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What Designers Need to Know About HTML5 and CSS3

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Agenda

- HTML5
  - Audio and video
  - Structural elements
  - Input types
- CSS3
  - Rounded corners
  - Shadows
  - Gradients
  - Transitions, transforms, and animation

Even If You Only Design in Photoshop...

- You need a solid understanding of the core web technologies

  - Not necessarily how to code, but what it can do

- Your visual designs should take into account the effects that are generated by code

  - Don't bother to design pixels for these things

- Communication with both client and developer requires understanding of these issues

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Is It Safe Yet?

- For mobile sites targeting iPhone, Android, and latest Blackberry, you can use almost everything

- For desktop sites, use with care

  – Visual enhancements that are OK to lose

    - Consider css3pie.com — makes IE 6-9 largely compatible

  – Features that can be handled in JavaScript on older browsers (e.g., form input types, validations)

    - Modernizr JS library assigns classes based on browser abilities

  – Elements that don't matter much if they aren't supported (e.g., new structural elements)

HTML5 Basics

- A large, complex specification with many independent elements

- Use HTML or XHTML syntax

- Simplified DOCTYPE and charset

```
<doctype html>
<meta charset=utf-8>
```

HTML5 Video

- iPad and iPhone have pushed this to the forefront

- In theory, it could be so simple

```
<video width="640" height="360"
    src="/video/videofile.mp4"></video>
```

- However...

  - Still need Flash video for older browsers

  - No single video encoding supported by all major browsers

    - Apple (Safari) supports only H.264 (MPEG-4)

    - Mozilla (Firefox) and Google (Chrome) will **not** support H.264

Multi-Format HTML5 Video

```
<video width="640" height="360" controls>

<source src="/file.mp4" type="video/mp4" />

<source src="/file.ogv" type="video/ogg" />
```

(Insert Flash video player code here)

(or, if you're willing to write off older browsers)

```
<h2>Your browser is inferior</h2>

</video>
```

Avoiding the Craziness

- Put the video on YouTube or Vimeo and use their embedded player

  - They take care of encoding into multiple formats and providing the right code for each browser

- Use a library or service that takes care of HTML code and providing Flash fallback

  - You still need to encode video into multiple formats

  - jPlayer.org (jQuery plugin)

  - JWplayer (www.longtailvideo.com/players)

  - SublimeVideo.net (hosted player)

New Structural Elements

- Not visible on page, but helpful for code structure and for search engines

```
<nav>
<header>
<footer>
<article>
<aside>
<section>
<figure>
```

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New Input Types

- For browsers that support them, give alternatives to "type=text" that provide specific behaviors

- Especially useful for mobile, where touch keyboard is optimized

    - tel (telephone number)

    - url (web address)

    - number

More Form Goodies

- Not yet widely enough supported that you can omit JavaScript fallbacks
- More types
  - Color, range, search, date, datetime, time, week
- Validation
- Autofocus
- Placeholder text

Rounded Corners

- Rounded corners without images!

```
#rounded-region {
   border-radius: 15px;
}
```

- Can specify each corner separately

```
#rounded-region {
   border-radius: 5px 20px 40px 60px;
}
```

But It's Never That Simple

- Latest browsers support the standard syntax
    - Even IE9!
- But lots of older browsers support CSS rounded corners but require vendor prefix

```
-moz-border-radius
-webkit-border-radius
```

- IE8 and older will get square corners

Shadows

- Text-shadow
  - `text-shadow: 2px 2px 5px #666;`
  - Horiz. offset, vert. offset, blur radius, color
  - No IE support until IE10
    - Can support CSS3 text-shadow with JavaScript aid
      - cssSandpaper

- Box-shadow
  - `box-shadow:2px 2px 5px #666;`
  - Works in IE9!

Gradients

- CSS gradients are an alternative to those single-pixel-wide repeated background images
  - Better performance
  - Easy to change (in theory...)
- Linear, radial, multiple stops all possible
- Code is messy due to differing implementations
- IE9 doesn't support it, but you can make it work using IE-proprietary filter

Example Gradient Code

```
#gradient-div  {
  /* fallback */
  background-color:#063053;
  /* chrome 2+, safari 4+; multiple color stops */
  background-image:-webkit-gradient(linear,left bottom,left top,color-
stop(0.32,#063053),color-stop(0.66,#395873), color-stop(0.83,#5c7c99));
  /* chrome 10+, safari 5.1+ */
  background-image:-webkit-linear-gradient(#063053,#395873,#5c7c99);
  /* firefox; multiple color stops */
  background-image:-moz-linear-gradient(top,#063053,#395873,#5c7c99);
  /* ie 6+ */
  filter: progid:DXImageTransform.Microsoft.gradient(startColorstr='#063053',
endColorstr='#395873');
  /* ie8 + */
  -ms-filter: "progid:DXImageTransform.Microsoft.gradient(startColorstr='#063053',
endColorstr='#395873')";
  /* ie10 */
  background-image: -ms-linear-gradient(#063053,#395873,#5c7c99);
  /* opera 11.1 */
  background-image: -o-linear-gradient(#063053,#395873,#5c7c99);
  /* The "standard" */
  background-image: linear-gradient(#063053,#395873,#5c7c99);
}
```

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Transitions, Transforms, and Animation

- Now (with the latest browsers) you can:

  - Tilt an image

  - Distort an image

  - Animate the application of a CSS rule

- 2D transforms: all current browsers

- 3D transforms: current Chrome and Safari, but require Firefox 10 and IE 10

- Transitions: current non-IE browsers and IE 10

- Animation: current non-IE browsers and IE 10

Resources

- www.caniuse.com - browser support

- www.quirksmode.org/html5 - HTML5 support

- www.quirksmode.org/css - CSS3 support

- www.cssportal.com - online CSS generators

- Lots more on our resource pages:

  - www.webvanta.com/html5

  - www.webvanta.com/css3

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