HTML5 in Practice

An HTML5 Report Card

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This talk is about HTML5 in practice, given in the format of a *report card*. with *letter grades*.

Evaluating HTML5

- HTML5 ancillary materials
- HTML5 tools support
- HTML5 features *spec'ed*
- HTML5 features *implemented*

HTML5 ancillary materials:

grade: B-

Ancillary materials are complements to the spec.

Ancillary materials are the materials that most of us learn from directly (rather than the spec itself).

HTML5 differences
from HTML4

http://w3.org/TR/html5-diff/

Hands-on/
one-stop shopping

http://html5rocks.com/

Tutorials/how-to guides for authors

Several print books from Jeremy Keith, Bruce Lawson & Remy Sharp, Mark Pilgrim, more

Dive into HTML5

http://diveintohtml5.org/

The HTML5 Doctors

http://html5doctor.com/

Alternative authoring references

HTML5:
The Markup Language Reference

http://dev.w3.org/html5/markup

HTML5: The Markup Language Reference is an alternative front-end to the HTML5 spec

HTML5:
Edition for Web Authors

http://dev.w3.org/html5/spec-author-view

HTML5: Edition for Web Authors is an *author-friendly subset* *of the spec that* *omits implementation details*

Fork me!

http://github.com/benschwarz/ html5forAuthors

http://github.com/sideshowbarker/ html5forAuthors

Bonus:

Annotated JavaScript/
EcmaScript 5 spec *in HTML**

http://sideshowbarker.github.com/
es5-spec/

*Get expert guidance
on addressing
accessibility needs*

New!

http://html5accessibility.com/

...*from Steven Faulkner*

@stevefaulkner

HTML5accessibility.com gives info about *which HTML5 user interface features are* *usable by people who rely upon assistive technology (AT)* to use the Web.

Check current browser implementation support for specific features

HTML5
Accessibility workarounds

http://html5accessibility.com/index-aria.html

HTML5 Readiness

http://html5readiness.com

When can I use…

http://caniuse.com/

HTML5 tools support:

grade: C+

HTML5 Validator
(stable)

http://validator.nu

HTML5 Validator
(unstable)

http://w3.org/html/check

HTML5, CSS3, etc., feature detection

http://modernizr.com/

The *professional badass's* base HTML/CSS/JS template for a fast, robust and future-proof site!

http://html5boilerplate.com/

Adobe Dreamweaver & Illustrator CS5 HTML5 Packs

HTML5: The Good Parts

- Syntax simplifications: **A+**
- HTML5 parsing algorithm: **A+**
- MathML & SVG integration: **A+**
- New elements/attributes: **A+**
- New APIs for scripting: **A+**

HTML5: More Good Parts

- HTML5 design principles: **?**
- maintain XHTML support: **?**

Syntax simplifications

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">

<!doctype html>

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

```html
<meta charset="UTF-8">
```

New elements

- **<video>** & **<audio>** (no plugins)
- **<canvas>** (2D/3D image scripting)
- **<article>**, **<section>**, **<header>**
- **<details>**, **<progress>**, **<meter>**...
- **<ruby>** (annotations)
- *all* SVG elements (MathML too)

New attributes

- for client-side validation of forms + form controls: date picker, &c.

- draggable (drag-and-drop)

- marking up context menus

- contenteditable (editable pages)

- spellcheck (turn off spell checking)

Crap removal

- <frame>, <frameset>

- <a name>

- more...

New APIs for scripting

- API for <video> & <audio>

- 2D drawing API for <canvas>

- 3D <canvas> API: WebGL*

- getElementsByClassName()

- innerHTML and more…

New APIs for scripting

- Web Storage (local + session)

- Indexed Database *(non-SQL)*

- Web Messaging (cross-doc/postmg+)

- Web Workers

- WebSocket API + Protocol

"Friends of HTML5" APIs

- Geolocation

- Device Orientation/Motion

- File API (w/ HTML5 Drag & Drop)

- Selectors API

- Audio API* (sampling+synthesis)

"*HTML5*" has become shorthand for "The Open Web Platform".

Web-Platform formats:
HTML5, CSS3, SVG,
ARIA, *and…* JavaScript

HTML design principles

http://w3.org/TR/html-design-principles/

HTML design principles

- Support existing content
- Ensure interoperability
- Precisely define UA behavior
- Handle errors (*non-draconian*)
- Evolution *not* revolution
- "Priority of constituencies"

Important point:
HTML5 includes XHTML

Even more important point:
IE9+ fully supports XHTML

Grading some specific HTML5 features

Two ways to grade spec features

- Does the feature meet market needs and user and developer needs well or not?

- Is the feature currently well-supported in browsers or not?

Let's start by grading some features on how well they meet market/ user/developer needs

getElementsByClassName

spec grade: A+

Interactive & UI elements

<details>,

<progress>, <meter>

spec grade: *B+*

New *structural* elements

\<article\>, \<section\>

grade: B ?

<canvas> 2D

spec grade: B-/D- ?

<canvas> 3D

spec grade: **B+/D-** ?

<video>

spec grade: **B+/C-** ?

Let's now grade some features on *How well they are currently supported in browsers*

HTML5 canvas

in all major browsers

current support: **B+**

SVG

static SVG supported,
animations less supported

current support: *C+*

HTML5 video

in all major browsers

BUT… codec problem :(

current support: B+

Query selector API

use CSS selector syntax
instead of DOM methods

current support: *A-*

Downloadable fonts

@font-face

current support: *B+*

HTML5 forms

Opera already, in progress in other browsers

current support: *D+*

HTML5 local storage

Better solution than cookies for saving data/state

current support: *B+*

drag & drop

interoperability problems

current support: C-

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