DrupalCamp CT 2012

Frontiers of CSS

Its Past, Present, and Future

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Welcome!

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What we'll cover

1. Where is CSS now?
2. CSS 3 properties and compatibility
3. Vendor prefixes
4. Responsive design and other media
4. CSS 4: Going out in style

Where is CSS now?

1

A brief retrospective

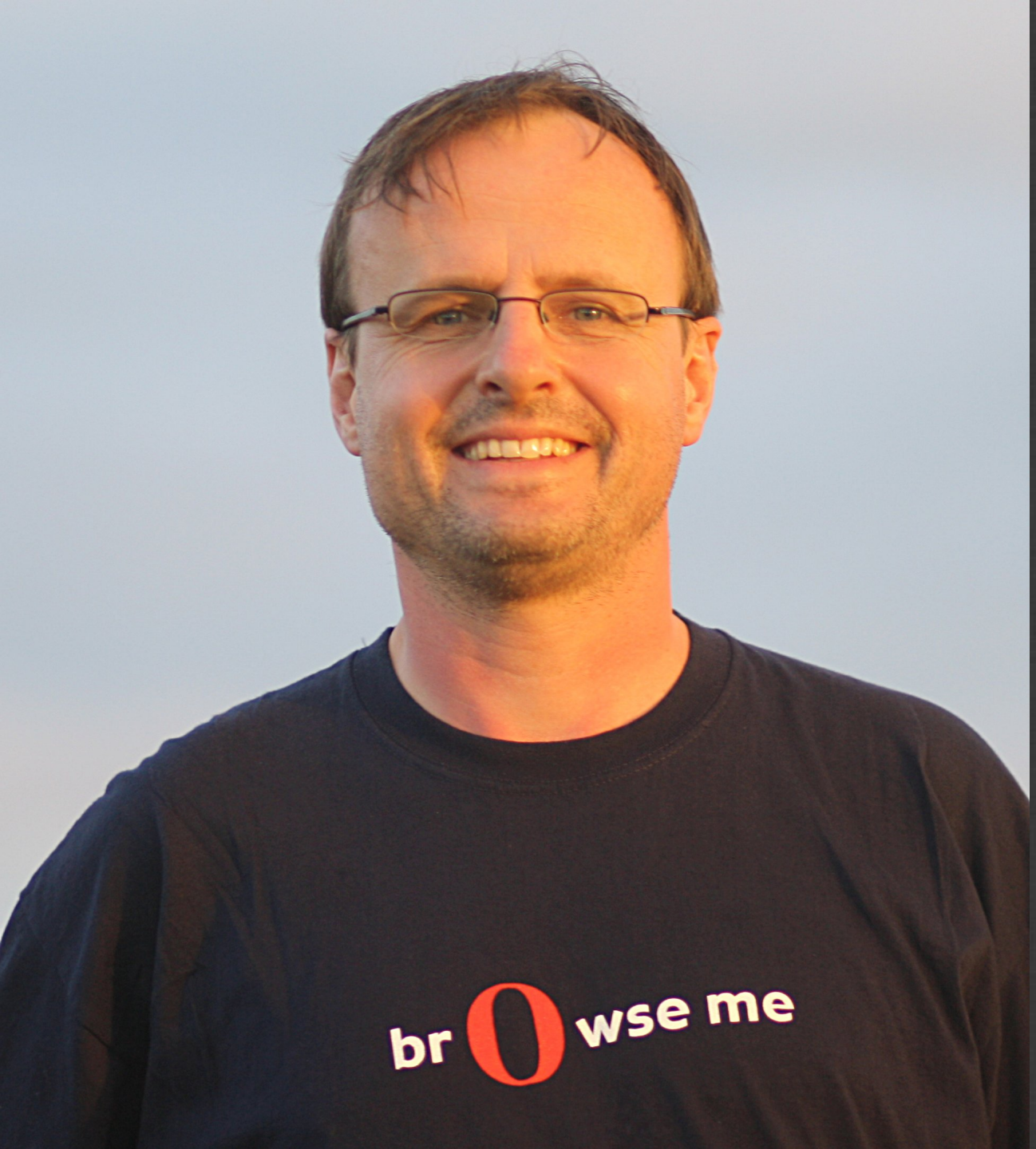
A history of browser support

CSS before CSS 3

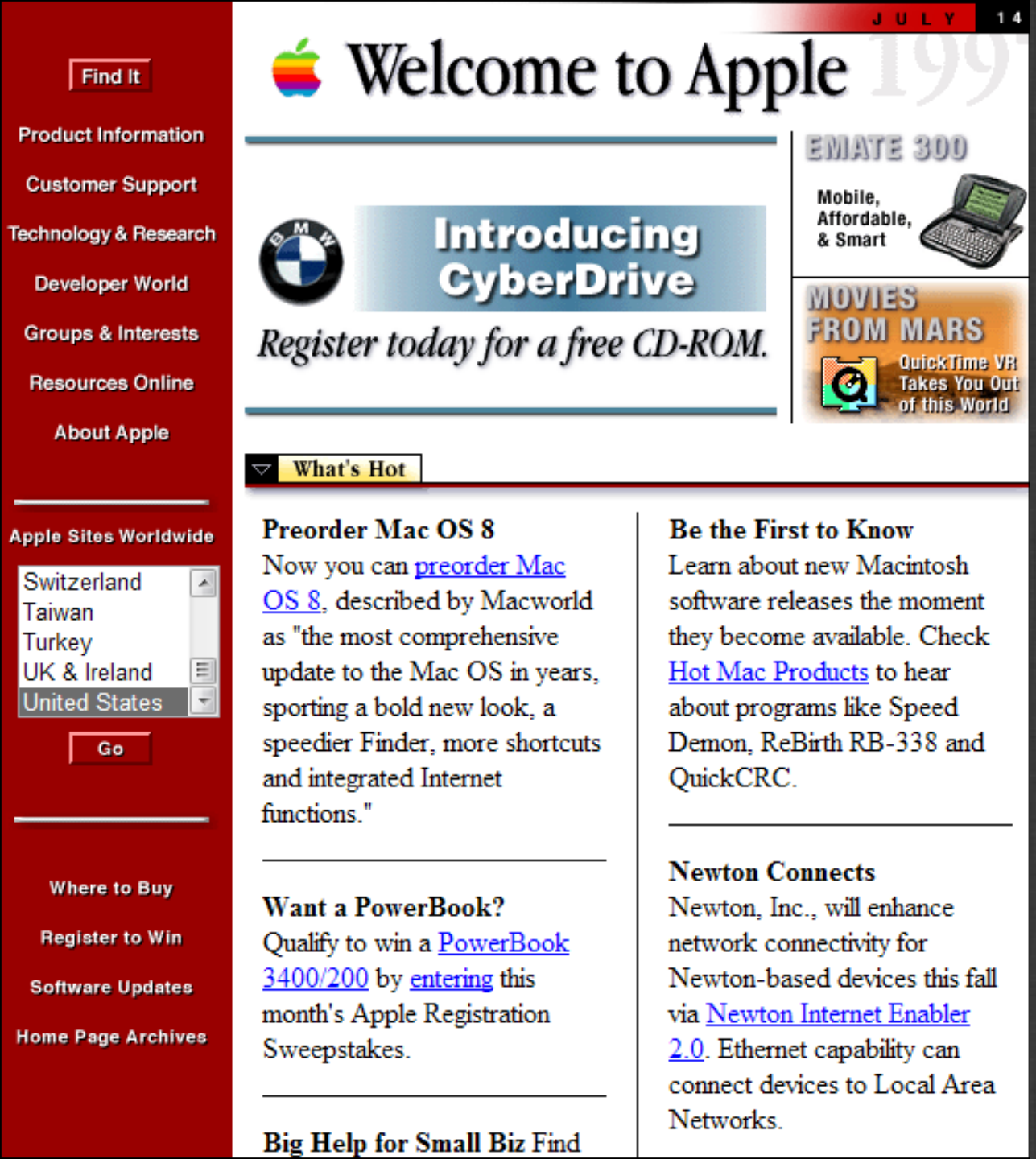
CSS

CSS

- Structure versus presentation.



CSS 1


Find It
Product Information
Customer Support
Technology & Research
Developer World
Groups & Interests
Resources Online
About Apple
Apple Sites Worldwide
Switzerland
Taiwan
Turkey
UK & Ireland
United States
Go
Where to Buy
Register to Win
Software Updates
Home Page Archives
JULY 14
Welcome to Apple
Introducing CyberDrive
Register today for a free CD-ROM.
EMATE 300
Mobile, Affordable, & Smart
MOVIES FROM MARS
QuickTime VR Takes You Out of this World
What's Hot
Preorder Mac OS 8
Now you can preorder Mac OS 8, described by Macworld as "the most comprehensive update to the Mac OS in years, sporting a bold new look, a speedier Finder, more shortcuts and integrated Internet functions."
Want a PowerBook?
Qualify to win a PowerBook 3400/200 by entering this month's Apple Registration Sweepstakes.
Big Help for Small Biz Find
Be the First to Know
Learn about new Macintosh software releases the moment they become available. Check Hot Mac Products to hear about programs like Speed Demon, ReBirth RB-338 and QuickCRC.
Newton Connects
Newton, Inc., will enhance network connectivity for Newton-based devices this fall via Newton Internet Enabler 2.0. Ethernet capability can connect devices to Local Area Networks.

CSS 1

CSS 1

1996

- The W3C releases the CSS 1 specification.
- Internet Explorer 3 offers limited support.

CSS 1

1998

- CSS 2 becomes a W3C Recommendation.

CSS 1

2000

- IE 5 for Mac offers better than 99% support.

CSS 1

- Font
- Color
- Alignment
- Text
- Box model
- ids and classes

CSS 2

- Font
- Color
- Alignment
- Text
- Box model
- ids and classes

- Absolute
- Relative
- Fixed
- z-index
- Media
- Bidirectional

CSS 2

- Absolute
- Relative
- Fixed
- z-index
- Media
- Bidirectional

CSS 3

- Absolute
- Relative
- Fixed
- z-index
- Media
- Bidirectional

- Media queries
- Border styles
- Opacity
- Shadows
- Background styles
- Content

CSS 3 properties and compatibility

2

CSS 3 properties

Browser compatibility

border-radius


9


10.5


5


5


4

- Image-free rounded corners.

```
p {
  border: 1px solid #999;
  border-radius: 10px;
}
```

border-radius


9


10.5


5


5


4

- No border is necessary.

```
p {
  background-color: #666;
  border-radius: 10px;
}
```

border-radius


9


10.5


5


5


4

- No shorthand yet.

```
p {
  background-color: #666;
  border-radius: 10px;
  border-bottom-left-
>> radius: 0;
  border-bottom-right-
>> radius: 0;
}
```

border-radius


9


10.5


5


5


4

- No shorthand yet.

```
p {
  background-color: #666;
  border-radius: 10px;
  border-bottom-left-
>> radius: 0;
  border-bottom-right-
>> radius: 0;
}
```

box-shadow

9

10.5

5

10

4

- Photoshop-like drop shadow.

```
p {
  background-color: #666;
  box-shadow: 10px 10px 5px
>> #ccc;
}
```

box-shadow

9

10.5

5

10

4

- Inner shadow.

```
p {
  background-color: #666;
  box-shadow: 10px 10px 5px
>> #ccc inset;
}
```

box-shadow

9

10.5

5

10

4

- Negative values permissible.

```
p {
  background-color: #666;
  box-shadow: -5px -5px 5px
>> #ccc;
}
```

text-shadow

none

10

4

4

3

- Horizontal precedes vertical.

```
p {
  color: #666;
  text-shadow: 2px 2px
>> #ccc;
}
```

opacity


9


10


4


4


2

- In IE 8-, this was filter.

```
p {
  background-color: #666;
  opacity: 0.5;
}
```

opacity


9


10


4


4


2

- 0 is transparent, 1 is opaque.

```
p {
  background-color: #666;
  opacity: 1;
}
```

transform


-9


-10.5


-5


-5


-3.6

- This syntax still lacks support.

```
p {
  background-color: #666;
  transform: rotate(5deg);
}
```

transform


-9


-10.5


-5


-5


-3.6

- Vendor prefixes are required.

```
p {
  background-color: #666;
  -ms-transform:
>> rotate(5deg);
  -moz-transform:
>> rotate(5deg);
}
```

transform


-9


-10.5


-5


-5


-3.6

- Webkit has 3-d transforms.

```
p {
   background-color: #666;
   -webkit-transform:
>>  rotate(5deg);
   -o-transform:
>>  rotate(5deg);
}
```

transform


-9


-10.5


-5


-5


-3.6

- matrix(n, n, n, n, n, n)
- translate(x, y)
  translateX, translateY, translateZ
- scale(x, y)
  scaleX, scaleY, scaleZ

transform


-9


-10.5


-5


-5


-3.6

- rotate(angle)
  rotateX, rotateY, rotateZ
- skew(angleX, angleY)
  skewX, skewY

transform


-9


-10.5


-5


-5


-3.6

- Webkit has 3-d transforms.

```
p {
  background-color: #666;
  -webkit-transform:
>> translate3d(5deg, 6deg,
>> 10deg);
}
```

transition

none

-10.5

-5

-5

-4

- Vendor prefixes required.

```
p {
   color: #666;
   -moz-transition: color
>>  2s;
}
p:hover {
   color: #369;
}
```

Multiple backgrounds

9

10.5

3.1

4

3.6

- You can use longhand.

```
p {
  color: #666;
  background-image:
>> url(foreground.png),
>> url(background.png);
  background-repeat:
>> no-repeat, repeat-x;
}
```

Multiple backgrounds


9


10.5


3.1


4


3.6

- Shorthand is also permitted.

```
p {
  color: #666;
  background:
>> url(foreground.png)
>> no-repeat,
>> url(background.png),
>> repeat-x;
}
```

Multiple backgrounds


9


10.5


3.1


4


3.6

- Shorthand is also permitted.

```
p {
  color: #666;
  background:
>> url(foreground.png)
>> no-repeat,
>> url(background.png),
>> repeat-x;
}
```

background-clip

9

10.5

-5

10

4

- Where is the image painted?
- We can define where in the box model the image ends.

```
p {
  color: #666;
  background-clip:
>> content-box;
}
```

background-origin

9

10.5

5

4

4

- Position relative to box model.

```
p {
  color: #666;
  background-position:
>> 15px 20px;
  background-origin:
>> content-box;
}
```

background-size


9


10.5


5


4


4

- A background image's size.

```
p {
  color: #666;
  background-position:
>> 15px 20px;
  background-size:
>> 160px 180px;
}
```

background-size


9


10.5


5


4


4

- Cover: smallest area that fits.

```
p {
  color: #666;
  background-position:
>> 15px 20px;
  background-size:
>> cover;
}
```

background-size


9


10.5


5


4


4

- Contain: largest area that fits.

```
p {
  color: #666;
  background-position:
>> 15px 20px;
  background-size:
>> contain;
}
```

Vendor prefixes

3

Where are they from?

What can they do?

Where are they headed?

Why vendor prefixes?

- The browser wars led to a great deal of nonstandard markup, such as IE's *filter* property.
- Netscape 3 and IE 3 had different interpretations of the box model.
- Netscape followed W3C specifications, while IE steadfastly held the "logical" interpretation.

Box model inconsistencies

- In Netscape, a box's width and height only referred to the content area.
- In IE, a box's width and height referred to the box's outer border edge.
- As you can expect, this led to broken layouts and hearts and "almost killed CSS" (Eric Meyer).

Vendor prefixes

- Vendor prefixes look kind of ugly.

```
p {
  -moz-border-radius: 5px;
  -o-border-radius: 5px;
  -webkit-border-radius: 5px;
  border-radius: 5px;
}
```

Vendor prefixes

- Aaron Gustafson: Like the box model hack.

```
#elem {
  width: [IE width];
  voice-family: "\"}\"";
  voice-family: inherit;
  width: [Other browser width];
}
html>body #elem {
  width: [Other browser width];
}
```

Vendor prefixes

- Aaron Gustafson: Like the box model hack.

```
p {
  padding: 10px;
  width: 200px;
  w\idth: 180px;
  height: 200px;
  heigh\t: 180px;
}
```

box-sizing

8

none

-5

9

-4

- No more box model pain.

```
p {
  color: #666;
  box-sizing:
>> border-box; /* IE */
  box-sizing:
>> content-box: /* W3C */
}
```

Advantages of vendor prefixes

- Vendor prefixes mark a property as “in progress,” or still under development.
- If standards change, browsers have a chance to adapt to the new recommendation.
- According to Meyer, they add “sorely needed flexibility” to the progress of CSS.

Advantages of vendor prefixes

- Vendor prefixes mark a property as “in progress,” or still under development.
- If standards change, browsers can adapt.
- According to Meyer, they add “sorely needed flexibility” to the progress of CSS.
- They are progressive rather than regressive.

Disadvantages of vendor prefixes

- Vendor prefixes are not part of the standard and can increase file size substantially.
- If standards change, browsers can fall back onto the prefix instead of advancing.
- Vendors can now keep and maintain proprietary markup outside of standards.

The –webkit fight

- In February 2009, the CSS Working Group reported that vendors were considering implementing the –webkit prefix, because other prefixes are much less prevalent.
- This is a move that could set a dangerous precedent; Firefox and Opera would display elements with –webkit just as they would their own prefixes.

The –webkit fight

- For now, vendor prefixes are here to stay; they are simply too prevalent nowadays.
- Eric Meyer suggests that browsers adopt other prefixes only when they adopt the standard.
- Aaron Gustafson argues that use of vendor prefixes is fraught with risk and developers are responsible for stemming its proliferation.

Responsive design and other media

4

CSS and other media

Responsive design

@media

- @media has been around since CSS 2.

```
@media screen {
p {
  font-size: 1.5em;
}
}
```

@media

- @media supports many other media:

```
@media print {
p {
  color: black;
}
}
```

@media

- @media supports many other media:

```
@media aural {
p {
  voice-family: female;
}
}
```

@media

- all
- aural
- braille
- embossed
- handheld
- print
- projection
- screen
- tty
- tv

Media queries

- As you can see, the fundamentals of responsive behavior are nothing new.
- CSS 3 introduces *media queries*, which allow you to denote styles for specific viewport conditions, including orientation, device size, resolution, aspect ratio, and presence of color.

www.w3.org/TR/css3-mediaqueries/

Media queries

- We can now define responsive behavior:

```
@media screen and (max-width: 20em) {
#content {
  width: 100%;
  float: none;
}
}
```

Media queries

- We can now define responsive behavior:

```
@media screen and (min-width: 20em) {
#content {
  width: 50%;
  float; left;
}
}
```

Media queries

- box-sizing makes gutters and padding easier.

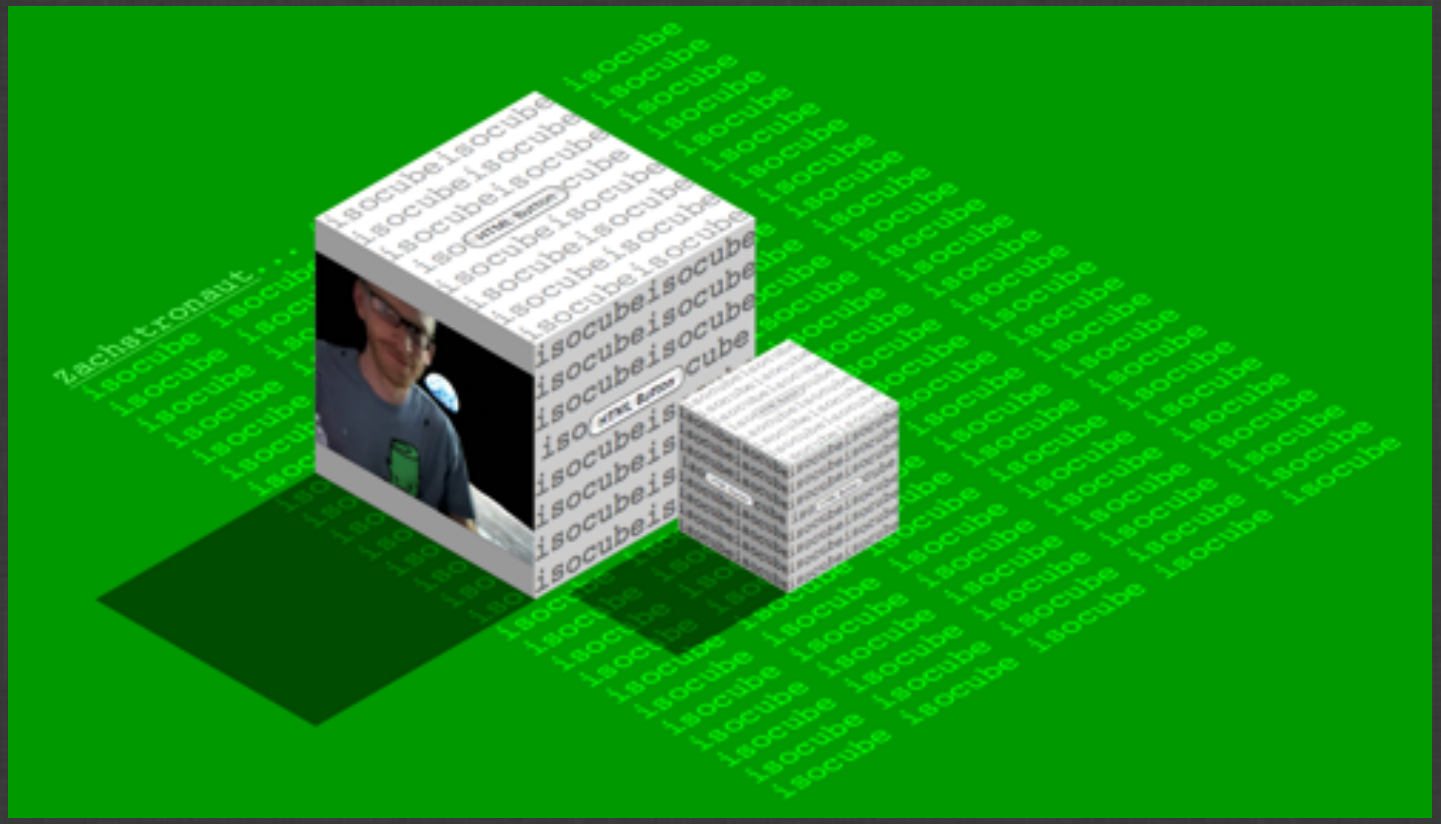
```
@media screen and (min-width: 20em) {
#content {
  box-sizing: content-box; /* W3C */
  width: 37%;
  padding: 1.5%;
}
}
```

Media queries

- box-sizing makes gutters and padding easier.

```
@media screen and (min-width: 20em) {
#content {
  box-sizing: border-box;
  width: 40%;
  padding: 5%;
}
}
```

Style's the limit



ajaxian.com/archives/fun-with-3d-css-and-video

CSS 4: Going out in style

5

Progress on the CSS 4 standard

CSS 4 and Drupal

CSS in the long run

CSS 4

- CSS 4 entered planning as soon as CSS 3 was released, and it introduces new syntax.
- Currently, no browser supports any CSS 4 markup, except for the any() selector, and only with vendor prefixes.

:matches

- CSS 4 introduces some new pseudoclasses:

```
:matches(header, nav, footer) ul {
  margin: 0;
  padding: 0;
}

/* header ul, nav ul, footer ul { } */
```

:matches

- :matches already exists in –vendor-any():

```
-moz-any(header, nav, footer) ul,
-webkit-any(header, nav, footer) ul {
  margin: 0;
  padding: 0;
}

/* header ul, nav ul, footer ul { } */
```

:dir

- Including improvements for bidirectional text:

```
p:dir(ltr) {
  margin-left: 1em;
}

p:dir(rtl) {
  margin-right: 1em;
}
```

:local-link and :any-link

- CSS 4 allows you to indicate a link's destination.

```
a:local-link {
  color: purple; /* '/node/1', 'edit/' */
}

a:any-link {
  color: blue; /* 'http://drupal.org' */
}
```

/for/

- Slashes now denote CSS qualified names.
- /for/ denotes “having the same ID.”

```
label:hover /for/ input {
  border-radius: 5px;
}
```

$subject

- We can also target parents of specific children.

```
ol > $li > strong {
  text-decoration: underline;
}

/* Styles the li that contains strong. */
/* The entire li will have underline. */
```

Implications for Drupal

- So what does this mean for Drupal?
- Selecting particular cases of parenthood and ID matching will greatly expand what CSS can affect in Drupal, meaning less crufty UIs.
- The new selector subject will greatly reduce the need for body classes and similar markup.

Implications for Drupal

- We may not need body, node, or block classes.

```
$body > #toolbar {
  margin-top: 65px; /* no class needed */
}

body.toolbar {
  margin-top: 65px; /* class required */
}
```

More general implications

- CSS 4 adds syntax which can be considered more logical or programmatic than before.
- As CSS 4 develops, it is important to keep in mind that CSS is not a programming language.
- However, these advancements have huge advantages for Drupal in the long run.

More front end at DCCT

- Intensive Beginning Theming
  - 4:10-5:00, Auditorium
  - Preston So (that's me!)

Thank you!

- **Preston So** (prestonso) is Prototyper Intern at Acquia and co-maintainer of the upcoming Spark distribution. He founded the Southern Colorado User Group.

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