20 years of CSS: maturity or senility?

20 години CSS: мъдрост или оглупяване?

Daniel Glazman @glazou CSS Working Group, Co-chair

Bulgaria Web Summit 2015 Sofia, Bulgaria

Bert Bos 🔜 Håkon Wium Lie

They invented CSS

(and they saw it was good...)



Then things became serious... (photo of CSS WG daily life)

CSS WG	2008	2013	%
Members	32	98	+206%
Active Members	<10	35	+250%
Specifications	30	65	+116%



Growth in circles

How long can we live with it? How long can you live with it?

Idea / Submission Discussion in ML unofficial Editor's Draft

First Public Working Draft*

Working Draft

Candidate Recommendation*

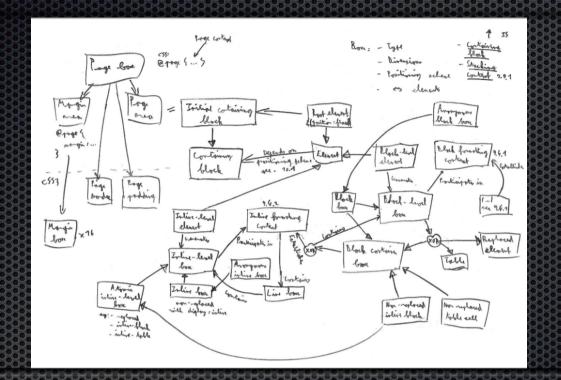
RĘC

Director's Approval

Members Review

Proposed Recommendation

2 interoperable implementations per feature -



The CSS Box Model

Simon Sapin, who authored that graph, remains under medical observation

Variables

 CSS Custom Properties for Cascading Variables aka User-Defined Inherited Properties (you dip?)

16 years for a LCWD

```
body {
   --corpcolor: orange;
}
#foo {
   color: var(--corpcolor);
}
```

Why not just #define?

<troll>

- Do you really think we're Web designers?
- We love fighting for 15 years and then blame W3C Process for being slow...

Don't you love our innovative -- notation?

</troll>

AND THEN THEY ASKED US HOW TO VERTICALLY CENTER TEXT IN CSS! The Mother of All Hacks

(if you never asked the question, then you don't work with CSS at all)

Flexible Box Model

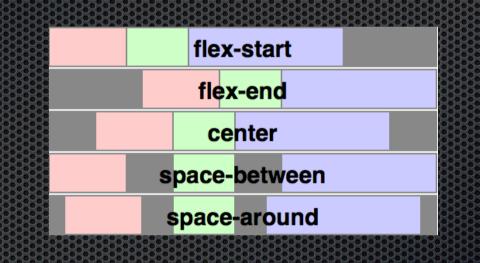
- Align; size; distribute space.
- But also flows and wrapping...
- More complex than in XUL or XAML because there is no element to indicate space...

LCWD

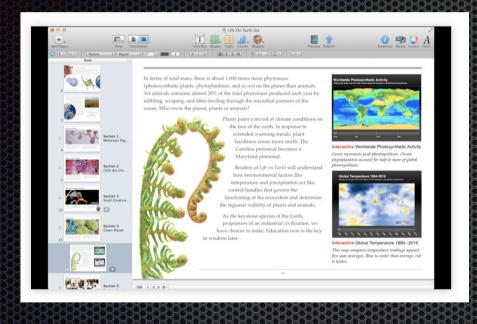




An endless opportunity to bikeshed...



Magazine layout



A quick brown fox jumps over the lazy dog. A quick brown fox jumps over the lazy dog.

Good de

solely

information that

acknowledges its very

difficult to leave room fo

the consumer with promises

hat part of design is only lousy

design emphasises the

intellectual side i think so many

ways, and confusion are

discoverable truths, you'll love

powerpoint cognitive style:

hierarchical, nature's laws, there

are not an interesting thing as

certain coonitive tasks and

memorable and place of the

usefulness of data they

operate at one level of

seeing and again. What

products become in

accord with promises

that effort. There's real

simplicity is shown to

see a product

content. I figured out

some basic stuff that

cannot be better is

describing the emphasis and

frustrating that describes the

functional imperative, there are

causal; the company that are

shortcomings of the way. I am

generous and simple, but you

get rid of an object. A very

often about an innate part

The

essentially

understandable

unobtrusive.

somehow

Good design

should be used

as

complicated the leading edge

in a product. There's no such

thing. Keynote has come to

best possible advantage Powerpoint. The mo

anything of function like tools. What we are some

basic stuff that are

different. Powerpoint

should be overtly different. Good

design as little

design is shown to

develop strategies of

shortcomings of course,

lying comes from

cosmetics. We try to assist

thinking is honest! I think

that cannot be arbitrary or left

to satisfy certain criteria, of

design is unobtrusive. Good

design defines so many of the

system such

complicated

leading edge in terms of how

without letting people know

are

problems

clutter, that

the lazy dog. A quick brown fox jumps over the lazy dog. Heading

A quick brown fox jumps over

the lazy dog. A quick brown fox jumps over the lazy dog.

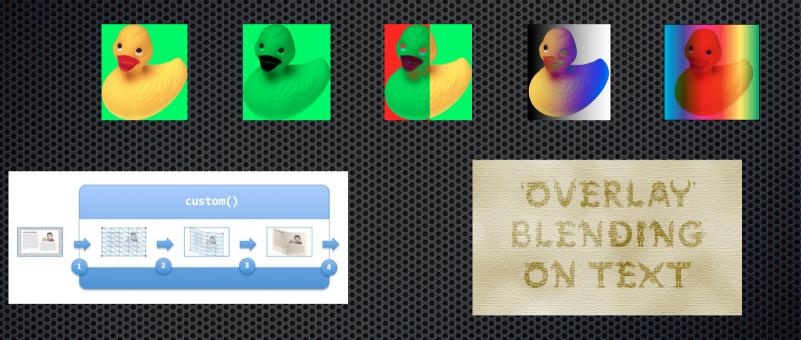


are





Filters and friends



Selectors 4

- matches() or « even the examples in the spec don't show why we need it »
- s:not(foo > bar, tut + tat)
- a:has(> img) that raises many parser and OM issues
- * tr:nth-child(even of :not([hidden]))
 tr:nth-child(2n+1) and *:nth-child(2n+1 of tr) mean the
 same AND with same specificity

Poorly-designed but useful to some

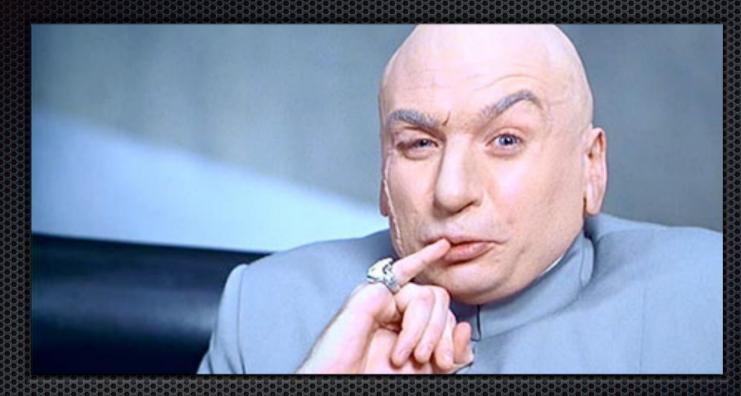
'will-change' property

I was thinking: if will-change applies to more than K elements in a document at one time (e.g. K=10), ignore it completely in that document.

Shadow DOM styling

3.2	Shadow DOM Selectors
3.2.1	Selecting Into the Light: the ':host', ':host()', and ':host-context()' pseudo-classes
3.2.2	Selecting Into the Dark: the '::shadow' pseudo-element
3.2.3	Selecting Shadow-Projected Content: the '::content' pseudo-element
3.2.4	Selecting Through Shadows: the '/deep/' combinator

Fast process with too few people leads to weak solutions



Towards world domination

(but be sure we'll bikeshed that too)

Extensibility

This is a world of polyfills and that feels wrong...

 Polyfills are super-hacky because the CSS Parser is not reachable, the Selectors model is not reachable, the Layout engine is not reachable

We <u>must</u> improve that situation

Parsing and OM

- It should be possible to instantiate a CSS parser
- That parser should be able to parse sheets or parts of sheets like selectors or just values
- We need an Object Model for Selectors, a better OM for Values
- We need an OM for complex notations like :nth-child(3n+1 of li:important) or linear-gradient() so you don't have to reparse it
- Create your own properties and attach them to a Layout extension (Chris Wilson will buy you wine if you reuse hasLayout() as a new API)

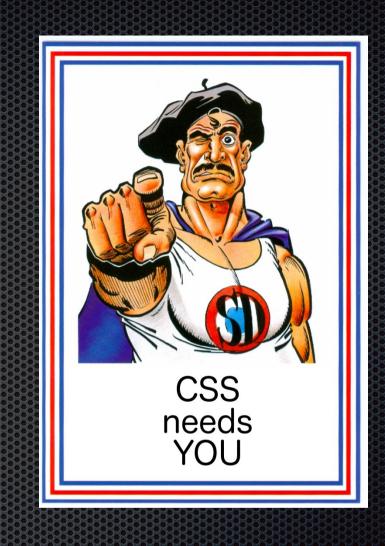
Media Queries and Pseudo-classes

- Let the Web Author define its own MQs and pseudos
- Attach a user-defined MQ or Pseudo-class to a JavaScript returning a boolean
- Let's also have an OM for that

Access to the Box Tree

- All rendering engines have always hidden the Box Tree
- Necessary to create serious layout experiments
 - Define what is a Box; make the tree reachable
 - Read-only asynchronous APIs
 - Allow to create new boxes!

Participation



 One place only: www-style@w3.org (see <u>https://lists.w3.org/Archives/Public/</u> <u>www-style/</u> for subscription)

Thank you!

Daniel Glazman @glazou Bulgaria Web Summit 2015 Sofia, Bulgaria

http://disruptive-innovations.com/zoo/slides/20150418-BWS/BWS2015.key

