

HIT 5



EVERYTHING OLD IS NEW AGAIN

Structure

Session 1

Introduction

HTML 5 Basics

Session 2

What's inn for meDeveloper ?

Session 3

What's inn for me Code reviewer/ Webtesting ?

Session 4

What's inn for me Hacker ?

WHAT IS HTML 5 ?

- New Standard for HTML
- work in progress..
- Supported Browsers

HTML5 is still a viable
marketing term.

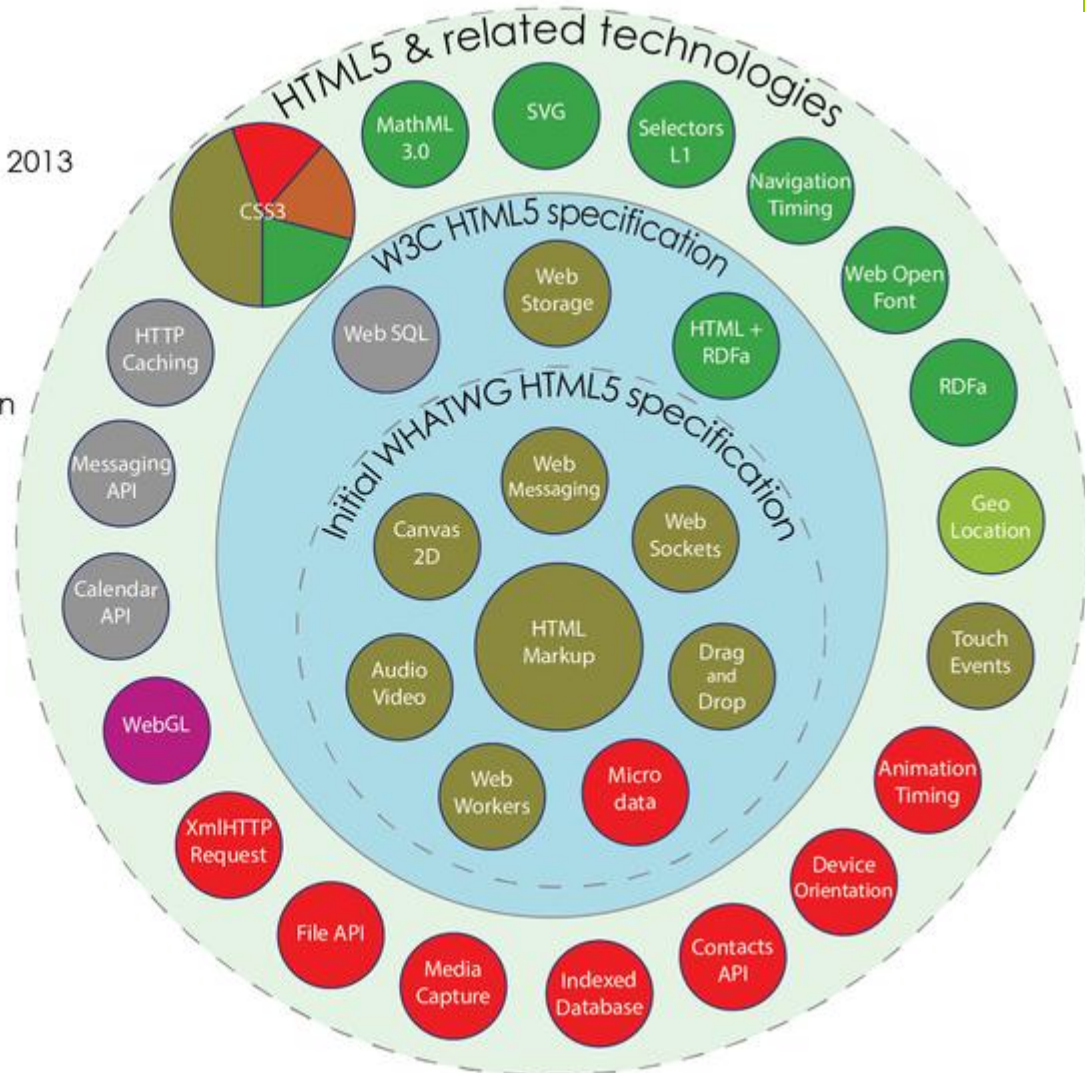
See that? You need some
HTML5 right here.



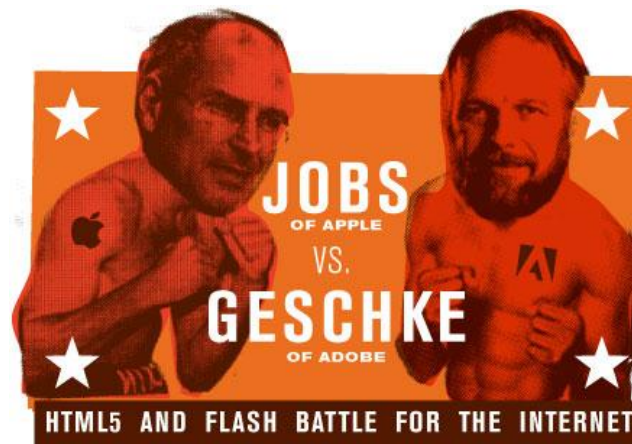
HTML5?? Give
me six!!

HTML5

Taxonomy & Status on January 20, 2013



Objective

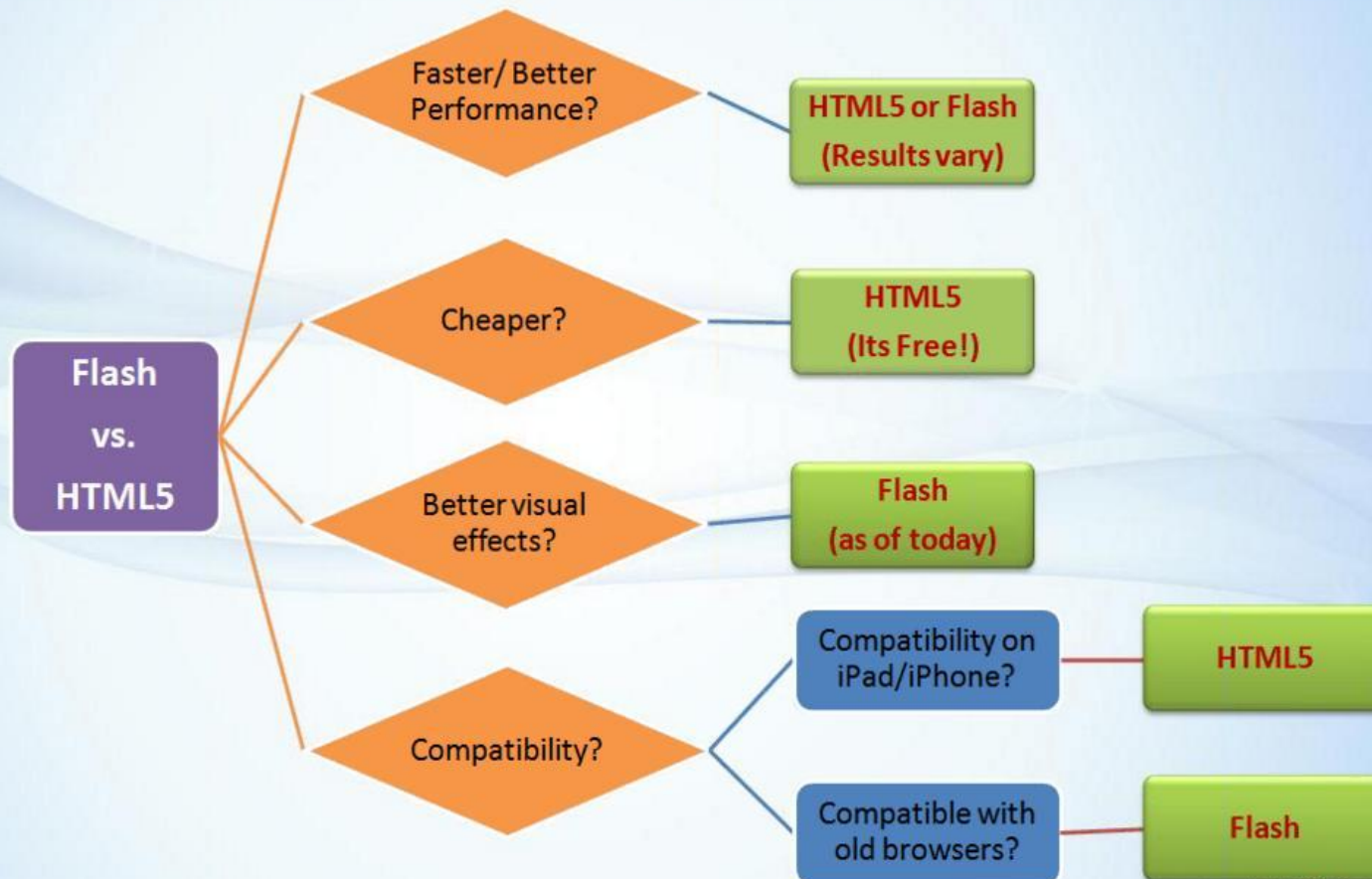


- New Feature - HTML, CSS, DOM, and JavaScript
- Error handling
- Markup vs Scripting
- Independence

How it all Started?

W3C & WHATWG(WebHypertext Application Technology Working Group)

HTML5 or Flash





<http://www.youtube.com/watch?v=mzPxo7Y6JyA>

Developer Point of view



HTML5 - New Features

- Drag and Drop
- <canvas> vs SVG
- HTML5 Geolocation
- Webforms 2.0
- local storage & session storage
- HTML5 Cache
- Web sockets
- Webworkers
- Server Sent events

Graphics

What is SVG?

- Vector based graphics
- Resolution independence
- W3C recommendation
- Dom Based

What is Canvas?

- Speed
- Text rendering capabilities
- Graphics quality – Max and Min
- Animation and accessibility support

Web SQL

Core methods

- `openDatabase`
- `transaction`
- `executeSql`

Operations

- Read
- Insert



Web Storage

Types

- Session
- local

Web Workers

Operations

- CPU Utilization
- Threads
- Terminate
- Import scripts

Web SQL

Core methods

- `openDatabase`
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- `executeSql`

Operations

- Read
- Insert



HTML5 <keygen> Element

The purpose of the <keygen> element is to provide a secure way to authenticate users.

The <keygen> tag specifies a key-pair generator field in a form.

When the form is submitted, two keys are generated, one private and one public.

The private key is stored locally, and the public key is sent to the server. The public key could be used to generate a client certificate to authenticate the user in the future.

What is HTML5 Web Storage?

With HTML5, web pages can store data locally within the user's browser.

Earlier, this was done with cookies. However, Web Storage is more secure and faster. The data is not included with every server request, but used ONLY when asked for. It is also possible to store large amounts of data, without affecting the website's performance.

The data is stored in key/value pairs, and a web page can only access data stored by itself

What is Application Cache?

HTML5 introduces application cache, which means that a web application is cached, and accessible without an internet connection.

Application cache gives an application three advantages:

Offline browsing - users can use the application when they're offline

Speed - cached resources load faster

Reduced server load - the browser will only download updated/changed resources from the server

What is a Web Worker?

When executing scripts in an HTML page, the page becomes unresponsive until the script is finished.

A web worker is a JavaScript that runs in the background, independently of other scripts, without affecting the performance of the page. You can continue to do whatever you want: clicking, selecting things, etc., while the web worker runs in the background.

Server-Sent Events - One Way Messaging

A server-sent event is when a web page automatically gets updates from a server.

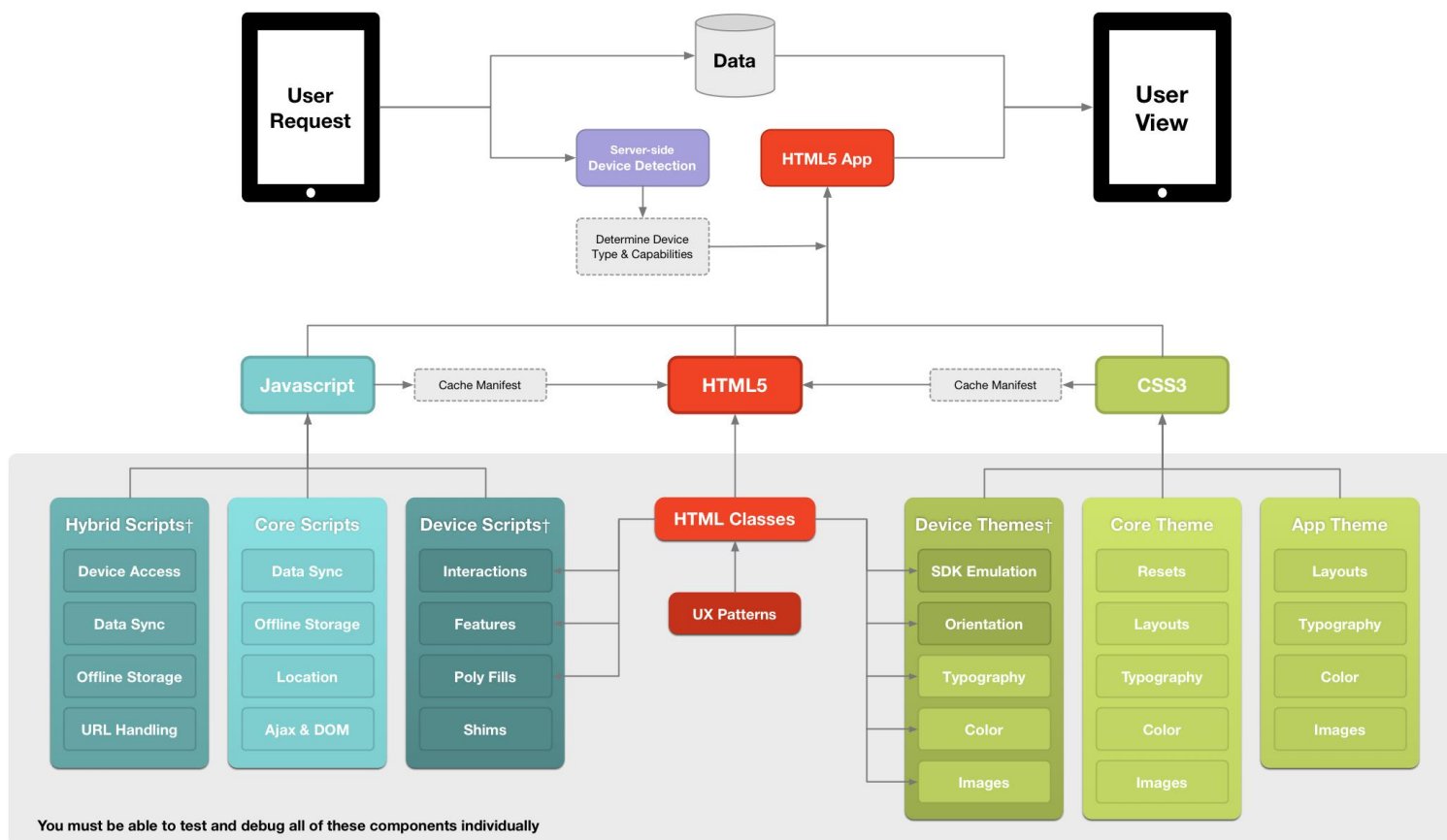
This was also possible before, but the web page would have to ask if any updates were available. With server-sent events, the updates come automatically.

Examples: Facebook/Twitter updates, stock price updates, news feeds, sport results, etc.



Anatomy of a HTML5 Mobile App

An example of the components you need to consider when creating a cross-platform HTML5 mobile app



† Multiply by number of target platforms you intend to support. Remember to account for variation and fragmentation.

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