

HTML5

The Future of HTML

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1

Warning!

All of this may change!

The spec is still in development!

2

Bye Bye

3

Elements

4

`<basefont>`
``
Use CSS instead

5

`<big>`
`<center>`
`<s>`
`<strike>`
`<tt>`
`<u>`
Use CSS instead

6

<frame>

<frameset>

<noframes>

Removed due to
poor usability & accessibility

7

<acronym>

Use <abbr> instead

8

<applet>

Use <object> instead

9

`<dir>`
Use `` instead

10

`<isindex>`
Use form controls instead

11

Attributes

12

align
bgcolor
height & on <td> & <th>
hspace & vspace
nowrap
valign
width
on <hr>, <table>, <td>, & <th>

13

New Elements

14

Metadata

15

HTML 4.01 elements

<head>

<title>

<base>

<link>

<meta>

<style>

16

Scripting

17

HTML 4.01 elements

<script>

<noscript>

18

Sections

19

HTML 4.01 elements

`<body>`

`<h1>–<h6>`

`<address>`

20

`<address>`

“contact information
for [the] nearest
article or body element ancestor”

“must not be used
to represent arbitrary addresses
(e.g. postal addresses)”

Use `<p>` instead

<http://dev.w3.org/html5/spec-author-view/sections.html#the-address-element>

21

<section>

“The **section** element represents a generic document or application section ... The **section** element is not a generic container element. When an element is needed for styling purposes or as a convenience for scripting, authors are encouraged to use the **div** element instead.”

22

You should almost always start a section with a header

```
<section>
<h2>Header</h2>
<p>...</p>
</section>
```

23

<article>

“a section of content that forms an independent part of a document or site”

In other words, content that can stand on its own, a specialized kind of **<section>**

<http://dev.w3.org/html5/markup/article.html>

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<article>

An independent, self-contained
block of related content
“Can it stand on its own?”

<section>

A block of related content
“Is it related content?”

<div>

A block of content
“Is it a block of content?”

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For more on when to use what,
see
“HTML5 articles and sections:
what’s the difference?”
[www.brucelawson.co.uk/2010/
html5-articles-and-sections-
whats-the-difference/](http://www.brucelawson.co.uk/2010/html5-articles-and-sections-whats-the-difference/)

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Examples

Forum post

Magazine or newspaper article

Blog entry

User-submitted comment

Interactive widget

Any independent item of content

27

“Authors are encouraged
to use the article element
instead of the section element
when it would make sense
to syndicate
the contents of the element.”

28

Typically has a header
& sometimes a footer

29

Use `<section>` to split `<article>`
into logical groups of content

30

```
<article>
  <h1>Cthulhu Mythos</h1>
  <p>Lorem ipsum</p>
  <section>
    <h2>Yog-Sothoth</h2>
    <p>Lorem ipsum</p>
  </section>
  <section>
    <h2>Nyarlathotep</h2>
    <p>Lorem ipsum</p>
  </section>
</article>
```

31

Use `<article>` to split `<section>`
into logical groups of content

32

```
<section>
  <h1>Articles on Cthulhu</h1>
  <article>
    <h2>Yog-Sothoth</h2>
    <p>Lorem ipsum</p>
  </article>
  <article>
    <h2>Nyarlathotep</h2>
    <p>Lorem ipsum</p>
  </article>
</section>
```

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<aside>

Tangentially related content

- ✓ Sidebars
- ✓ Pull quotes
- ✓ Glossary
- ✓ Related links

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<hgroup>

“... used to group
a set of h1-h6 elements
when the heading
has multiple levels,
such as subheadings,
alternative titles,
or taglines.”

<http://www.w3.org/TR/html5/semantics.html#the-hgroup-element>

35

```
<hgroup>
  <h1>Dr. Strangelove</h1>
  <h2>Or: How I Learned to Stop
Worrying and Love the Bomb</h2>
</hgroup>

<hgroup>
  <h1>Google Apps Deciphered</h1>
  <h2>Compute in the Cloud to
Streamline Your Desktop</h2>
</hgroup>
```

36

Do not use `<hgroup>`
if you have only one header element

`<hgroup>`
 `<h1>Google Apps Deciphered</h1>`
`</hgroup>`



37

`<header>`

Introductory or navigational aids

Usually contains

- ✓ A section's heading
(`<h1>`–`<h6>` or `<hgroup>`)
- ✓ Table of contents
- ✓ Logos
- ✓ Search form

Does not introduce a new section;
it is the head of a section

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`<footer>`

Replaces `<div id="footer">`

Footer not just for pages,
but also for sections too

Info such as

- ✓ Author
- ✓ Copyright
- ✓ Links to related content
- ✓ Contact info (in `<address>`)

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`<nav>`

“a section of a page
that links to other pages
or to parts within the page:
a section with navigation links.”

Only “major navigation blocks”

No need for `<nav>` in `<footer>`

<http://www.w3.org/TR/html5/semantics.html#the-nav-element>

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Grouping Content

41

HTML 4.01 elements

`<p>`

``

`<hr>`

``

`
`

``

`<pre>`

`<dl>`

`<blockquote>`

`<dt>`

`<dd>`

42

<hr>

In HTML 4, inserted horizontal rule

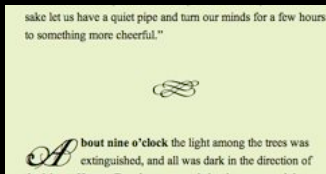
In HTML5, indicates
“paragraph-level thematic break”
(not sections—use <section>)

Use to separate topics or scenes

<http://dev.w3.org/html5/markup/small.html>

43

Replace boring browser rendering
with CSS



```
hr {height: 24px; background: url  
("flourish.png") no-repeat 50% 50%;  
margin: 3em 0; border: 0;}
```

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Text-Level Semantics

45

HTML 4.01 elements

| | |
|-----------------------------|---------------------------|
| <code><a></code> | <code><var></code> |
| <code></code> | <code><samp></code> |
| <code></code> | <code><kbd></code> |
| <code><small></code> | <code><sub></code> |
| <code><cite></code> | <code><sup></code> |
| <code><q></code> | <code><i></code> |
| <code><dfn></code> | <code></code> |
| <code><abbr></code> | <code><bdo></code> |
| <code><code></code> | <code></code> |

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`<i>`

HTML 4: italic

HTML5: text in an “alternate voice”

Examples

Foreign words `<i lang=“fr”>`

Technical terms

Ship names

Stage directions

Typographically italicized text

47

``

HTML 4: bold

HTML5: “stylistically offset” text
that’s not more important

Examples

Keywords

Product names in a review

Typographically emboldened text

48

*I*t was nearly one o'clock when Sherlock Holmes returned from his excursion. He held in his hand a sheet of blue paper, scrawled over with notes and figures.

This is bold only for stylistic reasons,
not because it is more important

49

``

HTML 4: emphasis (italic)

HTML5: "stress emphasis" text

Examples

Something pronounced differently

"Come here *now!*"

50

``

HTML 4: strong emphasis (bold)

HTML5: "strong importance" text

Examples

Warning: Do not feed the bears.

51

<small>

In HTML 4, made text smaller

In HTML5, indicates
side comments & small print

Examples:
legal disclaimers, disclaimers,
copyright & licensing info,
& attributions

Inline equivalent of <aside>

<http://dev.w3.org/html5/markup/small.html>

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<mark>


“a highlight that was not originally present but which has been added to bring the reader’s attention to a part of the text that might not have been considered important by the original author when the block was originally written, but which is now under previously unexpected scrutiny.”

<http://dev.w3.org/html5/spec/Overview.html#the-mark-element>

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These search terms are highlighted: **granneman** [Text only version](#)

[Contact](#) | [Site Map](#) | [Search](#)



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- [Don't Click on the Blue IT!](#)
- [Why You Should Switch to Firefox \(3.2 MB PDF, 3.6 MB HTML\)](#)
- [Interoperability between Windows & Linux \(1.1 MB PDF\)](#)
- [Web Site Design and Development Scenarios](#) Spring 2009

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``

Indicate the importance of words,
like errors or warning messages

``

Stress words to adapt meaning

55

`<progress>`

Represents task's progress

Can be

- ✓ Indeterminate
("I'm working but I don't know
how long it'll take")
- ✓ Number in range
("I'm 75% done")

<http://www.w3.org/TR/html5/text-level-semantics.html#the-progress-element>

56

`<meter>`

"Scalar measurement within
a known range,
or a fractional value"

Must have minimum & maximum



57

Correct

You scored `<meter>75%</meter>`

Incorrect

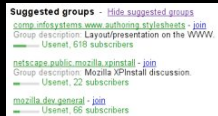
You scored `<meter value="75">
</meter>`

58

`<meter value="0.5">`Moderate
activity,`</meter>` Usenet, 618
subscribers

`<meter value="0.25">`Low activity,
`</meter>` Usenet, 22 subscribers

`<meter value="0.25">`Low activity,
`</meter>` Usenet, 66 subscribers



59

`<time>`

“either a time on a 24 hour clock,
or a precise date
in the proleptic Gregorian calendar
... intended as a way
to encode modern dates and times
in a machine-readable way
so that user agents
can offer to add them
to the user’s calendar”

<http://www.w3.org/TR/html5/text-level-semantic.html#the-time-element>

60

“not intended for encoding times
for which a precise date or time
cannot be established”

<http://www.w3.org/TR/html5/text-level-semantic.html#the-time-element>

61

<ruby>
Ruby markup

<rp>
Ruby parenthesis

<rt>
Ruby text

```
...
<ruby>
漢 <rt> かん </rt>
字 <rt> じ </rt>
</ruby>
...
```

This might be rendered as:

かん じ
... 漢字 ...

<http://www.w3.org/TR/html5/text-level-semantic.html#the-ruby-element>

62

Edits

63

HTML 4.01 elements

<ins>

64

Embedded Content

65

HTML 4.01 elements

<iframe>

<object>

<param>

<source>

<map>

<area>

66

`<figure>`

“annotate illustrations, diagrams, photos, code listings, etc, that are referred to from the main content of the document, but that could, without affecting the flow of the document, be moved away from that primary content, e.g. to the side of the page, to dedicated pages, or to an appendix.”

<http://www.whatwg.org/specs/web-apps/current-work/multipage/embedded-content-1.html#the-figure-element>

67

`<dt>`
Caption
`<dd>`
Contents

68

```
<figure>
  <dd><video src="basterds.mov"></video>
  <dt>Figure 6. The
<cite>Inglourious Basterds</cite>
trailer.
</figure>
```

69

```
<figure>
  <dd>
    <p>'Twas brillig, and the
slithy toves
    <br>Did gyre and gimble in the
wabe;</p>
  </dd>
  <dt><cite>Jabberwocky</cite>.
Lewis Carroll, 1832-98</dt>
</figure>
```

70

<canvas>

“a resolution-dependent
bitmap canvas,
which can be used for
rendering graphs,
game graphics,
or other visual images
on the fly.”

<http://www.w3.org/TR/html5/the-canvas-element.html#the-canvas-element>

71

“a rectangle in your page
where you can use JavaScript
to draw anything you want ...
[using]
a set of functions (“the canvas API”)
for drawing shapes,
defining paths,
creating gradients,
and applying transformations.”

<http://diveintohtml5.org/detect.html>

72

`<embed>`

Insert external (typically non-HTML)
application or interactive content

73

`<audio>`

Play audio without plugins
Embed Flash as a fallback

<http://www.w3.org/TR/html5/video.html#audio>
<http://html5doctor.com/native-audio-in-the-browser/>

74

`<audio src="elvis.ogg" controls
autobuffer></audio>`


`autoplay`

`autobuffer`

Download file in background

`loop`

75

| | | | | | |
|-----|---|---|---|---|--|
| Ogg |  | | |  | |
| MP3 |  |  | | | |
| WAV | |  |  |  | |

76

`<video>`

Play video without Flash
or other plugins

77

```
<video width="640" height="360"
src="http://www.youtube.com/demo/
google_main.mp4" controls></video>
```

`autoplay`

`autobuffer`

No autoplay,
so video downloaded in background

`poster="action.png"`

Display image if video doesn't load

78

| | | | | | |
|-------------|---|---|---|---|---|
| Ogg |  | |  |  | |
| H.264 (MP4) |  |  | | |  |
| WebM |  | |  |  | |

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`<source>`

“allows authors
to specify multiple media resources
for media elements.

It does not represent anything
on its own.”

Always a child of media elements

`<video>` & `<audio>`

<http://www.w3.org/TR/html5/video.html#the-source-element>

80

`<video>`

...

```

<source src="video.mp4"
type="video/mp4">
  <source src="video.ogv"
type="video/ogg; codecs='theora,
speex'">
</video>

```

81

Tabular Data

82

HTML 4.01 elements

| | |
|-------------------------------|----------------------------|
| <code><table></code> | <code><thead></code> |
| <code><caption></code> | <code><tfoot></code> |
| <code><colgroup></code> | <code><tr></code> |
| <code><col></code> | <code><td></code> |
| <code><tbody></code> | <code><th></code> |

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Forms

84

HTML 4.01 elements

| | |
|-------------------------------|-------------------------------|
| <code><form></code> | <code><select></code> |
| <code><fieldset></code> | <code><optgroup></code> |
| <code><label></code> | <code><option></code> |
| <code><input></code> | <code><textarea></code> |
| <code><button></code> | |

85

`<datalist>`

“ a set of option elements that represent predefined options for other controls. The contents of the element represents fallback content for legacy user agents, intermixed with option elements that represent the predefined options.”

<http://www.w3.org/TR/html5/forms.html#the-datalist-element>

86

`<keygen>`

“... a key pair generator control. When the control's form is submitted, the private key is stored in the local keystore, and the public key is packaged and sent to the server.”

<http://www.w3.org/TR/html5/forms.html#the-keygen-element>

87

`<output>`

“the result of a calculation.”

<http://www.w3.org/TR/html5/forms.html#the-output-element>

88

Interactive

89

`<menu>`

Represents a list of commands

`<menu type="context|toolbar|list">`

90

```

<menu type="toolbar">
  <li>
    <menu label="File">
      ...
    </menu>
  </li>
  <li>
    <menu label="Edit">
      <button type="button" onclick="ecopy
() ">Copy</button>
      <button type="button">Cut</button>
    </menu>
  </li>
</menu>

```



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```

<menu>
  <li>
    <menu label="Help">
      <li><a href="help.html">Help</a></
li>
      <li><a href="about.html">About</a></
li>
    </menu>
  </li>
</menu>

```

92

<hr> used as separator

93

`<command>`

A command that a user can run

<http://www.w3.org/TR/html5/interactive-elements.html#the-command>

94

`<details>`

“additional information or controls
which the user
can obtain on demand.”

<http://www.w3.org/TR/html5/interactive-elements.html#the-details-element>

95

Miscellaneous

96

HTML 4.01 elements

<legend>

<div>

97

Microformats

98

What's a *microformat*?

99

“web-based approach
to semantic markup
which seeks to re-use
existing HTML/XHTML tags
to convey metadata
& other attributes
in web pages”

100

Data encoded in webpages
(contact info, calendar events, etc.)
that allows software
to automatically process that data
for end-users

101

For more, see
microformats.org

102

hCard

103

Represents
people, companies,
organizations, & places

Uses a 1:1 representation of vCard

104

(1)

Find a photo of yourself
& name it your-name.jpg

(2)

Upload your-name.jpg
to your website

105

(3)

Create your own hCard
microformats.org/code/hcard/creator

(4)

Save the code to
your-name.htm

(5)

Upload your-name.htm
to your website

106

(6)

Enter the URL
pointing to your-name.htm
at h2vx.com/vcf/

(7)

Use the generated HTML
on your webpages
(Feel free to change the text
inside the `<a>`)

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H2VX

Contacts Conversion Service

Download *hCard* contacts to your address book

Web address:

<http://www.granneman.com/scott-granneman-hcard.htm>

Download

URL: <http://h2vx.com/vcf/www.granneman.com/scott-granneman-hcard.htm>

HTML: `<a type="text/directory" href="http://h2vx.com/vcf/www.granneman.com/scott-granneman-hc`

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Further reading

“hCard 1.0”

microformats.org/wiki/hcard

“hCard authoring”

microformats.org/wiki/hcard-authoring

“hCard microformat Validator”

hcard.geekhood.net

109

hCalendar

110

Represents calendaring events

Uses a 1:1 representation
of iCalendar

111

(1)

Create your own hCard
microformats.org/code/
hcalendar/creator

(2)

Save the code to
your-event.htm

(3)

Upload your-event.htm
to your website

112

(4)

Enter the URL
pointing to your-name.htm
at h2vx.com/ics/

(5)

Use the generated HTML
on your webpages
(Feel free to change the text
inside the `<a>`)

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H2VX

Events Conversion Service

Download or subscribe to hCalendar events

Web address:

Download

Subscribe

URL: <http://h2vx.com/ics/microformats.org/wiki/events>

HTML: `Download iC
subscribe Subscribe`

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Further reading
“hCalendar 1.0”
[microformats.org/wiki/
hCalendar](http://microformats.org/wiki/hCalendar)
“hCalendar authoring”
[microformats.org/wiki/
hcalendar-authoring](http://microformats.org/wiki/hcalendar-authoring)

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Problems & Solutions

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IE

117

```
<!--[if IE]>
  <script src="http://
html5shiv.googlecode.com/svn/
trunk/html5.js"></script>
<![endif-->
```

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Modernizr

119

Google Chrome Frame

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Thank you!

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HTML5

The Future of HTML

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