

HTML5 and CSS3:

New Markup & Styles for the Emerging Web

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Overview

- Revolution or Evolution?
- New Features and Functions
- Demos
- Getting Started
- Questions

[pinboard.in #tag](#)

[pinboard.in/u:jasonclark/t:plan2011/](#)

Hello, My Name is...

- Background, Position
- HTML, Programming experience?
- Experience with CSS3?
- What do you want to learn most?

Terms: HTML, CSS, API

Does everybody know what these elements are?

CSS

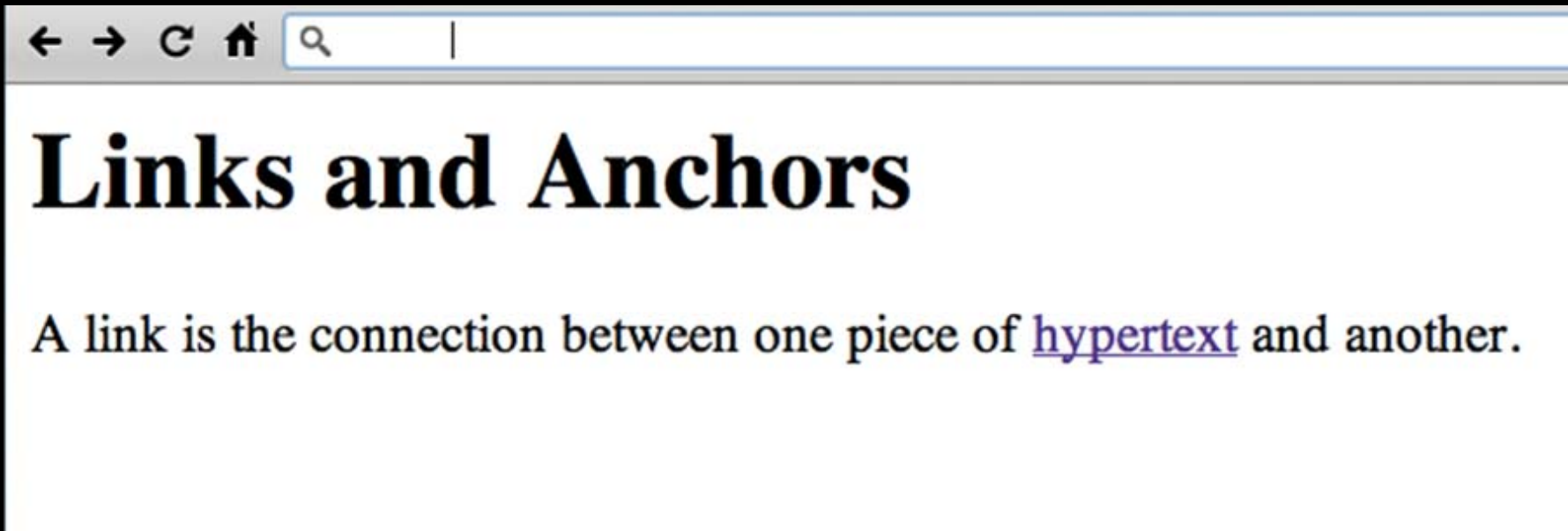
- style rules for HTML documents

HTML

- markup tags that structure docs
- browsers read them and display according to rules

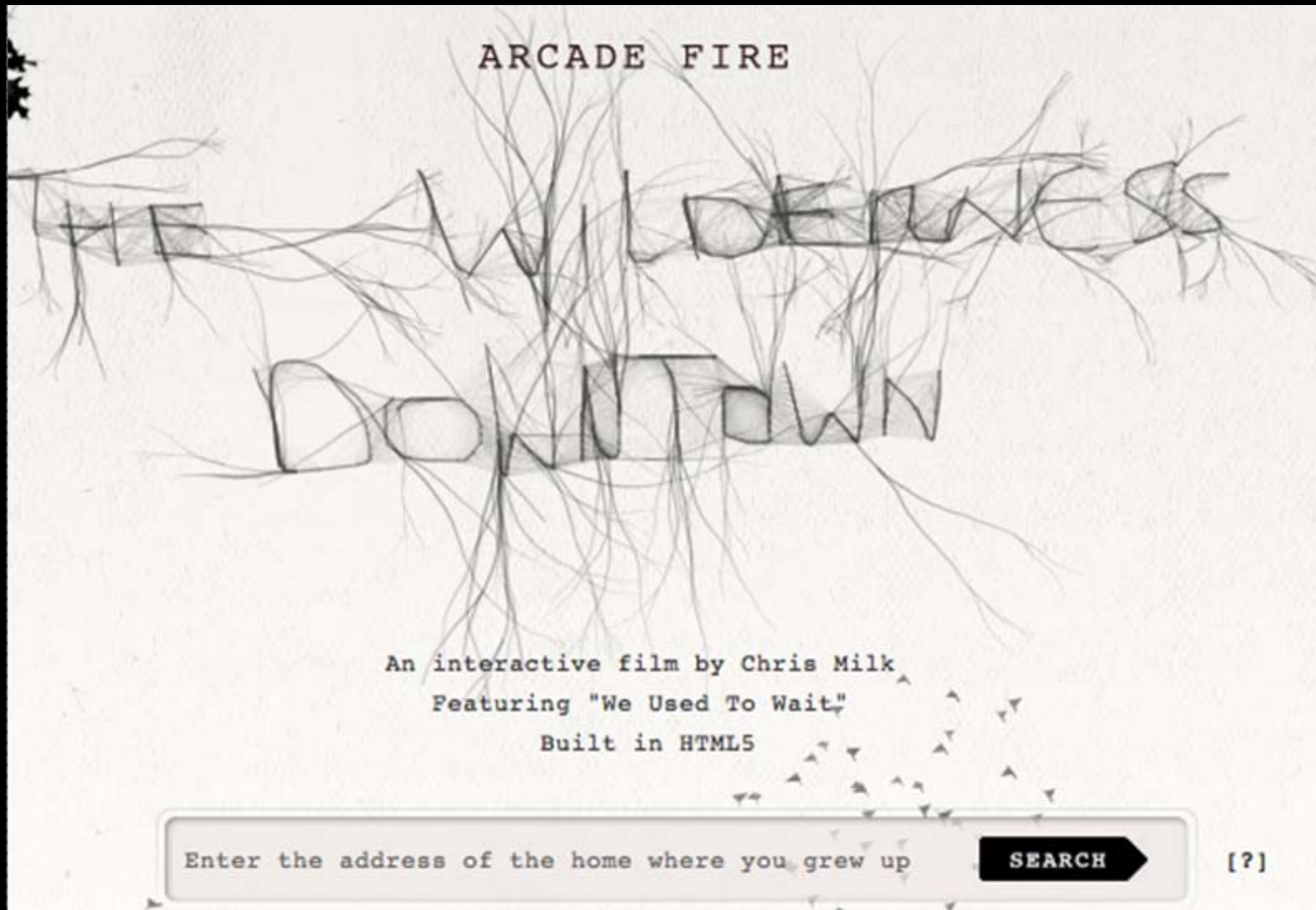
API (application programming interface)

- set of routines, protocols, and tools for building software applications



```
1 <title>Hypertext Links</title>
2 <h1>Links and Anchors</h1>
3 A link is the connection between one piece of
4 <a href=WhatIs.html>hypertext</a> and another.
```

Chrome Experiments



Arcade Fire - The Wilderness Downtown
<http://www.chromeexperiments.com/arcadefire/>

HTML5 as "umbrella" Term

- Changes to HTML spec
- Additions to CSS spec
- New Javascript APIs

Evolution into HTML5

Reacting to how the web is used

A Minimal HTML5 Document

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="utf-8">
  <title>title</title>
  <link rel="stylesheet" href="style.css">
  <script src="script.js"></script>
</head>
<body>
  <!-- page content -->
</body>
</html>
```

Semantic & Functional Markup

- header
- footer
- nav
- section
- article
- aside
- figure
- mark
- contenteditable attribute

Native Video and Audio

- simple markup
- no plugin!
- limited formats: .ogv, .mp4

```
<video src="turkish.mp4" controls></video>
```

Forms <form>

- field types - email, date
- validation
- regular expressions
- still need to watch for security/hacks

<form> Markup

<input type="email" required>

<input type="date">

<input type="url">

<input type="email" required autofocus>

Canvas <canvas>

- create graphics, images, games, and visualizations by using the <canvas> tag to draw elements into the browser
- SVG
- No plugin
- Paired with javascript

Javascript APIs

Desktop programming for the web

Geolocation

- w3c API
- accurate
- supported in Firefox 3.6, Safari 4

File API, Drag & Drop API

- Uploading of files
- Drag & drop API in combination with a draggable attribute

History API

- Preserve the state of the page
- Enabling back button in client-side scripts

sessionStorage

- mega COOKIE
- Stores key/value pairs while page is open

localStorage

- mega COOKIE
- Stores key/value pairs that persist after page and browser are closed



You are not connected to the Internet.

Safari can't open the page "http://www.apple.com/startpage/" because your computer isn't connected to the Internet.

Network Diagnostics can help you solve network connection problems.

[Network Diagnostics...](#)

Offline Storage, Web Workers

- work without a connection
 - Cache manifest file
- SQLite database
- Google discontinued Gears effort

HTML5 right now? IE?

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8" />
<title>HTML5 right now</title>
<!--[if IE]>
<script
  src="http://html5shiv.googlecode.com/svn/trunk/html5.js"></script>
<![endif]-->
<style>
article, aside, dialog, figure, footer, header, hgroup, menu, nav,
  section {display:block;}
</style>
</head>
<body>
<!-- ready to roll with HTML5 now -->
</body>
</html>
```

HTML5 Working Example

www.lib.montana.edu/~jason/files/html5-mobile-feed/

- Learn more by viewing source

Evolution into CSS3

Rethinking web displays and styles

Rounded Elements

- border-radius declaration
- smooth out your interfaces
- button effects

Gradients/Opacity

- no more background images
- transparency

Transitions

- Animation behavior
 - Scaling, fading, easing, etc.

```
body {  
  -o-transition:all .2s linear;  
  -moz-transition:all .2s linear;  
  -webkit-transition:all .2s linear;  
  transition:all .2s linear;  
}
```

Columns and Grids

- Layout and page structure
- Goodbye, Float?

```
ul#content {  
  -webkit-column-count: 3;  
  -webkit-column-rule: 1px solid #eee;  
  -webkit-column-gap: 1em;  
  -moz-column-count: 3;  
  -moz-column-rule: 1px solid #eee;  
  -moz-column-gap: 1em;  
  column-count: 3;  
  column-rule: 1px solid #eee;  
  column-gap: 1em;  
  display: block;  
}
```



We landed on the moon and we left stuff there. A lot of it.

5 9 2 3 7

things left so far.



1 BIG DOUGHNUT



1 LAWNMOWER



1 ASTRO CAT



1 RECLINER



1 MAGIC GNOME

LATEST THING NEWS

New things discovered this week

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure **dolor in reprehenderit** in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat

TOP CATEGORIES

Furniture	185 items	
Fashion	4,729 items	
Pets	4 items	

CSS3 example - <http://css3exp.com/moon/>

Media Queries

- switch stylesheets based on width and height of viewport
- same content, new view depending on device

```
@media screen and (max-device-width:480px) {...mobile styles here...}
```

Media Queries in Action

```
<link rel="stylesheet" type="text/css"  
  media="screen and (max-device-  
width:480px) and (resolution: 163dpi)"  
  href="shetland.css" />
```

Responsive Web Design, Ethan Marcotte

<http://www.alistapart.com/articles/responsive-web-design>

@Font-Face

- bring in fonts
- use any licensed TrueType (.ttf) or OpenType (.otf) font
- independent of machine it's being rendered on...

Demos & Examples

It's your call....

Demos

- YouTube HTML5 demo
 - <http://www.youtube.com/html5>
- 24 ways CSS3 demo
 - <http://24ways.org/>
- HTML5 Demos
 - <http://html5demos.com/>
- Other possible examples:
 - geolocation
 - localStorage

What Type of Support?

- see "When can I use..."
 - <http://a.deveria.com/caniuse/>
- Mobile browsers leading the way
- Modernizr
 - <http://www.modernizr.com/>
- HTML5 enabling script
 - <http://remysharp.com/2009/01/07/html5-enabling-script/>

Resources

- HTML5 Tag Reference (W3Schools)
 - w3schools.com/html5/html5_reference.asp
- Cross Browser Support Tables
 - www.findmebyip.com/litmus/
- HTML5 Doctor
 - html5doctor.com/
- CSS3 Previews (CSS3.info)
 - www.css3.info/preview/
- HTML5 & CSS3 Cheat Sheets
 - webresourcesdepot.com/html-5-and-css3-cheat-sheets-collection/

Resources (cont.)

- HTML5 Boilerplate
 - <http://html5boilerplate.com/>
- HTML5rocks
 - html5rocks.com
- Check html5 article
 - www.findmebyip.com/litmus/

Questions?

twitter.com/jaclark

www.lib.montana.edu/~jason/talks.php

Episode IV

A NEW HOPE

It is a period of civil war. Rebel spaceships, striking from a hidden base, have won their first victory against the evil Galactic Empire.

During the battle, Rebel spies managed to steal secret plans to the Empire's