

HTML5

Don't talk trash about my Flash!

What is HTML5?

- HTML (Hypertext markup language) is the language underneath every web page you've ever been to
- The language, along with its various complementary technologies (CSS, Javascript etc), has become immensely complex over the years, but the concept is simple
- It's basically a set of instructions that a website hands to a browser, which the browser then reads and converts into a formatted page, full of text, images, links and whatever else.
- HTML5 is being developed as the next major revision of HTML

What is HTML5?

There are lots of new and exciting developments for HTML5 including:

- Audio
- Canvas
- Offline storage database
- Video

Video

- If you watch a video on the internet, you're watching it through a plugin
- HTML5 includes support for a simple tag that lets developers embed video in a page just like they'd embed an image
- Provided the video codec is compatible with the browser's rendering engine, embedding a video is as easy as:

```
<video src="video.mp4" width="320" height="240"></video>
```
- The fact that the iPad will never ship with Flash means development of HTML5 video will be pushed through over next year or so

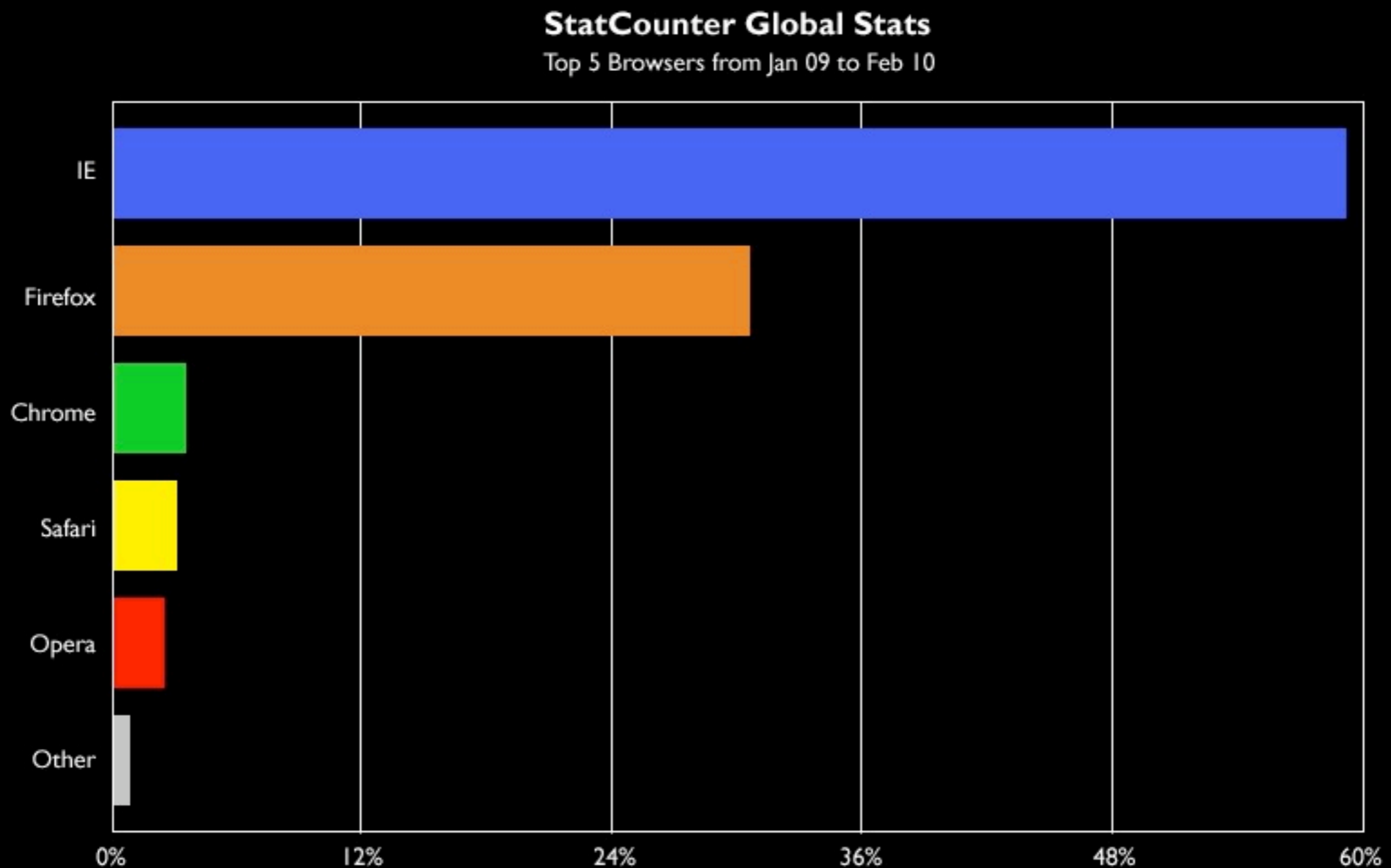
Great! So we can now
forget Flash and do all
our video in HTML5?

NO!

not yet anyway and there's
several reasons why

Internet Explorer

Still globally the most popular dashboard to the internet but even the latest version of IE doesn't support the video tag



- Safari and Chrome do support it
- Firefox supports the tag, but doesn't support decoding of the key video format currently used by YouTube and Vimeo
- Internet Explorer doesn't support it at all without a plugin

	MAC				WIN								
													
	CHROME	FIREFOX	OPERA	SAFARI	CHROME	FIREFOX	OPERA	SAFARI	IE				
	5	3.6	10.1	4	4	3.6	3	10	10.5	4	6	7	8
Canvas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✗
Canvas Text	✓	✓	✗	✓	✓	✓	✗	✗	✓	✓	✗	✗	✗
Audio	✓	✓	✗	✓	✓	✓	✗	✗	✓	✓	✗	✗	✗
Video	✓	✓	✗	✓	✓	✓	✗	✗	✓	✓	✗	✗	✗

Codecs

- Browsers will have to be able to decode embedded video files in lieu of the plugin that use to do it for them
- Current working HTML5 standard doesn't explicitly define a video format to be used with the tag
- At present there are two formats vying for the job

Ogg Theora

- free codec standard (open source)
- most browsers that support HTML5 video support Ogg Theora right now
- notoriously inefficient
- Google's standards guru Chirs DiBona infamously said:

“If [YouTube] were to switch to Theora and maintain even a semblance of the current quality, it would take up most available bandwidth across the internet”

h.264 video

- suffers from pretty much opposite situation
- very efficient
- YouTube and Vimeo already store their mobile-quality libraries in h.264 (that's what you see on your iPhone)
- one problem: it's proprietary
- a browser that plays back h.264 with HTML5 would cost millions
- risky to put the internet's entire video ecosystem in hands of some obscure rightsholders

Digital Rights Management (DRM)

- Flash video supports it
- HTML5 video doesn't, as it stands
- without it every video would be a right-click away from being saved to your computer
- Great! For us... not so great for execs in Hollywood
- Without DRM no movies or TV shows. Simple as that.

Video Conclusion

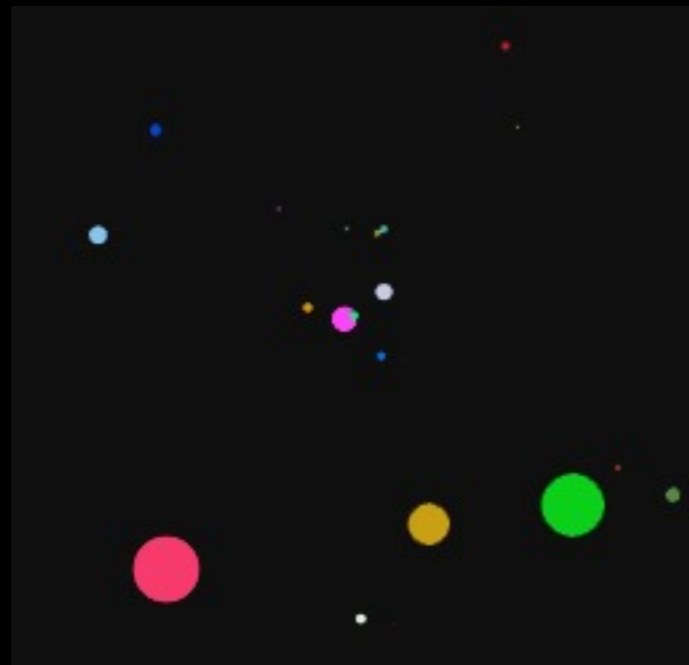
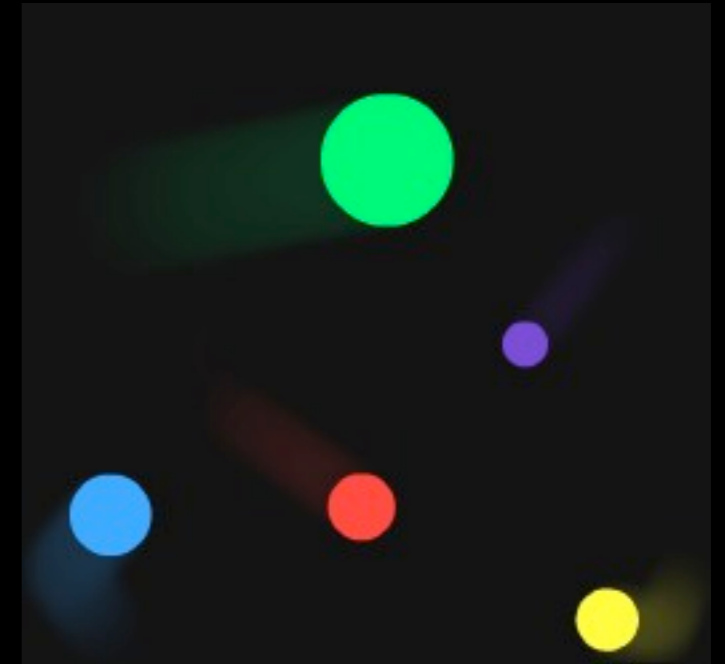
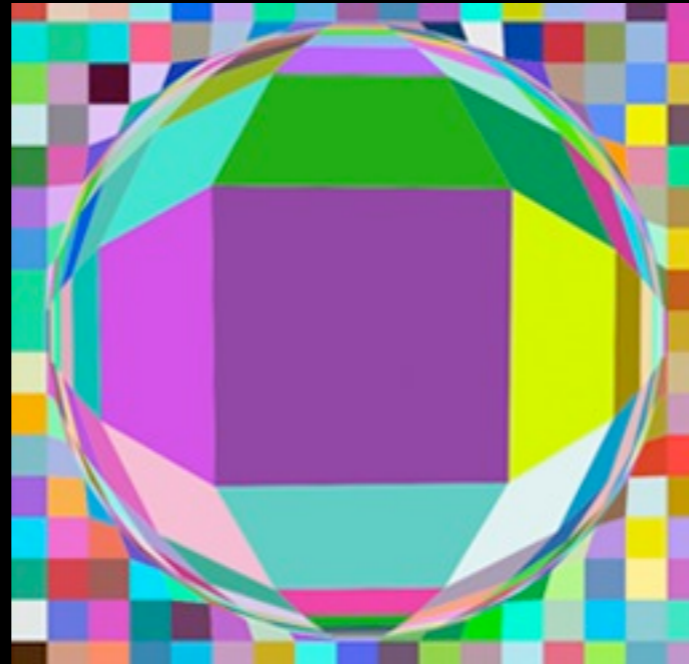
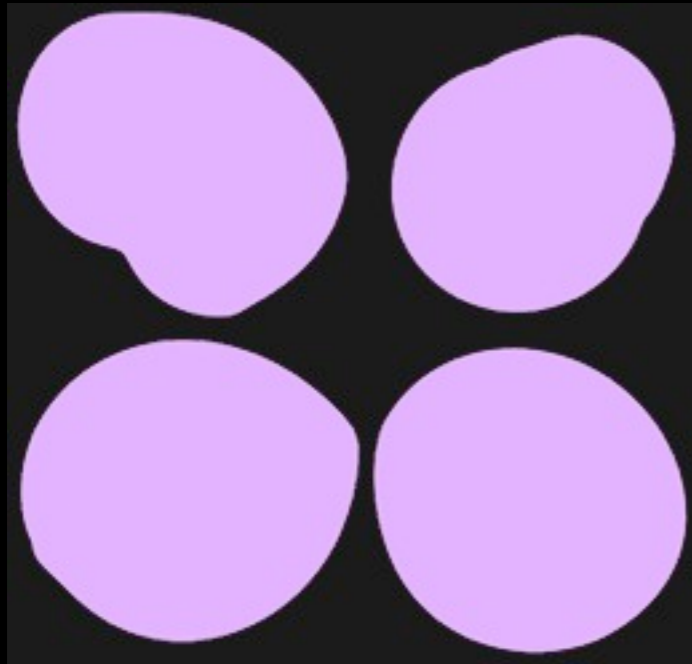
- For the foreseeable future, video on the internet is going to remain almost exactly as-is.
- Flash could become more entrenched in the short term as YouTube (etc) expand their catalogs with more DRM'd content
- Mobile devices like iPhone/iPad will move more towards apps for displaying video
- HTML5 has a place in online video, but an internet where native web languages have killed all plugins, including Flash, is just too far away to talk about coherently

Now for something a
bit more fun...

Canvas

- drawable region defined in HTML code
- JavaScript may access the area through a full set of drawing functions
- allows for dynamically generated graphics

Examples



So is Canvas the end of Flash?

As John Dowdell from Adobe (slightly angrily) put it:

“There is also an unsubstantiated assumption that Flash’s total functionality is duplicated by either (a) a CANVAS spec; (b) a particular CANVAS implementation; or (c) the subset of functionality shared by all CANVAS implementations.”

Basically, although Flash was originally built as a vector based animation tool it now does so much more, for example Flash 10’s sound spectrum capabilities.

Conclusion

- love it or hate it, Flash will be around for a few more years, for videos at least
- you shouldn't get emotional about technology, I don't care if it's Mac vs. PC, XBox vs. PS3, or Flash vs. HTML5, I say use whatever works for you

Links/references

Most of the content of this presentation was stolen directly from here:

<http://gizmodo.com/5461711/giz-explains-why-html5-isnt-going-to-save-the-internet>

And a bit of it from here:

<http://richardleggett.co.uk/blog/index.php/2010/02/01/the-world-is-moving-to-html5>

The Canvas examples can be viewed here:

<http://www.flashmonkey.co.uk/html5-monkey/>

<http://www.flashmonkey.co.uk/simple-javascript-physics/>

<http://mrdoob.com/120/Harmony>

<http://9elements.com/io/projects/html5/canvas/>

Other interesting links:

<http://www.findmebyip.com/litmus#target-selector>

<http://html5test.com/>

<http://blog.nihilogic.dk/2009/02/html5-canvas-cheat-sheet.html>

http://blogs.adobe.com/jnack/2009/10/sneak_peek_at_flash_canvas.html

