CSS3 - directions

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Contents

- Main trends and drivers
- CSS3
    - What exists?
    - How is CSS standards development done?
    - What is coming?
- Related technologies
    - Examples

file:///C:/Documents%20and%20Settings/olleo/Skrivbord/G-processes/w3c/demos/%C3%ADndex.html

Trends and drivers

What's the future?

- Web 1.0 – HTML & HTTP
  - Access to contents; … starting CSS use

- Web 2.0 – Ajax
  - Create content; interactivity; ...; CSS more important

- Web X.0 {X > 2} – Web platform
  - Devices; …
  - Web of Data
  - Web of Interaction
  - Web of Applications
  - … CSS key component

Web platform – main drivers

- Economic: infrastructure investment; cost-effective creation/construction; ...

- Reach: usable everywhere; ...

- Stable: works today and tomorrow; ...

and ...

- New platforms: mobile; embedded; …

- Expectations: user experience; technology up-take

- Competition: technology control; proprietary, ...

The Next Open Web Platform

- **HTML 5**
- CSS 2.1
- CSS 3 Selectors
- CSS 3 Media Queries
- CSS 3 Text
- CSS 3 Backgrounds and Borders
- CSS 3 Colors
- CSS 3 2D Transformations
- CSS 3 3D Transformations
- CSS 3 Transitions
- CSS 3 Animations
- CSS 3 Multi-Columns
- CSS Namespaces
- SVG 1.1
- WAI-ARIA 1.0
- MathML 2.0
- ECMAScript 5
- 2D Context
- WebGL
- Web Storage

- Indexed Database
- Web Workers
- Web Sockets Protocol/API
- Geolocation
- Server-Sent Events
- Element Traversal
- DOM Level 3 Events
- Media Fragments
- XMLHttpRequest
- Selectors API
- CSSOM View Module
- File API
- RDFa
- Microdata
- WOFF
- HTTP 1.1 part 1 to part 7
- TLS 1.2 (updated)
- IRI (updated)
- ...

Web Platform, CSS and the HTML5 space

- CSS is for markup languages

- CSS main use: with HTML / HTML5

  - HTML5 in the narrow sense
    - The specification titled "HTML5" – *HTML* & *XHTML* !
  - HTML5 in the wider sense – "Open Web Platform"
    - The HTML5 language as framework
    - CSS2/CSS3, SVG, MathML
    - Additional specialised technologies
      - Storage, threads, fonts, geolocation, ...

- Perspectives on CSS from different roles:

  - User
  - Author
  - Implementor ; Specifier
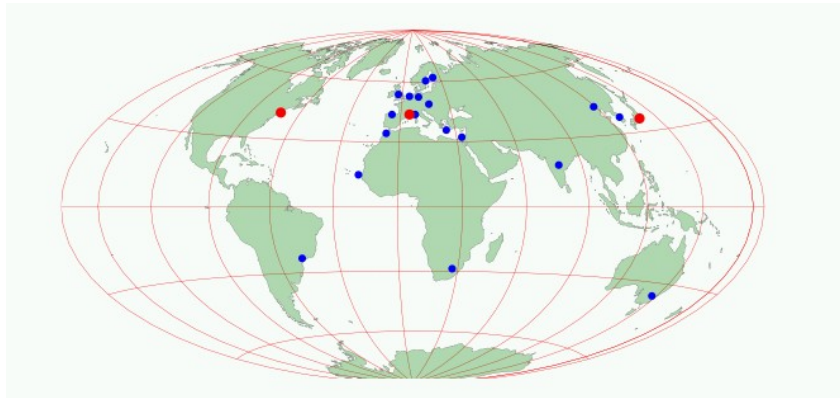

"A quick word from our sponsor"

World Wide Web Consortium (W3C)

- W3C (World Wide Web Consortium)
  - The web standards organization Consortium

- Consortium 350 member organisations

- Founded 1994

- Creating web standards ("W3C Recommendations")
  - HTML, CSS, SVG, RDF, PNG, MathML, XML, WCAG, EXI…

W3C Offices

Open standardisation process

- Requirements driven and needs driven
  - Use cases, business needs, …

- Proposals exposed to the world

- Comments and feedbacks incorporated

- Consensus in working group
  - Stakeholders are driving it

- Drivers: market; use; and technology
  - (and business strategies)

Work structure

- Working Groups
  - HTML WG
  - **CSS WG**
  - XML Core WG
  - … ±40 more

- Incubator Groups

- Interest Groups

- Coordination Groups

- Community Groups

- ...etc

Challenges to standardisation

- Compatibility between standards
  - Combining web technologies
    - Combining standards
  - HTML + CSS; CSS + SVG; …

- Compatibility across generations of a standard
  - Keep old stuff? How to shape new stuff?
  - "**Deprecated**"

- What to support in a specific technology:
  - Fits nicely into a technology?
  - Supported in other ways?

"What is in?" (CSS) – pragmatic scope
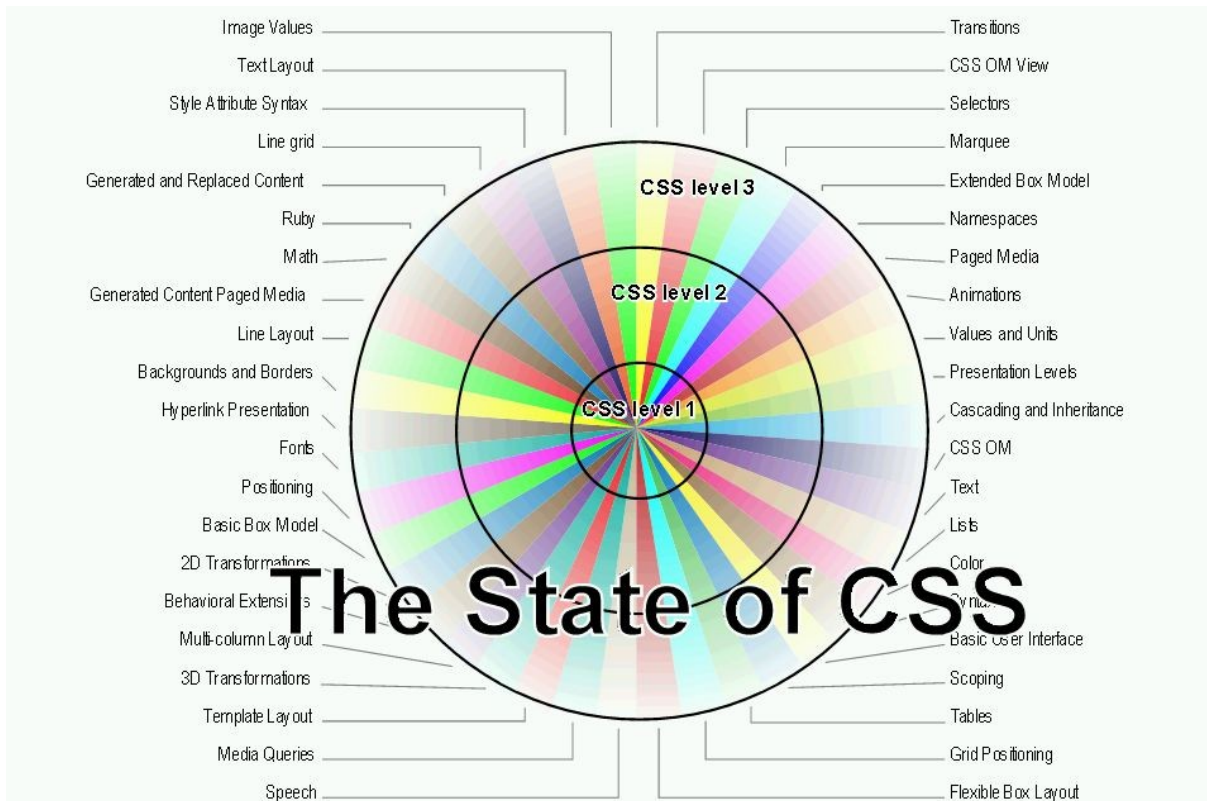
Example

- Let CSS set size of image? – obvious yes
  - Since level 1 (fg), since level 3 (bg)
- Let CSS rotate image? – maybe yes
  - Planned for level 3: 'transform'
- Let CSS blur, enhance, colorize, etc.? – no

Depends on:

- Perceived need?
- Support related functionality?
- Difficult to support
- Difficult to use?

CSS / CSS3

CSS – the big picture

The State of CSS

CSS level 1
CSS level 2
CSS level 3

Image Values
Text Layout
Style Attribute Syntax
Line grid
Generated and Replaced Content
Ruby
Math
Generated Content Paged Media
Line Layout
Backgrounds and Borders
Hyperlink Presentation
Fonts
Positioning
Basic Box Model
2D Transformations
Behavioral Extensions
Multi-column Layout
3D Transformations
Template Layout
Media Queries
Speech

Transitions
CSS OM View
Selectors
Marquee
Extended Box Model
Namespaces
Paged Media
Animations
Values and Units
Presentation Levels
Cascading and Inheritance
CSS OM
Text
Lists
Color
Syntax
Basic User Interface
Scoping
Tables
Grid Positioning
Flexible Box Layout

Evolution of CSS

- Some points in history:
  - 1970s: several SGML style sheet technologies
  - ...
  - 1994: CSS work started at W3C
  - 1996: **CSS1 W3C Recommendation**
  - 1998: **CSS2 W3C Recommendation**
  - 1999: "CSS3" work starts
  - ...
  - ... modularization!
  - ...
  - 2011: **CSS2.1 W3C Recommendation**
  - 2011: (CSS3) **Color W3C Recommendation**

CSS state: Stable & proven

Stable & proven (Recommendation, or almost there)

- CSS level 1
- CSS Level 2.1
- Color
- Selectors
- ...

CSS state: Stable & implementing

Stable & being implemented – examples

- CSS Namespaces
- Backgrounds and Borders
- Multi-column Layout
- Media Queries
- Mobile Profile
- TV Profile

- Paged Media

CSS state: Almost stable

Almost stable – examples

- Template Layout
- 2D Transformations
- Transitions
- ...

CSS state: Not stable

Not stable

- Tables, Lists, Positioning, Generated & Replaced Content, Image Values, 3D Transformations, Fonts, Text Layout…

… apart from the properties that already in level 2

Profiles

CSS subsets targeting specific uses/devices

- **Mobile Profile**
  - Suitable for handheld devices, e.g. mobile phones
  - Device type: *handheld*

- **Print Profile**
  - Suitable for documents printed on low-cost printers

- **TV Profile**
  - Suitable for documents displayed on TV sets

CSS 3 Selectors

- :first-child, :last-child, :nth-child(3), :nth-child(odd)

Date	Description	Depositption	Transfer	Withdrawal	Balance
10/08/2004	Restaurant	Expenses:Foods		38.14	440.67
10/10/2004	Market	Expenses:Groceries		123.14	317.53
10/11/2004	Gas	Expenses:Car		40.00	277.53
10/12/2004	Payroll	Income:Salary	2,000.00		2277.53
10/12/2004	Home depot	Expenses:House Supplies		41.14	2236.39
10/14/2004	Dentist	Expenses:Medical		166.20	2070.19
10/15/2004	Electricity	Expenses:Utilities		27.88	2042.31
10/16/2004	Filene's Basement	Expenses:Grooming		31.93	2010.38

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CSS3 Borders

We the People of the United States, in Order to form a more perfect Union, establish Justice, insure domestic Tranquility, provide for the common defence, promote the general Welfare, and secure the Blessings of Liberty to ourselves and our Posterity, do ordain and establish this Constitution for the United States of America.

(Preamble of the United States of America Constitution)

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CSS Media Queries

```
<link rel="stylesheet" type="text/css" href="base.css" />
<style type="text/css" media="screen and (min-width: 481px)">
  @import url("advanced.css");
</style>
<link rel="stylesheet" type="text/css" href="base.css"
      media="handheld, only screen and (max-device-width:
480px)" />
```

CSS Examples

Simple illustrations

- *Background, borders … visual decorations*

- *Media queries … adapting to screen*

- *Transitions/hover ... dynamic behavior*

What can I use?

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Practical approach

- Browser vendors:
  - Active in Working Group.
  - Supported pre-standards implementations
  - Implement and deploy emerging standards
- CSS3 is shaped by existing consensus
  - Standardize successful technology
- Modularization to successively provide technology
  - No formal full CSS3 standard
  - Modules emerge needs-driven
- Possible to start use **NOW**!

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Challenge to web site owners?

Challenges

- Support for older browsers?
- Support for variations among browser implementations?

Approaches

- Multiple CSS, for different implementations
- Tools that create cross-browser CSS
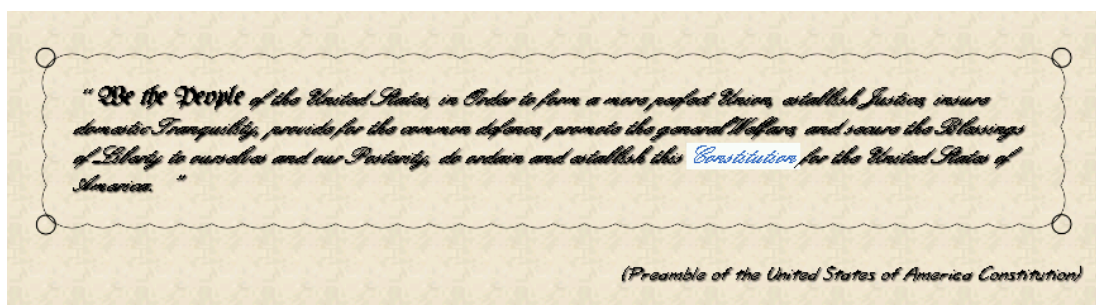- Selectively accept down-graded browser behavior

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Related technologies

Graphics: SVG

- Scalable Vector Graphics

- Graphical illustrations

- Potential uses:
  - Fonts
  - 2D transformations
  - 3D transformations
  - Backgrounds
  - etc.

Fonts: WOFF File Format

- Web Open Font Format

- Already available

- Adaptation of existing font packaging

- Opens up new design / branding opportunities

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Thank you for your attention!