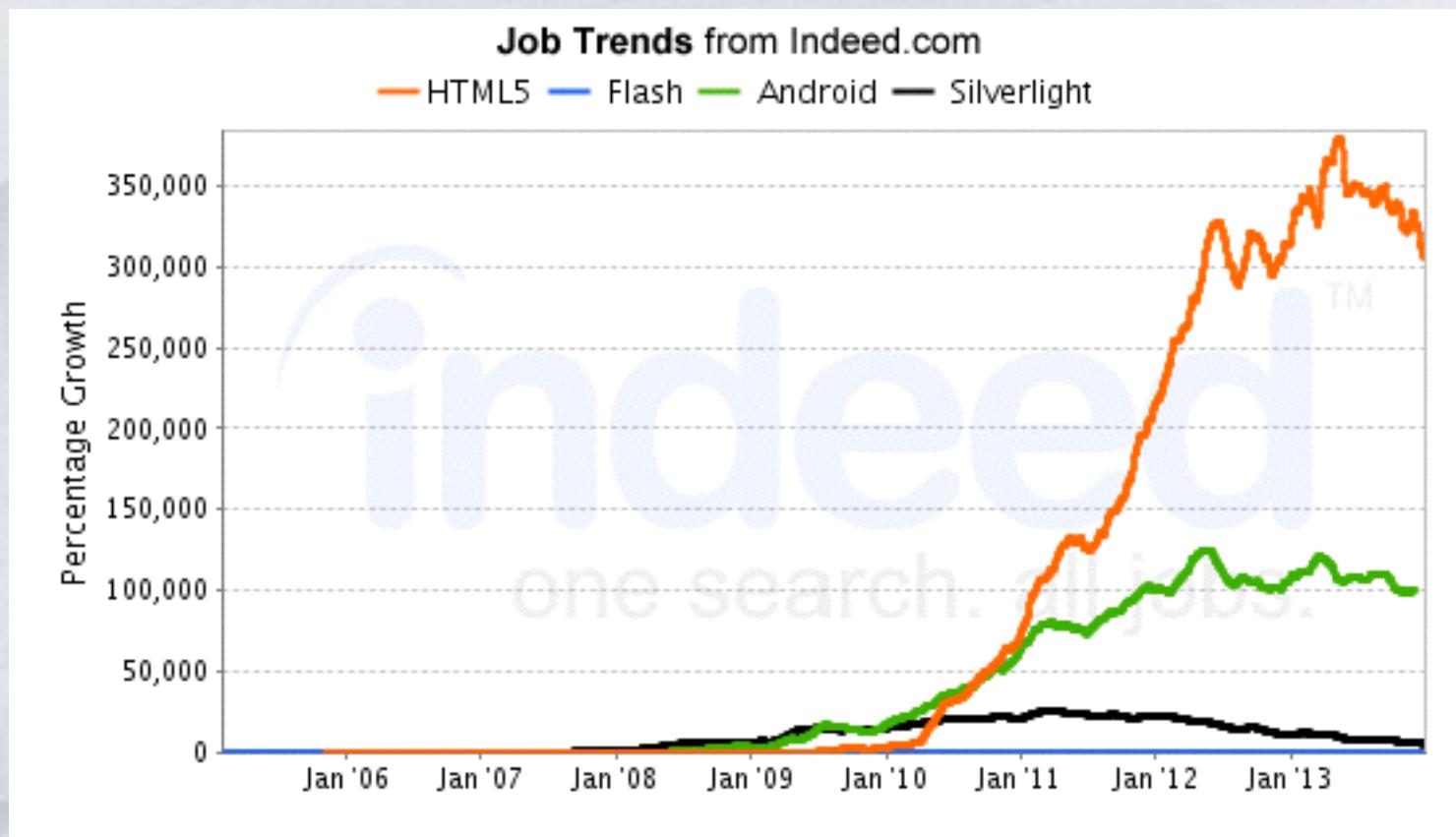
—Tim O'Reilly

"HTML5's impact on Tech Com will be bigger than DITA"

—Peter Lubbers



Job Trend 2013



“HTML5” is the #1 job trend - the fastest growing keyword found in online job postings
—indeed.com (<http://goo.gl/xXZVm>)

What is HTML5?

- * The new major milestone for HTML
- * Focused on Web Applications
- * Web apps are rapidly becoming first class apps, on par with desktop and native apps
- * Different definitions



Why HTML5?

* 5 Reasons why you should care!



1) HTML5 Paves the Cow Paths

✳ Because HTML5 takes a pragmatic approach, fixing common real-world problems



Paved Cow Path

HTML4

```
<form>
```

```
<input name="email" type="text">
```



crapload of
validation code
or extra js lib

```
(?:[a-zA-Z!#$%&'*+/=?^`{|}~-]+(?:\.[a-zA-Z!#$%&'*+/=?^`{|}~-]+)*|"(?:[\x01-\x08\x0b\x0c\x0e-\x1f\x21\x23-\x5b\x5d-\x7f]|\\"[\x01-\x09\x0b\x0c\x0e-\x7f])*")@(?:(:[a-zA-Z-]*[a-zA-Z-]*[a-zA-Z-])?\.|[a-zA-Z-]*[a-zA-Z-]?|\\[(?:(:25[0-5]|2[0-4][0-9]|0[1]?[0-9][0-9]?|\\.){3}|(?:(?:25[0-5]|2[0-4][0-9]|0[1]?[0-9][0-9]?|\\[a-zA-Z-]*[a-zA-Z-]):(?:(?:[\x01-\x08\x0b\x0c\x0e-\x1f\x21-\x5a\x53-\x7f]|\\"[\x01-\x09\x0b\x0c\x0e-\x7f])+))])
```

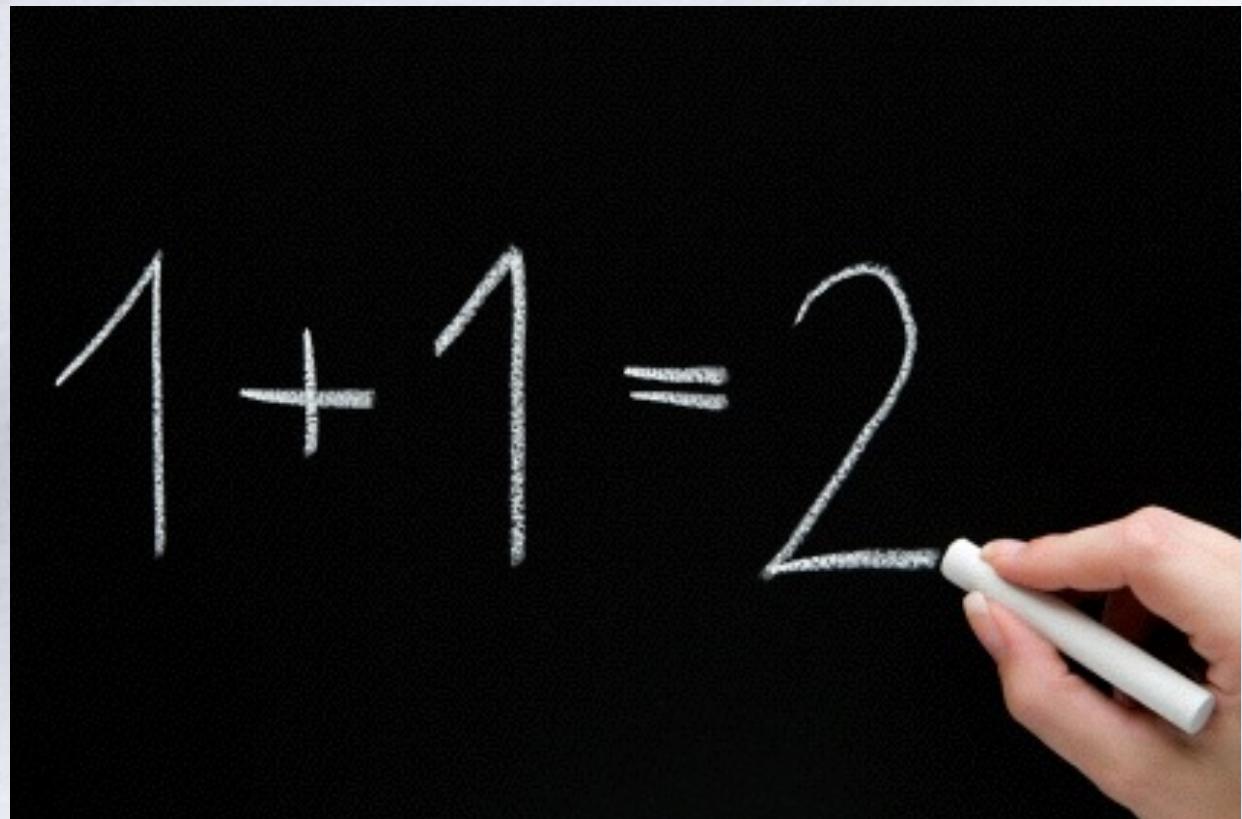


HTML5

```
<input type=email required>
```

2) HTML5 Simplifies

* Because HTML5 is, well, simpler



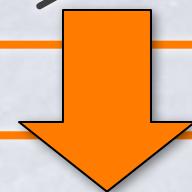
Simplified Doctype

HTML4/XHTML

- HTML 4.01 Strict
- HTML 4.01 Transitional
- HTML 4.01 Frameset
- XHTML 1.0 Strict
- XHTML 1.0 Transitional
- XHTML 1.0 Frameset
- XHTML 1.1



```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01  
Transitional//EN"  
"http://www.w3.org/TR/html4/loose.dtd">
```



HTML5

```
<!DOCTYPE html>
```

Simplified Character Set

HTML4

```
<meta http-equiv="Content-Type"  
content="text/html; charset=utf-8">
```



HTML5

```
<meta charset=utf-8>
```

Simplified Markup

HTML5

```
<!DOCTYPE html>  
<meta charset=utf-8>  
<title>HTML5</title>  
<h1>HTML5!</h1>
```

70 characters!

DOM

```
<!DOCTYPE html>  
└<html>  
  └<head>  
    <meta charset="utf-8">  
    <title>HTML5</title>  
  </head>  
  └<body>  
    <h1>HTML5!</h1>  
  </body>  
</html>
```

3) HTML5 is Universal

Because HTML5
works in all
languages and
accessibility is built in
from the ground up



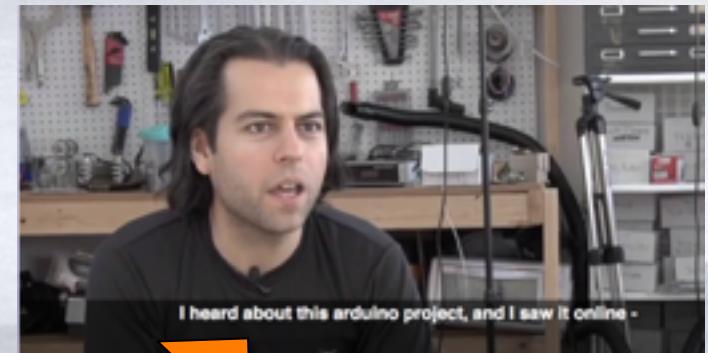
Universal Access

- * Support for all world languages

- * For example, the new <ruby> element

- * Accessibility

- * Semantic markup
 - * WebVTT



```
<video controls  
      preload="metadata">  
  <source src="rocpoc.mp4">  
  <track label="English"  
        kind="subtitles"  
        src="subtitles_en.vtt">  
</video>
```

WEBVTT

1
00:00:01,000 --> 00:00:03,050
What do I think about HTML 5?...

2
00:00:04,000 --> 00:00:07,100
It's pretty sweet. I just hope that
people use the new features
thoughtfully.

[http://html5videoguide.net/presentations/
WebVTT](http://html5videoguide.net/presentations/WebVTT)

4) HTML5 Means Less Plugins

Because HTML5 provides native support for many features that were possible only with plugins or complex hacks (audio/video, drawing, sockets)



Plugins are on the way out

- ❖ Built-in is better than bolt-on —@brucel
- ❖ Plugins may not be installed (for long)
- ❖ Plugins can be an attack vector (Proxy poisoning)
- ❖ “Whenever a Mac crashes, more often than not is because of Flash” —Steve Jobs

[Home](#) > [Industry News](#) > [Adobe kills mobile Flash, blames iPhone and iPad, "Occupy Flash" rises](#)

Adobe kills mobile Flash, blames iPhone and iPad, "Occupy Flash" rises

November 14, 2011 by Bill Palmer

by Bill Palmer

Data Storage Solutions

Best-in-class data storage products for AV, Enterprise and Home Users.
www.onmarktech.com

AddThis 



Adobe has discontinued its much maligned Mobile Flash Player software for smartphones and tablets, after years of bizarrely pushing forward with the the 1990s-era web development tool still had a place in the twenty-first century. Long after the internet had passed it by. But just when it was starting to lose its grip, Adobe finally figured out what everyone else had known about Flash for a long time: the company had to go and crush that notion by stating that it only killed off Flash because Apple's refusal to allow the buggy and resource-hogging plugin onto its iPhone and iPad. In other words, Adobe never did figure out that

News

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 print

Microsoft has Abandoned Silverlight and All Other Plugins in Metro IE

Posted by Jonathan Allen on Sep 15, 2011

Sections Development Topics [Silverlight](#) , [.NET](#) , [Javascript](#) , [HTML5](#) , [Web 2.0](#) Tags [Windows 8](#) , [Flash](#)

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Though it has been hard, we have been trying to avoid reporting on rumors about the death of Silverlight for quite some time. As in all things, rumors tend to be exaggerated or out-right false. A good example of this is the idea that Web Forms has entered maintenance mode and would never be updated to HTML5. Unfortunately the end of Silverlight is no rumor; if Microsoft doesn't change course it, as well as Flash and other plugin technologies, will be effectively unusable when Windows 8 is released.

<http://goo.gl/mzFjM>

<http://www.infoq.com/news/2011/09/Metro-Plug-ins>

5) HTML5 is Secure by Default

- * HTML5 uses origin-based security
- * Defines secure cross-origin sharing
- * Issues in HTML5 are fixed quickly



enable cross-origin resource sharing

What is this about?

Cross-Origin Resource Sharing (CORS) is a [specification](#) that enables a truly open access across domain-boundaries. With this site we want to support the adoption of CORS. [\[more...\]](#)

If you have [public content](#) that doesn't use require cookie or session based authentication to see, then please consider opening it up for universal JavaScript/browser access. [\[more...\]](#)

Why is CORS important?

<http://enable-cors.org/>

How to choose

* Native App

- * 提供最佳的用户体验，最优质的用户界面，最华丽的交互；针对不同平台提供不同体验；可节省带宽成本；可访问本地资源；盈利模式明朗
- 移植到不同平台上比较麻烦；维持多个版本的成本比较高；需要通过**store**或**market**的确认；盈利需要与第三方分成

* Web App

- * **Write once, run anywhere**
- * 开发成本低；适配多种移动设备成本低；跨平台和终端；迭代更新容易；无需安装成本
- 浏览的体验短期内还无法超越原生应用；不支持离线模式（**html5**将会解决这个问题）；消息推送不够及时；调用本地文件系统的能力弱

* Hybrid App

- ✿ Hybrid App is a mobile application that is coded in both browser-supported language and computer language. They are available through application distribution platforms such as the Apple App Store, Google Play etc. Usually, they are downloaded from the platform to a target device, such as iPhone, Android phone or Windows Phone. The subscribers need to install to run them.
- ✿ 用户可以离线使用
- ✿ 更新下载量及少，可以全部更新，也可以选择替换部分文件
- ✿ 代码很安全安全，众所周知Web应用有一个很大的问题就是代码安全的问题，但现在我们可以将Web代码全部加密，本地应用解密后再运行，大大的提供了代码的安全性。
- ✿ 可以通过浏览器作为中介充分利用Native的好处，比如说可以使用GPS、照相机、本地相册、读取本地联系人，也可以使用推送功能等，最重要的是，某些Web无法实现的功能，我们可以利用Native来实现。
- ✿ 跨平台，多数核心代码不用重写，Javascript的代码用得好的话，在许多地方都可以用到，包括移动应用、移动网站、PC网站、各种浏览器插件，甚至可以用WebKit封装作为跨平台的应用程序。诚然，这种方式并非完全跨平台，但这样也足以减少很多工作量了，特别是后期的维护。而且完全的跨平台是没有意义的，不同平台有自己的风格，为了更好的用户体验，界面层还是需要针对性开发的。
- 最大的坏处是技术难度高
- 就是它不能满足所有的需要，并不能代替Native

HTML5 Feature Areas



Semantics



CSS3



Multimedia



Graphics & 3D



Device Access



Performance



Offline & Storage



Connectivity

HTML5 At a Glance



Semantic Markup & Microdata



New HTML5 Elements

Layout (semantics)		Multimedia	Other
article	section	audio, video	command, menu*
aside	nav	source	embed
figure	figcaption		
header	footer	Graphics	Forms
details	summary	canvas	datalist
wbr	hgroup	svg	progress
time	mark		output
meter	ruby, rp, rt		keygen

* menu redefined from HTML 4

dev.w3.org/html5/markup/elements.html

Obsolete Elements

Presentational	Frames	Other
basefont	frame	acronym
big	frameset	applet
center	noframes	isindex
font		
strike		
tt		

<http://www.w3.org/TR/html5-diff/#obsolete-elements>

Semantic Markup Benefits

- ❄ Based on research (Opera, Google studies on commonly used div class and id names)
- ❄ Cleaner, less verbose markup (replace div and span elements with meaningful elements)
- ❄ Machine readable:
 - * Search engines
 - * Syndication
- ❄ Linking and sharing

Semantic Markup

Header

Subtitle

Nav

Link 1

Link 2

Link 3

Link 4

Link 5

Article Header

HTML5 nunc aut nunquam sit amet, consectetur adipiscing elit. Vivamus at est eros, vel fringilla urna. Pellentesque odio diam, rhoncus nec congue in, Class aptent taciti sociosqu ad litora torquent per conubia nostra. Per inceptos himenaeos. Quisque feugiat, justo at vehicula pellentesque, turpis lorem dictum nunc...

Article Footer

Article Header

figure and figcaption



Article Footer

Aside

HTML5: "Lorem ipsum dolor nunc aut nunquam sit amet, consectetur adipiscing elit. Vivamus at est eros, vel fringilla urna. Pellentesque odio diam, rhoncus nec congue in, pellentesque sed tortor. Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos himenaeos. Quisque feugiat, justo at vehicula pellentesque, turpis lorem dictum nunc."

Footer

Moving to Structural/ Semantic Markup

- ❖ Identify functional areas / use structural tags
- ❖ Separate content from presentation
 - * Move styles to CSS file
 - * Use a reset stylesheet
 - * Consider a grid system for layout
- ❖ Consider alternate layouts (e.g. mobile)

The screenshot shows the Kaazing website homepage. At the top, there is a navigation bar with links: PRODUCTS, DOWNLOAD, DEMO, TECH, NEWS, SUPPORT, ABOUT US, and CONTACT. To the right of the navigation is the word "nav". Below the navigation is a large orange banner with the text "Kaazing. Connect. Everything." and "HTTP got you to the Web. Kaazing gets everything else around you connected in ways that you could only imagine — until today." It also features a "Download Kaazing WebSocket Gateway" button. The main content area has a heading "section" and a sub-section "article". On the left, there is a sidebar with "News & Events" and a link to "GOTO, Aarhus, Denmark - October 19, 2011". On the right, there are social media icons for Facebook, Twitter, LinkedIn, and YouTube. A sidebar on the right contains several badges: "F5 KAAZING WEB SOCKET GATEWAY DOWNLOAD", "Gartner | 2011 COOL VENDOR", "HTML5 TRAINING", and "HTML5 LIVE". Text at the bottom right indicates events: "Coming to LONDON - OCT 19, 2011" and "and NEW YORK - NOV 1, 2011".

Home | Products | Download | Demo | Tech News | Support | About Us | Contact Us | Sitemap
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footer + nav

Details Element

HTML

```
<!-- Progressive Information Disclosure -->
<details>
  <summary>What are my download options?</summary>
  <ul>
    <li><strong>Base:</strong> Contains a minimal
       download...</li>
    <li><strong>Full:</strong> Contains the Base
       download plus documentation and demos.</li>
  </ul>
</details>
```

Progressive Info. Disclosure

To set up the Gateway on your local computer, perform the following steps:

1. Ensure your system meets the system requirements. See the [README.txt](#) file for specific environment and operating system information.
2. Download the full Kaazing WebSocket Gateway - HTML5 Edition from the [Kaazing download](#) page.
 - ▶ [What are my download options?](#)
3. Unpack the Kaazing WebSocket Gateway distribution into a directory of your choice (for example, C:\kaazing or



To set up the Gateway on your local computer, perform the following steps:

1. Ensure your system meets the system requirements. See the [README.txt](#) file for specific environment and operating system information.
2. Download the full Kaazing WebSocket Gateway - HTML5 Edition from the [Kaazing download](#) page.

▼ [What are my download options?](#)

- **Base:** Contains a minimal download of the Gateway for experienced users who are ready to use the Gateway in production.
- **Full:** Contains the Base download plus the Gateway documentation and the services needed to run the Gateway demos.

3. Unpack the Kaazing WebSocket Gateway distribution into a directory of your choice (for example, C:\kaazing or

Valid HTML vs. Valid XHTML

* So you created XHTML...



This document was successfully checked as XHTML 1.0 Strict!

Result:	Passed
Address:	<input type="text" value="http://www.example.com/index.htm"/>
Encoding:	us-ascii <input type="button" value="detect automatically"/>
Doctype:	XHTML 1.0 Strict <input type="button" value="detect automatically"/>
Root Element:	html
Root Namespace:	http://www.w3.org/1999/xhtml

* But did you know that:

- * Over 90% of XHTML is delivered with the text/html
- * Delivering XHTML as application/xhtml+xml is risky (not supported in old IE)

* Instead, use HTML5 and create valid HTML

- * <http://html5.validator.nu/> and <http://validator.w3.org>

* HTML5 allows XML syntax from XHTML 1.0 for backward compatibility

Microdata

- ❖ Emphasis on machine readability
- ❖ SEO advantages
- ❖ Use Microdata embed machine-readable data in HTML documents
- ❖ Easy-to-write syntax (add to any element)
- ❖ Compatible with other data formats such as RDF and JSON
- ❖ Use microdata vocabularies:
<http://data-vocabulary.org>



HTML5 Microdata Example

HTML

```
<section itemscope>
  <article id="html5-fast-track"
            itemtype="http://data-vocabulary.org/Product">
    <header>
      <h1 itemprop="name">HTML5 Fast Track</h1>
    </header>
    <p itemprop="description">The HTML5 Fast Track
      training course is a two day experience...
    </p>
  </article>
</section>
```

Microdata Testing

Google webmaster tools

Rich Snippets

Help with:

[Documentation](#)

[Troubleshooting Help](#)

Rich Snippets Testing Tool Beta

Use the Rich Snippets Testing Tool to check that Google can correctly parse your structured data.

Test your website

Enter a web page URL to see how it may appear in search results:

[Preview](#)

Examples: [Authors](#), [Reviews](#), [People](#), [Events](#), [Recipes](#), [Product](#)

Google search preview

[HP Officejet 6000 Wireless Printer | HP Official Store](#)

[www.shopping.hp.com/product/printer/inkjet/1/storefronts/C9295A%2523B1H](#) - [Cached](#)

     60 reviews - \$79.99 - In stock

The excerpt from the page will show up here. The reason we can't show text from your webpage is because the text depends on the query the user types.

Note that there is no guarantee that a Rich Snippet will be shown for this page on actual search results.

Extracted Author for this page

Page does not contain authorship information ([learn more](#))

Extracted rich snippet data from the page

```
hproduct
  availability = In stock
  fn = HP Officejet 6000 Wireless Printer
  identifier
    type = SKU
    value = C9295A#B1H
  price = 79.99
  review hreview-aggregate
    item fn = HP Officejet 6000 Wireless Printer
    rating
      average = 3.5
    count = 60
```

<http://www.google.com/webmasters/tools/richsnippets>

HTML5 Forms

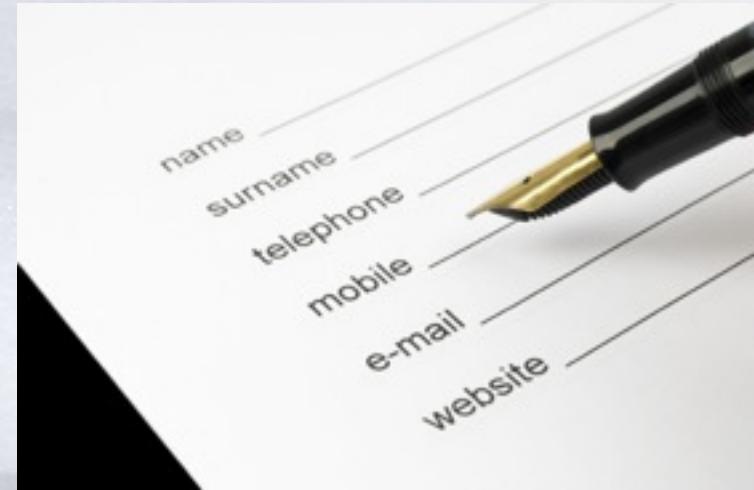
* New form functionality:

- * No JavaScript required
- * Native date and color pickers
- * Search, e-mail, web address
- * Client side validation
- * Spin boxes and sliders

* Features degrade gracefully 旧浏览器中新的表单控件会平滑降级(unknown input types are treated as text)

* Benefits:

- * Virtual keyboard support
- * Native widgets and error messages are internationalized



Build Mobile Web with HTML5

* Advanced Forms in Mobile

```
<input type="number" pattern="[0-9]*" />
<input type="email" required />
<input type="url" />
<input type="tel" />
<input type="time" />
<input type="date" />
<input type="month" />
<input type="week" />
<input type="datetime" />
<input type="datetime-local" />
<input type="color" />
```



[http://jquerymobile.com/demos/1.1.0-rc.1/
docs/forms/textinputs/](http://jquerymobile.com/demos/1.1.0-rc.1/docs/forms/textinputs/)

Example HTML5 Form

HTML

```
<form>
  <p><label for="phone">Telephone number:</label>
    <input type=tel
      placeholder="(xxx) xxx-xxx" required></p>
  <p><label for="emailaddress">E-mail address:</label>
    <input id="emailaddress" name="emailaddress"
      type=email required></p>
  <p><label for="dob">DOB:</label><input id="dob"
      name="dob" type=date value=1944-06-06
      max=1992-05-01></p>
  <p><label for="color">Shirt Color:</label>
    <input id="color" name="color" type="color"></p>
```

New Input Types

Runner: @peterlubbers

Tel #: 1-877-KAAZING

E-mail: peter

DOB: 1944-06-06 Please enter a valid email address

T-shirt Size:

Small

Medium

Large

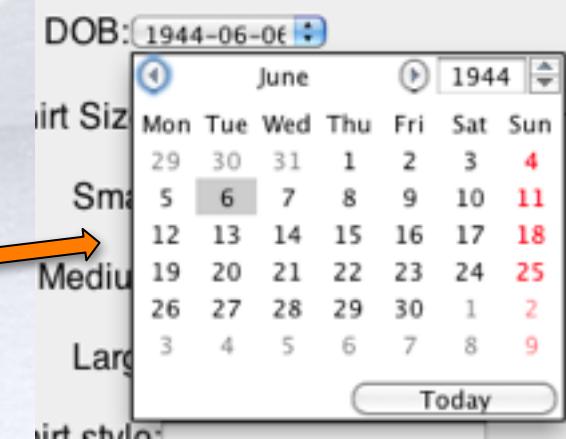
Shirt style: _____

Shirt Color: 

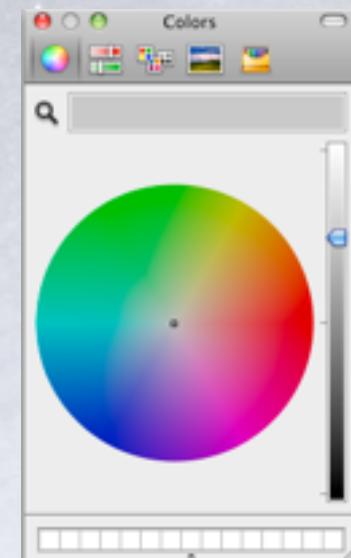
Expectations: _____

Confidence:  0%

Notes: _____



Date picker



Color picker

Multimedia



HTML5 Audio and Video

- ❖ New HTML5 media elements
 - ❖ <audio> and <video>
- ❖ Native audio and video (no plugins required)
 - ❖ Programmable with JavaScript
 - ❖ Style with CSS
- ❖ Add videos and audio as if it was an image
- ❖ Codec support varies, but multiple source elements and fallback
- ❖ content can be used
 - ❖ Complete JavaScript API available



HTML5 Video Example

HTML

```
//Basic Video
<video controls src="goldrush.mp4">
    A movie about HTML5
</video>

// Video with additional attributes
<video id="movies"
    controls preload="metadata"
    width="400px" height="300px"
    poster="html5.png" >
    <source src="goldrush.webm">
    <source src="goldrush.mp4">
    <track label="English" kind="subtitles"
        srclang="en" src="subtitles_en.vtt">
    A movie by Rocky Lubbers
</video>
```

Graphics and 3D



HTML5 Canvas and SVG

- ❖ Provide native drawing functionality
 - * Previously possible only with plugins (Flash, Silverlight)
- ❖ Completely integrated into HTML5 documents (part of DOM)
 - * Can be styled with CSS
 - * Can be controlled with JavaScript
- ❖ Use for animation, charts, images, pixel manipulation, and so on
- ❖ Canvas supports 2D and 3D (WebGL)
- ❖ Will impact animated graphics and diagrams soon (use libraries)



Build Mobile Web with HTML5

* Graphic Drawing - Canvas & SVG

<http://jsfiddle.net/adamlu/xFR4V/>

<http://jsfiddle.net/adamlu/W67j8/>

<http://www.limejs.com/static/roundball/index.html>

Table 1. XML elements for creating SVG graphics

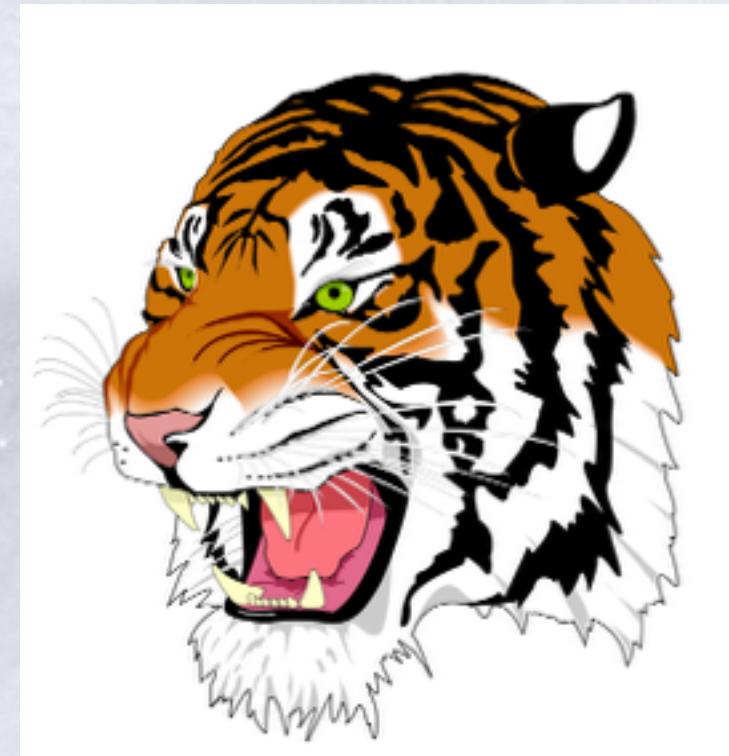
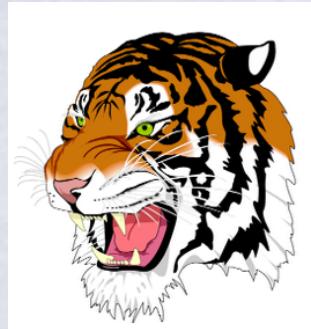
Element	Description
line	Creates a simple line.
polyline	Defines shapes built from multiple line definitions.
rect	Creates a rectangle.
circle	Creates a circle.
ellipse	Creates an ellipse.
polygon	Creates a polygon.
path	Allows for the definition of arbitrary paths.

```
<canvas id="a" width="300" height="225"></canvas>
var a_canvas = document.getElementById("a");
var a_context = a_canvas.getContext("2d");
a_context.fillRect(50, 25, 150, 100);

<svg xmlns="http://www.w3.org/2000/svg"
version="1.1">
  <circle cx="100" cy="50" r="40" stroke="black"
stroke-width="2" fill="red" />
</svg>
```

SVG

* "Scalable" Vector Graphics (not bitmaps)



[http://www.croczilla.com/bits_and_pieces/svg/
samples/tiger/tiger.svg](http://www.croczilla.com/bits_and_pieces/svg/samples/tiger/tiger.svg)

Device Access



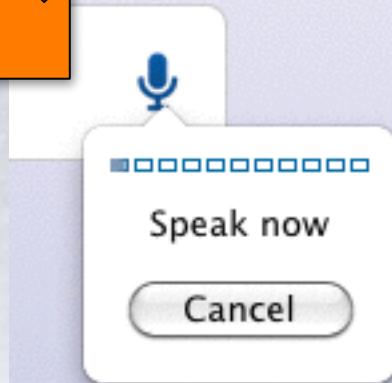
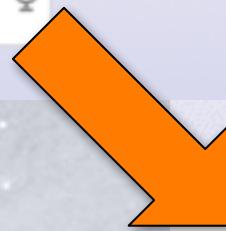
Speech Input

HTML

Speech Input

```
<input type="text" x-webkit-speech />
```

html5



<http://slides.html5rocks.com/#speech-input>

Accelerometer/WebSocket



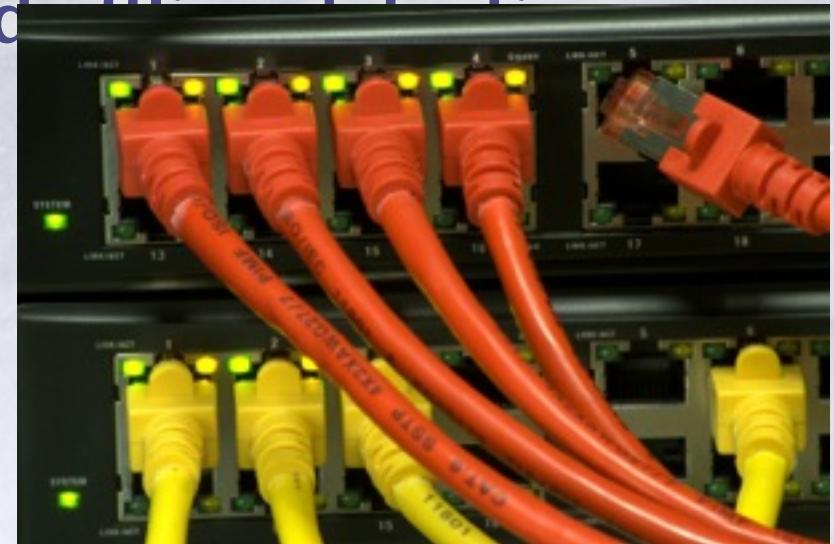
<http://demo.kaazing.com/racer/>

Offline and Storage



Offline Web Applications

- ❖ Use complete web sites (documentation sets) in offline mode
- ❖ Cache pages that have not been visited yet
- ❖ Browsers cache data in an Application Cache
- ❖ HTML5 allows online and offline state
- ❖ Allows prefetching of site resources (can speed up pages)
- ❖ Simple manifest mechanism



CSS3



CSS Level 3

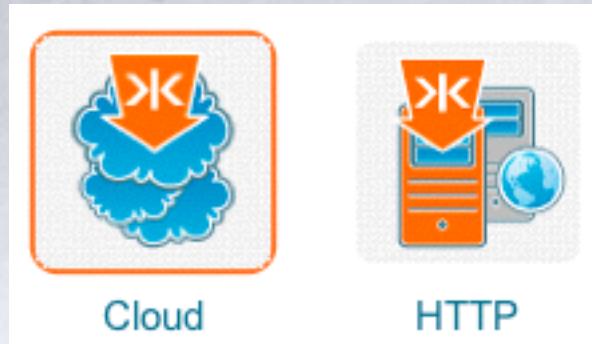
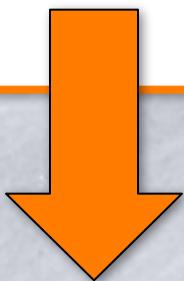
- * Modularized for easier browser uptake
- * Almost 50 modules (readiness varies)
- * Use browser-specific prefixes until finalized
- * Dramatically improves performance
- * Examples:
 - * Border radius (rounded corners) without images
 - * Gradients
 - * Multi-column layout
 - * Transformations and transitions
 - * Web Fonts
 - * Media Queries



Rounded corners

CSS

```
a:hover img {  
    border-radius: 10px;  
    border: 2px solid #F47D31;  
    -webkit-transform: scale(1.05);  
}
```

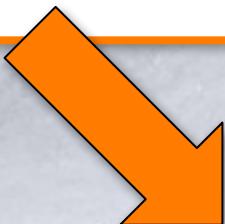


HTML4
css Sprites

Web Fonts

HTML

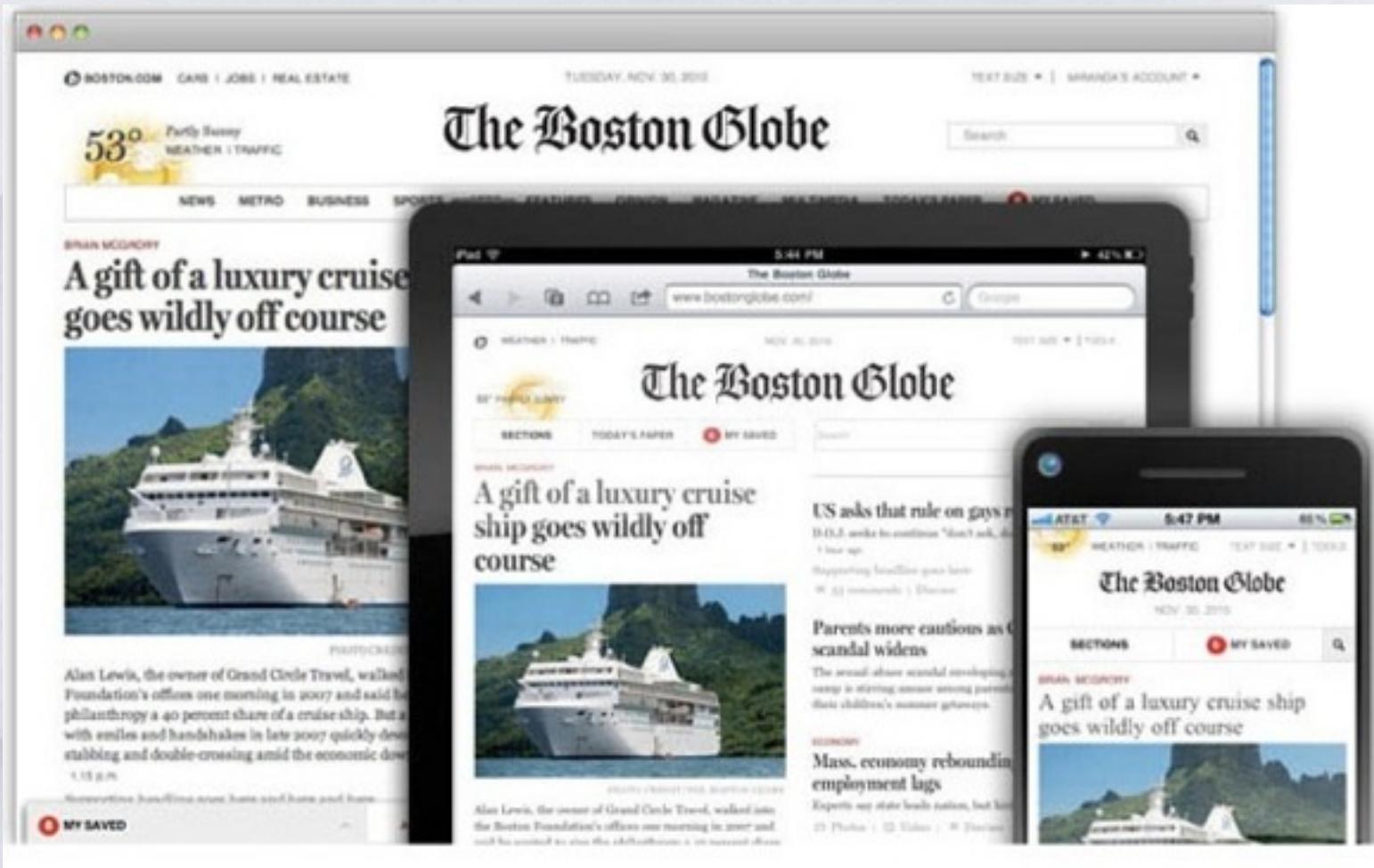
```
<html>
<head>
  <link rel="stylesheet" type="text/css" href="http://
fonts.googleapis.com/css?family=Tangerine">
  <style>
    h1 {
      font-family: 'Tangerine', serif;
      font-size: 48px;
    }
  </style>
</head>
<body><h1>Making the Web Beautiful!</h1></body>
```



Making the Web Beautiful!

http://code.google.com/apis/webfonts/docs/getting_started.html#Quick_Start

Responsive Web Design



<http://www.boston.com/bostonglobe/features/>

Nowadays

- ❖ Different Platform:Windows,Mac,Linux,iOS,Android,W P 7,WebOS,Chrome OS...
- ❖ Plenty of devices
- ❖ Multiple resolutions
- ❖ Landscape & portrait
- ❖ Smart devices increasing quickly.
- ❖ Cloud Computing,browser is the future,iOS5 take Nitro engine to web app

The screenshot shows a mobile phone displaying the news.sina.com.cn website. At the top, the address bar reads "news.sina.com.cn". The status bar indicates "EN 3G" and the time "12:21".

The main content area displays a news article titled "中方反对雅典奥运会火炬侵权更迭 专题" (Chinese opposition to Athens Olympic torch relay rights infringement). The article discusses the Chinese government's stance on the torch relay rights and includes a photo of a group of people.

On the left side, there is a sidebar with sections like "每日佳图" (Daily Good Pictures), "每日视频" (Daily Videos), and "每日微博" (Daily Weibo). On the right side, there are columns for "热点专题" (Hot Topic Special), "推荐文章" (Recommended Articles), and "特别报道" (Special Report).

A prominent banner at the top of the page says "拼梦不如拼微盘 求职精英自得成功!" (Pursue dreams instead of micro-dreams, career elites achieve success!).

The overall layout is typical of a news portal's mobile version, designed for easy reading on a small screen.



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"The best of [vegan recipes](#), via my favorite design blog @daringgourmet <http://t.co/2RQ8qzCm>"

[Join the Conversation](#)

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2012's Best Summer Cookbooks

With the best of the season coming from "orchards, farms and gardens," 2012 has put together an impressive

How to Make Vegetable Chips

About a month ago, I ate almost an entire box of kale chips. My brother and I were visiting our cousin in Brooklyn, and

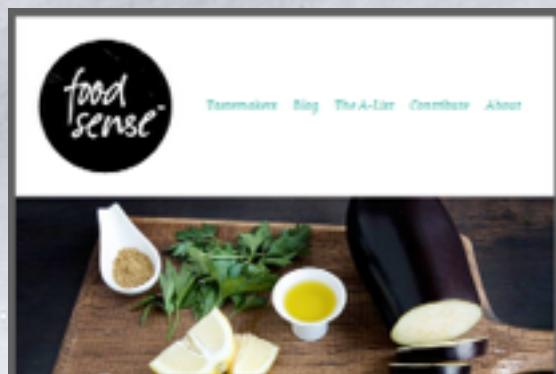
Join us on Pinterest!

If I could curate a cookbook for you, this would be it.

May 16, 2012 / [Read »](#)

Recipes from a Sunday Supper

I could not figure out what to do with the delectable slices of Pear Cake that I brought home from this wonderful



Read, Learn, Share

响应式Web设计(Responsive Web Design)

- * Recently, an emergent discipline called “responsive architecture” has begun asking how physical spaces can respond to the presence of people passing through them. Through a combination of embedded robotics and tensile materials, architects are experimenting with art installations and wall structures that bend, flex, and expand as crowds approach them. Motion sensors can be paired with climate control systems to adjust a room’s temperature and ambient lighting as it fills with people. Companies have already produced “smart glass technology” that can automatically become opaque when a room’s occupants reach a certain density threshold, giving them an additional layer of privacy.(<http://www.alistapart.com/articles/responsive-web-design/>)
- * Responsive web design (RWD) is a web design approach aimed at crafting sites to provide an optimal viewing experience—easy reading and navigation with a minimum of resizing, panning, and scrolling—across a wide range of devices (from mobile phones to desktop computer monitors).
– – Ethan Marcotte

Fluid Grid

* Fluid grid:using percentage length

The screenshot shows a web browser displaying the "Fluid 960 Grid System" website at www.designinfluences.com/fluid960gs/. The page title is "Fluid 960 Grid System". Below the title, there are tabs for "Fluid 12-column", "Fluid 16-column", "Fixed 12-column", "Fixed 16-column", "Download / Forum", and "The 960 Grid System". The main content area is titled "Templates for Rapid Interactive Prototyping" and contains four columns: "DESIGN PROCESS", "DESIGN INFLUENCES", "INSPIRATION", and "CONTRIBUTION". The "DESIGN INFLUENCES" section includes a paragraph about the concept of "design influences" as both noun and verb. The "INSPIRATION" section lists several individuals who have inspired the creator. The "CONTRIBUTION" section details how the templates were built on the work of Nathan Smith and his 960 Grid System. At the bottom of the page, the browser's developer tools are open, specifically the Elements tab, which shows the HTML structure of a grid item. The CSS panel displays a rule for ".grid_4" with a width of 23%, and the Scripts panel shows the file "grid.css" being loaded.

```
<div class="grid_4"></div>
<div class="clear"></div>
<div class="grid_4"></div>
```

element.style {
}
Matched CSS Rules:
media="screen"
.container_12 .grid_3, .container_16 .grid_4 {
width: 23%;
}
media="screen"
.grid_1, .grid_2, .grid_3, .grid_4, .grid_5, .grid_6, .grid_7, .grid_8, .grid_9, .grid_10, .grid_11, .grid_12, .grid_13, .grid_14, .grid_15, .grid_16 {
display: inline;
float: left;

s/

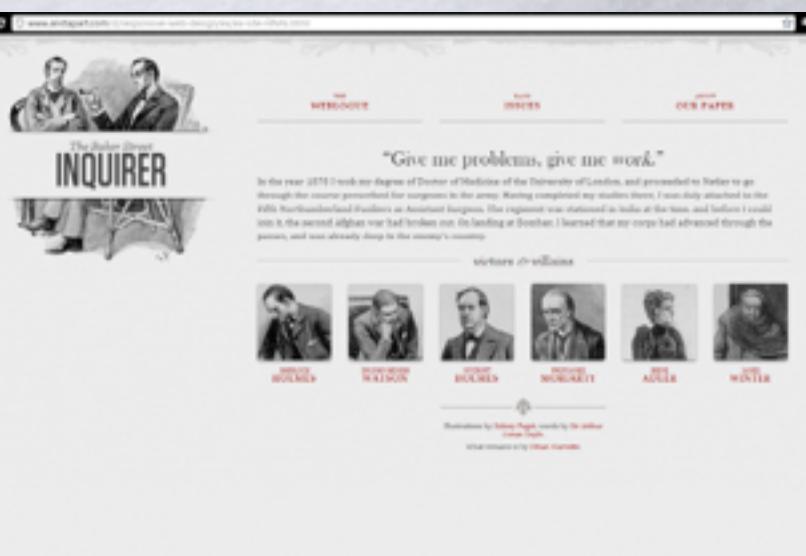
Liquid Image

- * Does the image convey information that I ought to put as text in an alt attribute?
 - * Do I want to make sure the image always prints because without it the printout wouldn't make sense or be complete?
 - * Do I want to link the image?
-
- * If the answer to any of these questions is yes, the image is content and should be kept in the (X)HTML.



Css3 media queries

```
@media (max-width: 400px) {  
    .figure,  
    li#f-mycroft {  
        margin-right: 3.317535545023696682%; /* 21px / 633px */  
        width: 48.341232227488151658%; /* 306px / 633px */  
    }  
}  
  
@media (min-width: 1300px){  
    .figure,  
    li#f-mycroft {  
        margin-right: 3.317535545023696682%; /* 21px / 633px */  
        width: 13.902053712480252764%; /* 88px / 633px */  
    }  
}
```



The mobile version of the website features a sidebar on the left containing a portrait of Holmes and Watson, and the title "INQUIRER". The main content area has a header with "THE SHERLOCK HOLMES INQUIRER" and "INTRODUCE YOURSELF". Below this is a section titled "Give me problems, give me work." with a paragraph of text. At the bottom, there are six small portraits labeled "ADLER", "BARTHOLMEW", "BOSCHEK", "MORIARTY", "WATSON", and "WINTER". A note at the bottom states "Illustrations by Sidney Paget, words by Sir Arthur Conan Doyle. © 2010 The Sherlock Holmes Inquirer, Inc."



The desktop version of the website features a sidebar on the left with the "INQUIRER" logo and navigation links for "THE INQUIRER", "OUR TEAM", and "OUR PAPER". The main content area has a header with "THE SHERLOCK HOLMES INQUIRER" and "INTRODUCE YOURSELF". Below this is a section titled "Give me problems, give me work." with a paragraph of text. At the bottom, there are six small portraits labeled "ADLER", "BARTHOLMEW", "BOSCHEK", "MORIARTY", "WATSON", and "WINTER". A note at the bottom states "Illustrations by Sidney Paget, words by Sir Arthur Conan Doyle. © 2010 The Sherlock Holmes Inquirer, Inc."



The desktop version of the website features a sidebar on the right with the "victors & villains" heading and two columns of three portraits each. The top row shows "SHERLOCK HOLMES" and "DR JOHN MORIAR WATSON". The middle row shows "ADLER" and "MORIARTY". The bottom row shows "BARTHOLMEW" and "WINTER". A note at the bottom states "Illustrations by Sidney Paget, words by Sir Arthur Conan Doyle. © 2010 The Sherlock Holmes Inquirer, Inc."

Responsive Design in 3 Steps

– Step 1

- * **Meta Tag** Most mobile browsers scale HTML pages to a wide viewport width so it fits on the screen. You can use the viewport meta tag to reset this. The viewport tag below tells the browser to use the device width as the viewport width and disable the initial scale. Include this meta tag in the <head>.

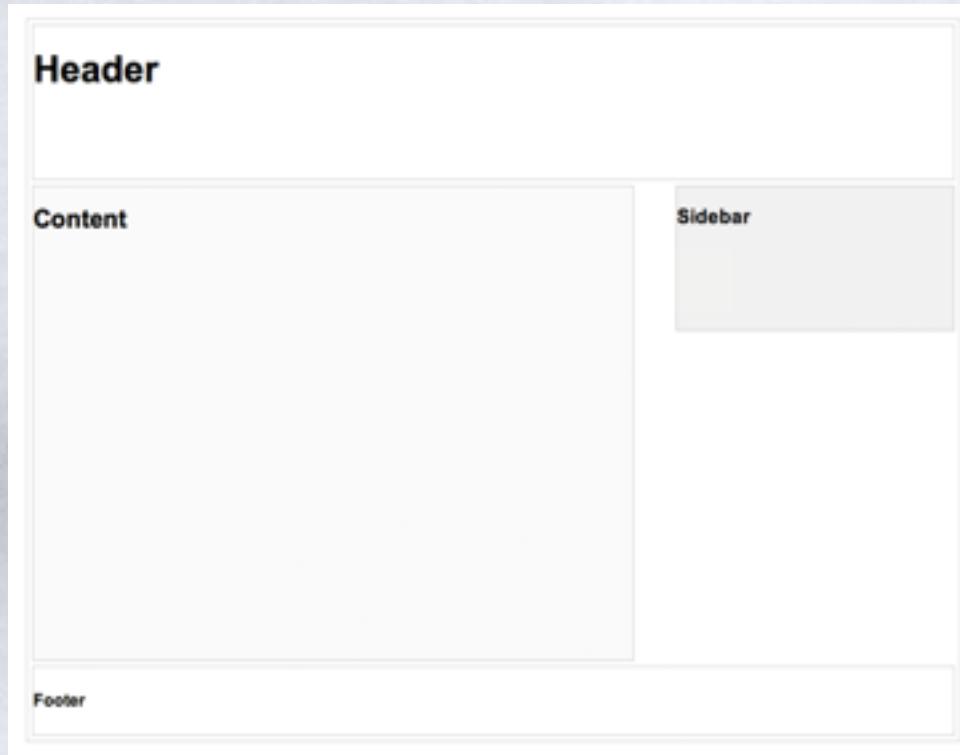
```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```

- * Internet Explorer 8 or older doesn't support media query. You can use media-queries.js or respond.js to add media query support in IE.

```
<!--[if lt IE 9]>
    <script src="http://css3-mediaqueries-js.googlecode.com/svn/trunk/css3-
mediaqueries.js"></script>
<![endif]-->
```

Step 2 HTML Structure

* In this example, I have a basic page layout with a header, content container, sidebar, and a footer. The header has a fixed height 180px, content container is 600px wide and sidebar is 300px wide.



Step 3. Media Queries

- * CSS3 media query is the trick for responsive design. It is like writing if conditions to tell the browser how to render the page for specified viewport width.

```
/* for 980px or less */  
@media screen and (max-width: 980px) {  
  
    #pagewrap {  
        width: 94%;  
    }  
    #content {  
        width: 65%;  
    }  
    #sidebar {  
        width: 30%;  
    }  
  
}
```

These rules will be in effect if the viewport width is 980px or less

```
/* for 700px or less */  
@media screen and (max-width: 700px) {  
  
    #content {  
        width: auto;  
        float: none;  
    }  
    #sidebar {  
        width: auto;  
        float: none;  
    }  
  
}
```

Reset container to auto width

```
/* For 480px or less */  
@media screen and (max-width: 480px) {  
  
    #header {  
        height: auto;  
    }  
    h1 {  
        font-size: 24px;  
    }  
    #sidebar {  
        display: none;  
    }  
  
}
```

[http://webdesignerwall.com/tutorials/
responsive-design-in-3-steps](http://webdesignerwall.com/tutorials/responsive-design-in-3-steps)

Frameworks

* Bootstrap

- * Simple, fluid HTML/CSS/JS framework
- * from Twitter

Bootstrap, from Twitter

Simple and flexible HTML, CSS, and Javascript for popular user interface components and interactions.

* goldilocksapproach.com

- * Fixed width for medium & large screens,
fluid single column for small

The Goldilocks Approach

TO RESPONSIVE WEB DESIGN

33em

16em

* Foundation

- * Flexible 6 and 12-grid framework.

Foundation

An easy to use, powerful, and flexible framework for building prototypes and production code on any kind of device.
[Start here, build everywhere.](#)

* Skeleton

- * Minimal responsive framework.
- * Includes Wordpress theme.

Skeleton



* ...and plenty more

实用工具

- * **Respond.js**, 让IE6-8支持media query
- * **Responsive Design Testing** 简单而方便的测试网站的响应性的工具，输入网址即可看到网站在不同分辨率下的表现
- * **Resize My Browser** 缩放浏览器工具，不过不支持chrome和opera浏览器
- * **Media Query Bookmarklet** 顾名思义，这是一个关于media query的书签工具
- * **ProtoFluid** 在线查看和调试网站对移动终端兼容性的工具
- * **ScreenFly** 和ProtoFluid类似
- * **responsivepx** 更直观的测试网站对不同分辨率的适配性

The 2012 HTML5 Toolbox



Browser Support

- * Modern browsers (incl. mobile) already support a lot of features, :
 - * <http://html5test.com>
- * Support varies widely for different features
 - * IE 6,7 and 8: minimal support
 - * Use support matrices:
 - * <http://caniuse.com>
 - * <http://mobilehtml5.org>



Browser Developer Tools



Browser	Built-In Tool	Mac Shortcut	Windows Shortcut
Chrome	Developer Tools	Command + Option + J	CTRL + Shift + J
Firefox	Firebug	F12	F12
Opera	Dragonfly	Command + Option + I	CTRL + Shift + I
Safari	Web Inspector	Command + Option + I	CTRL + Alt + I
Internet Explorer	Developer Tools		F12

HTML5 Boilerplate

* The best way to get started



<http://html5boilerplate.com>

Modernizr



Part of H5BP



Download or create a custom build



Use Modernizr.load to test for feature support

The screenshot shows the Modernizr configuration interface with three main panels:

- CSS3**: Contains features like @font-face, background-size, border-image, border-radius, box-shadow, Flexible Box Model (flexbox), inline-block, multiple backgrounds, opacity, rgba(), text-decoration, CSS Animations, CSS Columns, CSS Generated Content, CSS Gradients, CSS Reflections, CSS 2D Transforms, CSS 3D Transforms, and CSS Transitions.
- HTML5**: Contains applicationCache, Canvas, Canvas Text, Drag & Drop, hashchange, History (pushState), HTML5 Audio, HTML5 Video, IndexedDB, Input Attributes, Note: does not test classes, Input Types, Note: does not test classes, localStorage, postMessage, sessionStorage, Web Sockets, Web SQL Database, and Web Workers.
- Misc.**: Contains Geolocation API, Inline SVG, SML, SVG, SVG clip paths, Touch Events, and WebGL.

Below these panels is a section titled "Extra" containing HTML5 Shim/EPP, Modernizr.load (yepnope.js), MQ Polyfill (respond.js), Media Queries, and Add CSS Classes.

At the bottom left is a button labeled "GENERATE!" with a gear icon.

320 and up



320 and up

A 'tiny screen first' boilerplate extension*

'320 and Up' prevents mobile devices from downloading desktop assets by using a tiny screen's stylesheet as its starting point. Try this page at different window sizes and on different devices to see it in action.

Responsibly responsive

Many CSS Media Queries boilerplates start with a desktop-specific stylesheet, then add queries and styles for progressively smaller viewports. This means that even the small browsers load desktop layout styles and potentially large assets, even when these are set to `display:none;`.

'320 and Up' starts with a tiny screen stylesheet that contains only reset, colour and typography styles. Media Queries then load assets and layout styles progressively and only as they're needed. Think of this as *responsible responsive design*.

One web



[Download '320 and Up'](#)
Version 0.9b
(zipped 95kb)

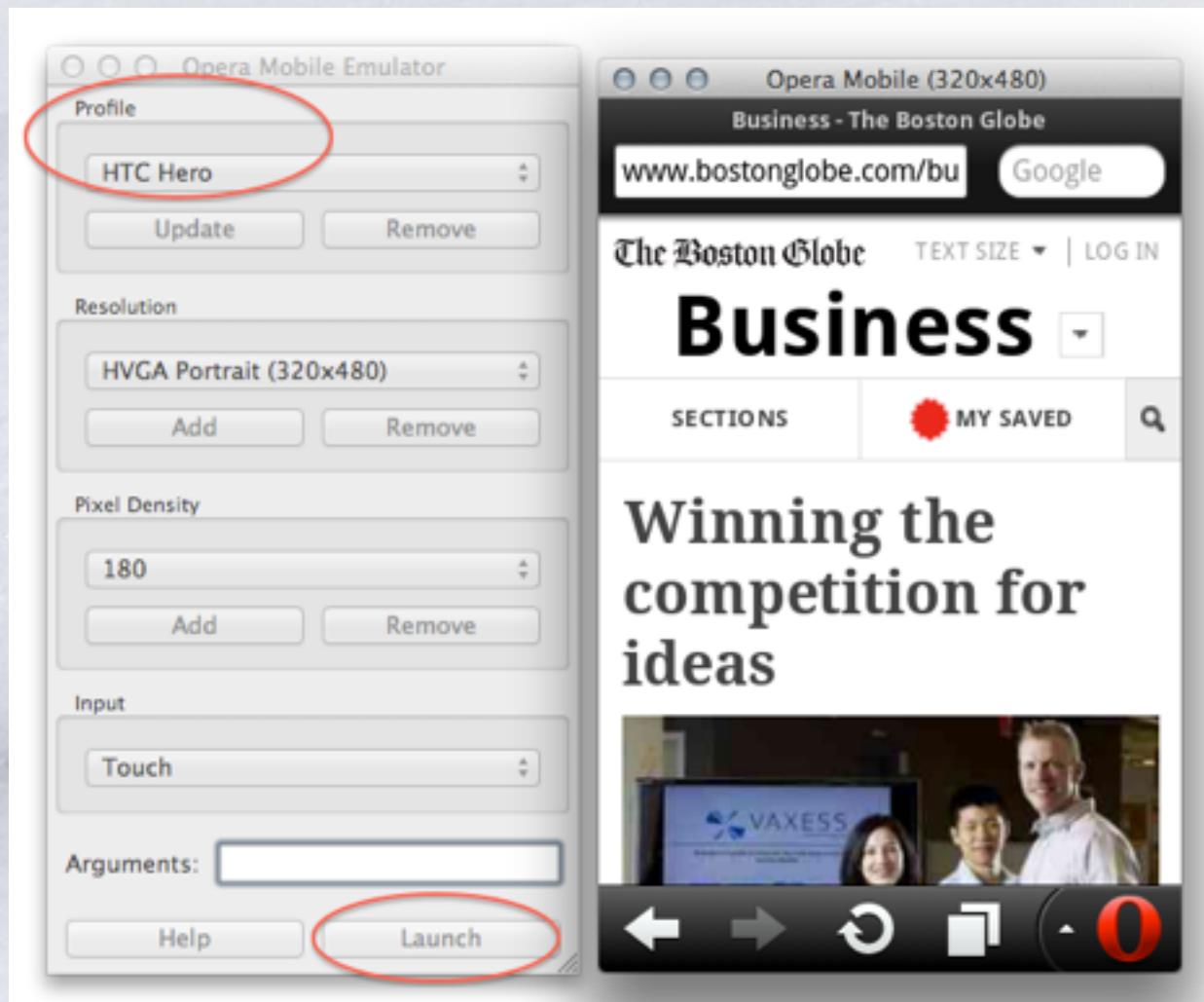
Download HTML5 Boilerplate
Choose either the [standard](#) or [mobile](#) boilerplate.

Replace these files and folders
404.html, index.html, /css/, /img/ and /js/ from HTML5 Boilerplate with '320 and Up'

* '320 and Up' works both as an extension to HTML Boilerplate and as a standalone kit.

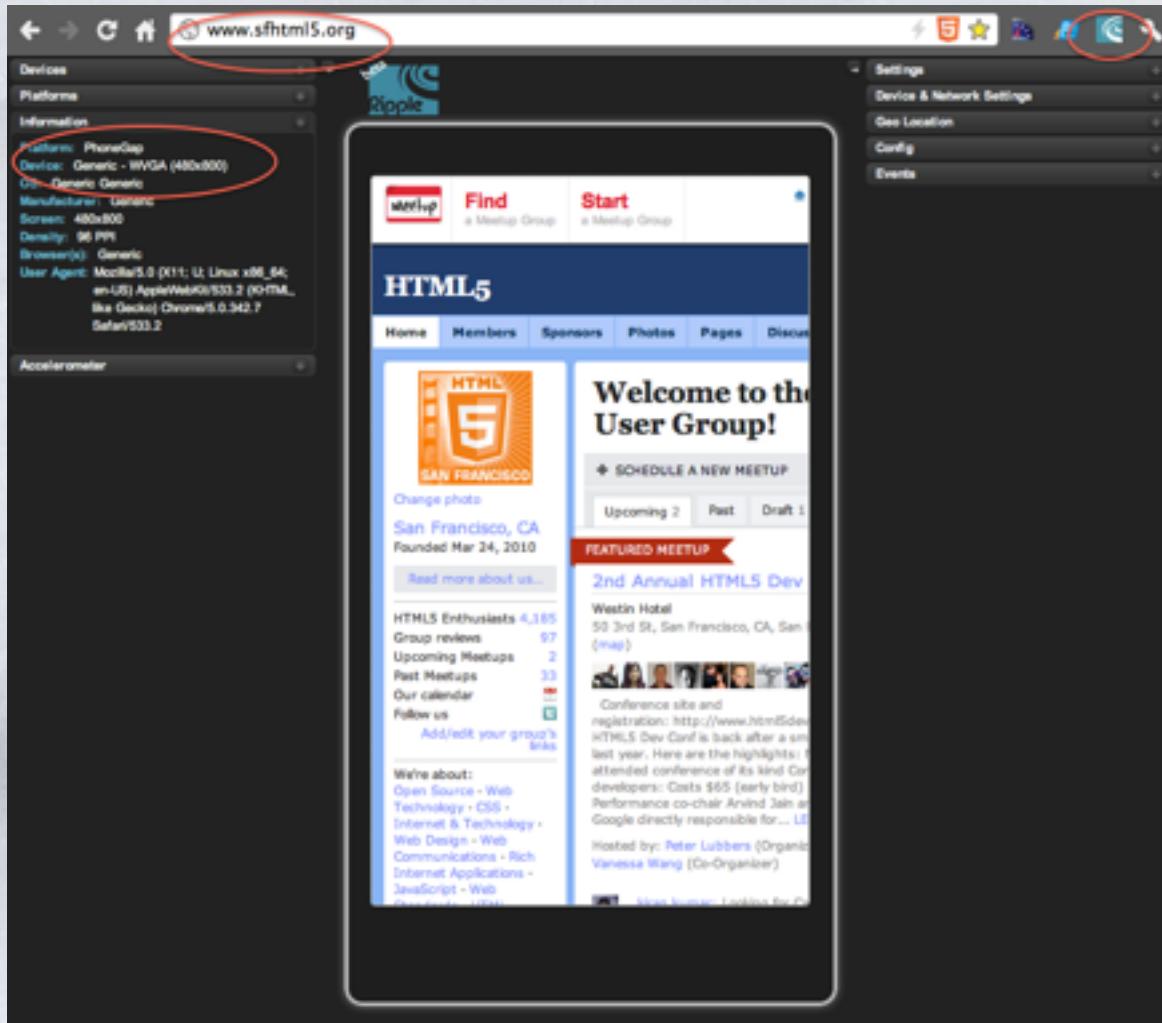
<http://stuffandnonsense.co.uk/projects/320andup>

Opera Mobile Emulator



<http://www.opera.com/developer/tools/mobile/>

Ripple Mobile Emulator



<http://ripple.tinyhippos.com/download>

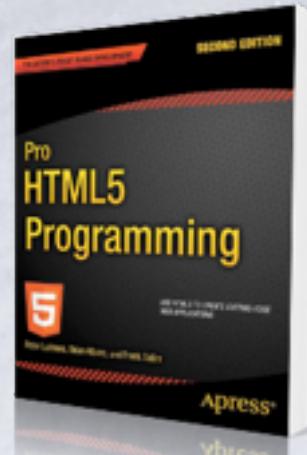
Who is Developing HTML5?

- * Web Hypertext Application Technology Working Group (WHATWG)
 - * <http://www.whatwg.org/specs/web-apps/current-work/>
- * World Wide Web Consortium (W3C)
 - * <http://dev.w3.org/html5/spec/Overview.html>
- * Internet Engineering Task Force (IETF)
 - * <http://tools.ietf.org/html/draft-hixie-thewebsOCKETprotocol>



References

- * Pro HTML5 Programming (Apress, 2011)
 - * 50% off e-book coupon code:
<http://www.apress.com/9781430238645>
- * <http://html5doctor.com/element-index/>



Thanks!!!

