

HTML

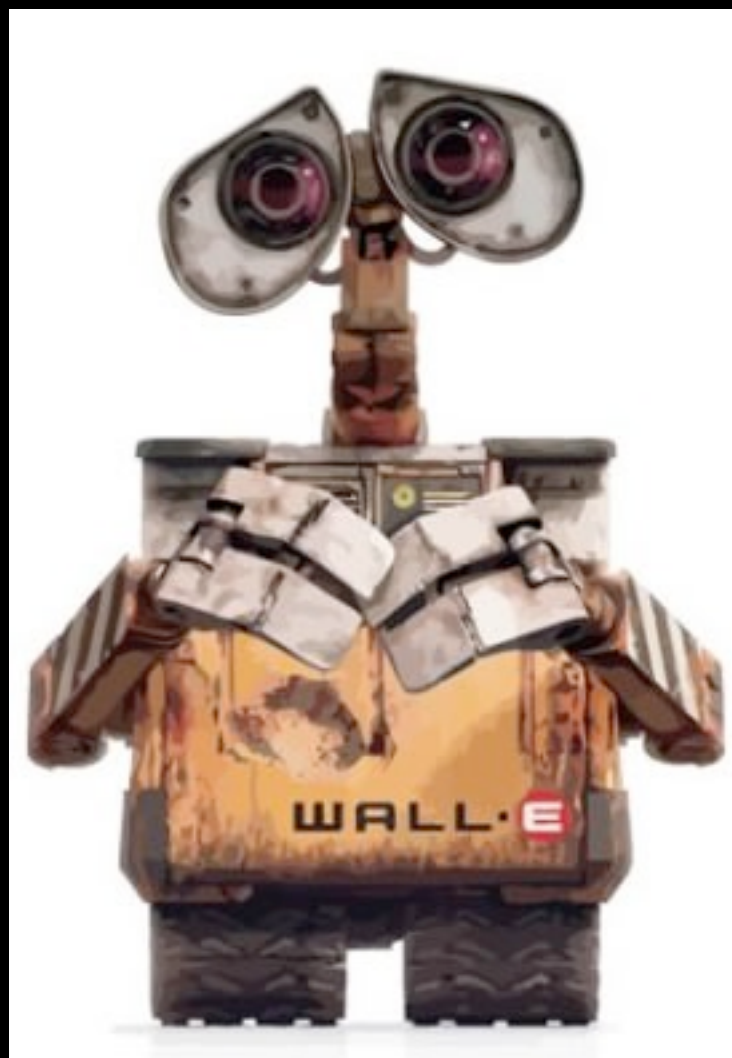


HTML5 设计原理

mixinfeng@meituan.com

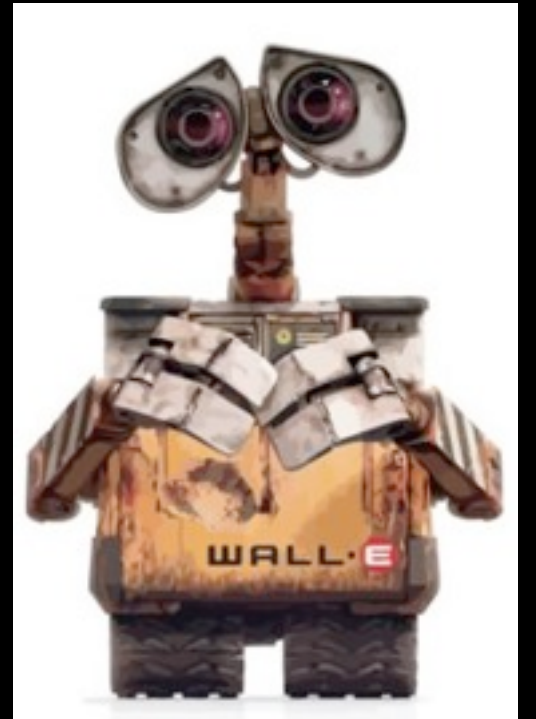
设计原理

设计原理



设计原理

不得伤害人类，或袖手旁观人类受伤害
必须服从人类，除非命令违反第一法则
必须自卫，只要不违背第一和第二法则

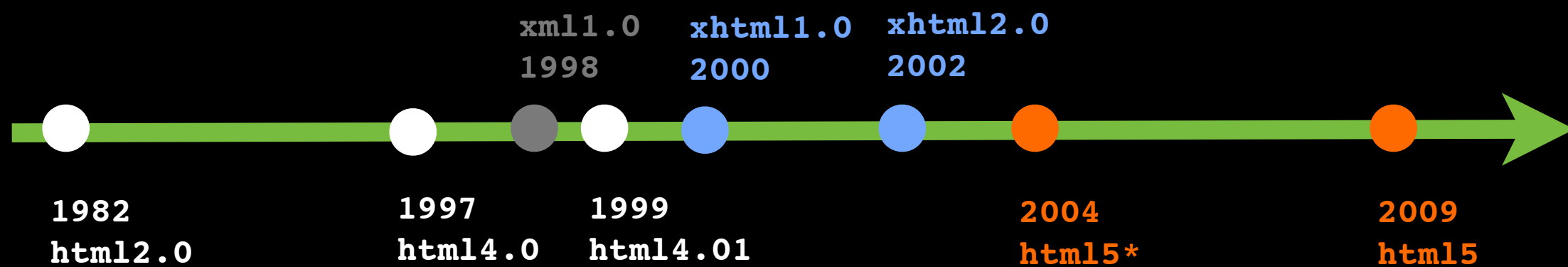


HTML与浏览器

```
<!DOCTYPE html PUBLIC "-//W3C/DTD HTML 4.01//EN" "http://  
www.w3.org/TR/html4/strict.dtd">
```

```
<meta http-equiv="Content-Type" content="text/html;  
charset=utf-8" />
```

HTML



HTML

html4.01

开放、自由
语法要求不严格

xhtml 1.0

相对自由
语法要求遵从xml规则

xhtml 2.0

严格的xml语法
不兼容html

HTML

html4.01

开放、自由
语法要求不严格

xhtml 1.0

相对自由
语法要求遵从xml规则

**Be conservative in what you send, be liberal
in what you accept.**

发送时要保守，接收时要开放。

— —Postel's Law

HTML5 设计原理

- **void needless complexity**
- **Support existing content**
- **Solve real problems**
- **Pave the cowpaths**
- **Degrade gracefully**
- **Priority of constituencies**

HTML5 设计原理

- **void needless complexity**
- **Support existing content**
- **Solve real problems**
- **Pave the cowpaths**
- **Degrade gracefully**
- **Priority of constituencies**
- 简化
- 兼容
- 解决问题
- 务实
- 退化
- 用户主导

简化

```
<!DOCTYPE html PUBLIC "-//W3C/DTD HTML 4.01//EN" "http://  
www.w3.org/TR/html4/strict.dtd">
```

```
<!DOCTYPE html PUBLIC "-//W3C/DTD XHTML 1.0 Strict//EN"  
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
```

简化

```
<!DOCTYPE html PUBLIC "-//W3C/DTD HTML 4.01//EN" "http://  
www.w3.org/TR/html4/strict.dtd">
```

```
<!DOCTYPE html PUBLIC "-//W3C/DTD XHTML 1.0 Strict//EN"  
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
```

```
<!doctype html>
```

简化

```
<meta http-equiv="Content-Type" content="text/html;  
charset=utf-8">
```

```
<?xml version="1.0" encoding="UTF-8" ?>
```

```
<meta http-equiv="Content-Type" content="text/html;  
charset=utf-8" />
```

简化

```
<meta http-equiv="Content-Type" content="text/html;  
charset=utf-8">
```

```
<?xml version="1.0" encoding="UTF-8" ?>  
<meta http-equiv="Content-Type" content="text/html;  
charset=utf-8" />
```

```
<meta charset="utf-8">
```


简化

```
<script type="text/javascript">
```

简化

```
<script type="text/javascript">
```

```
<script>
```

简化

```
<link rel="stylesheet" type="text/css" src="..." />
```

简化

```
<link rel="stylesheet" type="text/css" src="..." />
```

```
<link rel="stylesheet" src="...">
```

兼容

```
  
<p class="foo">Hello world</p>
```

```
<IMG SRC="foo" ALT="bar">  
<P CLASS="foo">Hello world</P>
```

```
<img src=foo alt=bar>  
<p class=foo>Hello world</p>
```

```
  
<p class="foo">Hello world</p>
```

解决问题

```
<h2><a href="/path/to/resource">Headline text</a></h2>  
<p><a href="/path/to/resource">Paragraph text.</a></p>
```

解决问题

```
<h2><a href="/path/to/resource">Headline text</a></h2>  
<p><a href="/path/to/resource">Paragraph text.</a></p>
```

```
<a href="/path/to/resource">  
  <h2>Headline text</h2>  
  <p>Paragraph text.</p>  
</a>
```

务实

```
<body>  
  <div id="header">...</div>  
  <div id="navigation">...</div>  
  <div id="main">...</div>  
  <div id="sidebar">...</div>  
  <div id="footer">...</div>  
</body>
```


务实

```
<body>
  <div id="header">...</div>
  <div id="navigation">...</div>
  <div id="main">...</div>
  <div id="sidebar">...</div>
  <div id="footer">...</div>
</body>
```

```
<body>
  <header>...</header>
  <nav>...</nav>
  <div id="main">...</div>
  <aside>...</aside>
  <footer>...</footer>
</body>
```

务实

```
<div class="item">
  <h2>...</h2>
  <div class="meta">...</div>
  <div class="content">
    ...
  </div>
  <div class="links">...</div>
</div>
```

务实

```
<div class="item">
  <h2>...</h2>
  <div class="meta">...</div>
  <div class="content">
    ...
  </div>
  <div class="links">...</div>
</div>
```

```
<section class="item">
  <header><h1>...</h1></header>
  <footer class="meta">...</footer>
  <div class="content">
    ...
  </div>
  <nav class="links">...</nav>
</section>
```

平稳退化

```
<input type="number" />  
<input type="search" />  
<input type="range" />  
<input type="email" />  
<input type="date" />  
<input type="url" />
```

平稳退化

```
<video>
  <source src="movie.mp4">
  <source src="movie.ogv">
  <object data="movie.swf">
    <a href="movie.mp4">download</a>
  </object>
</video>
```

平稳退化

输入Email, 订阅每日团购信息 订阅

```
<input value="输入email, 订阅每日团购信息" />
```

平稳退化



```
<input value="输入email, 订阅每日团购信息" />
```

```
<input placeholder="输入email, 订阅每日团购信息" value="" />
```

总结

- 解决问题是第一要务
- 输出严谨，接收宽容
- 渐进增强，平稳退化

HTML5 基础

geolocation

- `navigator.geolocation`
- `getCurrentPosition(location)`
- `location.coords.latitude`
- `location.coords.longitude`
- `location.coords.altitude`

geolocation


```
<script>
if (navigator.geolocation) {
    navigator.geolocation.getCurrentPosition(function(position) {
        var latitude = position.coords.latitude;
        var longitude = position.coords.longitude;
        alert(latitude + ' - ' + longitude);
    });
} else {
    error('You, out!');
}
</script>
```

HTML5 本地存储

- localStorage
- sessionStorage

HTML5 本地存储

- localStorage
- sessionStorage

						
IE	Firefox	Opera	Chrome	Safari	iPhone	Android
8.0+	3.0+	10.5+	4.0+	4.0+	2.0+	2.0+

HTML5 本地存储

```
var storage = window.localStorage;  
storage.a = "haha";  
storage["b"] = "hehe";  
var a = storage.a;  
var b = storage["b"];
```

HTML5 本地存储

```
if (window.addEventListener) {  
    window.addEventListener("storage", handle_storage, false);  
} else if (window.attachEvent) {  
    window.attachEvent("onstorage", handle_storage);  
}
```

HTML5 本地存储

```
<div id="c"></div>
<script>
    var storage = window.localStorage;
    if(!storage.getItem("num")){
        storage.setItem("num",0);
    }
    var n = parseInt(storage.getItem("num")) + 1;
    storage.setItem("num",n);
    document.getElementById("c").innerHTML = "result:" + n;
</script>
```


HTML5 本地存储

- cookies只能存储4096字节
- localStorage能存储5M
- ie8以下和opera暂不支持

cache manifest

cache manifest

1. 配置服务器manifest文件的MIME类型
2. 编写manifest文件
3. html标签的manifest属性中引用manifest文件

cache manifest

.htaccess

```
AddType text/cache-manifest manifest
```

cache manifest

`.manifest`

```
CACHE MANIFEST  
# meituan.localStorage v1.0
```

```
CACHE:  
index.html  
meituan.css  
logo.png  
core.js
```

```
NETWORK:  
login.php
```

```
FALLBACK:  
/index.php /default.html
```

cache manifest

.html

```
<html manifest="test.manifest">
```

cache manifest

用户可以离线访问web应用

- web页面加载速度提升
- 降低用户请求对服务器造成的负载压力

HTML5 标签

article

aside

section

hgroup

nav

header

footer

details

summary

figure

audio

video

canvas

source

embed

keygen

datalist

output

<form>

```
<form>
  <ul>
    <li><input placeholder="email" type="email" /></li>
    <li><input placeholder="url" type="url" /></li>
    <li><input placeholder="number" type="number" /></li>
    <li><input placeholder="range" type="range" /></li>
    <li><input placeholder="date" type="date" /></li>
    <li><input placeholder="search" type="search" /></li>
    <li><input placeholder="color" type="color" /></li>
  </ul>
  <input type="submit" />
</form>
```

<form>

autocomplete

- autofocus
- form
- form overrides
- height 、 width
- list

- min, max 、 step
- multiple
- pattern (regexp)
- placeholder
- required

<form>

- autocomplete
- autofocus
- form
- form overrides
- height 、 width
- list
- min, max 、 step
- multiple
- pattern (regexp)
- placeholder
- required

<video>

```
<style>  
  video { width:320px; height:240px; }  
</style>
```

```
<video src="movie.ogg" controls="controls"></video>
```

<video>

```
<style>  
    video { width:320px; height:240px; }  
</style>
```

```
<video src="movie.ogg" controls="controls"></video>
```

```
<video controls="controls">  
    <source src="movie.mp4">  
    <source src="movie.ogv">  
    <object data="movie.swf">  
        <a href="movie.mp4">download</a>  
    </object>  
</video>
```

<audio>

```
<audio src="song.ogg" controls="controls"></audio>
```

<audio>

```
<audio src="song.ogg" controls="controls"></audio>
```

```
<audio controls="controls">
```

```
  <source src="song.ogg">
```

```
  <source src="song.mp3">
```

```
  您的浏览器不支持audio标签, <a href="song.mp3">点击下载</a>
```

```
</audio>
```

<audio>

```
<audio src="song.ogg" controls="controls"></audio>
```

```
<audio controls="controls">
```

```
  <source src="song.ogg">
```

```
  <source src="song.mp3">
```

```
  您的浏览器不支持audio标签, <a href="song.mp3">点击下载</a>
```

```
</audio>
```



<canvas>

```
<canvas id="myCanvas"></canvas>
<script type="text/javascript">
    var c = document.getElementById("myCanvas");
    var cxt=c.getContext("2d");
    cxt.fillStyle="#FF0000";
    cxt.fillRect(0,0,150,75);
</script>
```

<article>

The article element represents a **self-contained composition** in a document, page, application, or site and that is, in principle, independently distributable or reusable, e.g. in syndication.

有**完整的独立内容**区块，可能包含header和footer

<article>

The article element represents a **self-contained composition** in a document, page, application, or site and that is, in principle, independently distributable or reusable, e.g. in syndication.

有**完整的独立内容**区块，可能包含header和footer

- a forum post

<article>

The article element represents a **self-contained composition** in a document, page, application, or site and that is, in principle, independently distributable or reusable, e.g. in syndication.

有**完整的独立内容**区块，可能包含header和footer

- a forum post
- a magazine

<article>

The article element represents a **self-contained composition** in a document, page, application, or site and that is, in principle, independently distributable or reusable, e.g. in syndication.

有**完整的独立内容**区块，可能包含header和footer

- a forum post
- a magazine
- newspaper article

<article>

The article element represents a **self-contained composition** in a document, page, application, or site and that is, in principle, independently distributable or reusable, e.g. in syndication.

有**完整的独立内容**区块，可能包含header和footer

- a forum post
- a magazine
- newspaper article
- a blog entry

<article>

The article element represents a **self-contained composition** in a document, page, application, or site and that is, in principle, independently distributable or reusable, e.g. in syndication.

有**完整的独立内容**区块，可能包含header和footer

- a forum post
- a magazine
- newspaper article
- a blog entry
- a user-submitted comment

<article>

The article element represents a **self-contained composition** in a document, page, application, or site and that is, in principle, independently distributable or reusable, e.g. in syndication.

有**完整的独立内容**区块，可能包含header和footer

- a forum post
- a magazine
- newspaper article
- a blog entry
- a user-submitted comment
- an interactive widget or gadget

<section>

The section element represents a **generic section** of a document or application. A section, in this context, is a thematic grouping of content, typically with a heading

一段**专题性质**的内容，一般包含标题，有语义的div标签。

<section>

The section element represents a **generic section** of a document or application. A section, in this context, is a thematic grouping of content, typically with a heading

一段**专题性质**的内容，一般包含标题，有语义的div标签。

- chapters

<section>

The section element represents a **generic section** of a document or application. A section, in this context, is a thematic grouping of content, typically with a heading

一段**专题性质**的内容，一般包含标题，有语义的div标签。

- chapters
- the various tabbed pages in a tabbed dialog box

<section>

The section element represents a **generic section** of a document or application. A section, in this context, is a thematic grouping of content, typically with a heading

一段**专题性质**的内容，一般包含标题，有语义的div标签。

- chapters
- the various tabbed pages in a tabbed dialog box
- the numbered sections of a thesis

<section>

The section element represents a **generic section** of a document or application. A section, in this context, is a thematic grouping of content, typically with a heading

一段**专题性质**的内容，一般包含标题，有语义的div标签。

- chapters
- the various tabbed pages in a tabbed dialog box
- the numbered sections of a thesis
- A Web site's home page could be split into sections for an **introduction**, **news items**, and **contact information**.

<header>

The header element represents a group of **introductory** or **navigational aids**.

特殊的更具语义的section标签，相对于content的辅助性内容

<header>

The header element represents a group of **introductory** or **navigational aids**.

特殊的更具语义的section标签，相对于content的辅助性内容

- section's heading

<header>

The header element represents a group of **introductory** or **navigational aids**.

特殊的更具语义的section标签，相对于content的辅助性内容

- section's heading
- to wrap a section's table of contents, **a search form, or any relevant logos**

<footer>

The footer element represents a footer for its nearest ancestor sectioning content or **sectioning root** element. A footer typically contains information **about its section** such as **who wrote it, links to related documents, copyright data, and the like.**

特殊的更具语义的section标签，相对于content的辅助性内容

<aside>

The aside element represents a section of a page that **consists of content** that is tangentially **related to the content around** the aside element, and which could be considered separate from that content. Such sections are often represented as **sidebars** in printed typography.

特殊的更具语义的section标签，相对于article的辅助性内容

<details><summary>

```
<section class="progress window">
  <h1>Details Element intro</h1>
  <details>
    <summary>intro detail element above</summary>
    <p>he first summary element child of the element, if
any, represents the summary or legend of the details. If ther
e is no child summary element, the user agent should provide
its own legend (e.g. "Details").</p>
  </details>
</section>
```

<hgroup>

The header element represents a group of **introductory** or **navigational aids**.

特殊的更具语义的section标签，相对于content的辅助性内容

<hgroup>

The header element represents a group of **introductory** or **navigational aids**.

特殊的更具语义的section标签，相对于content的辅助性内容

- section's heading

<hgroup>

The header element represents a group of **introductory** or **navigational aids**.

特殊的更具语义的section标签，相对于content的辅助性内容

- section's heading
- to wrap a section's table of contents, **a search form, or any relevant logos**

HTML5 标准属性

- accesskey
- class
- id
- style
- tabeindex tab
- title
- lang

HTML5 标准属性

- contenteditable
- contextmenu
- draggable
- dropzone
- hidden
- spellcheck

HTML5 事件属性

Window 事件属性

window 对象触发的事件。

适用于 <body> 标签：

属性	值	描述
onafterprint	new script	在打印文档之后运行脚本
onbeforeprint	new script	在文档打印之前运行脚本
onbeforeunload	new script	在文档加载之前运行脚本
onblur	script	当窗口失去焦点时运行脚本
onerror	new script	当错误发生时运行脚本
onfocus	script	当窗口获得焦点时运行脚本
onhaschange	new script	当文档改变时运行脚本
onload	script	当文档加载时运行脚本
onmessage	new script	当触发消息时运行脚本
onoffline	new script	当文档离线时运行脚本
ononline	new script	当文档上线时运行脚本
onpagehide	new script	当窗口隐藏时运行脚本
onpageshow	new script	当窗口可见时运行脚本
onpopstate	new script	当窗口历史记录改变时运行脚本
onredo	new script	当文档执行再执行操作（redo）时运行脚本
onresize	new script	当调整窗口大小时运行脚本
onstorage	new script	当文档加载加载时运行脚本
onundo	new script	当 Web Storage 区域更新时（存储空间中的数据发生变化时）
onunload	new script	当用户离开文档时运行脚本

HTML5 事件属性

媒介事件

由视频、图像以及音频等媒介触发的事件。

适用于所有 HTML 5 元素，不过在媒介元素（诸如 audio、embed、img、object 以及 video）中最常用：

属性	值	描述
onabort	<i>script</i>	当发生中止事件时运行脚本
oncanplay	<i>new</i> <i>script</i>	当媒介能够开始播放但可能因缓冲而需要停止时运行脚本
oncanplaythrough	<i>new</i> <i>script</i>	当媒介能够无需因缓冲而停止即可播放至结尾时运行脚本
ondurationchange	<i>new</i> <i>script</i>	当媒介长度改变时运行脚本
onemptied	<i>new</i> <i>script</i>	当媒介资源元素突然为空时（网络错误、加载错误等）运行脚本
onended	<i>new</i> <i>script</i>	当媒介已抵达结尾时运行脚本
onerror	<i>new</i> <i>script</i>	当在元素加载期间发生错误时运行脚本
onloadeddata	<i>new</i> <i>script</i>	当加载媒介数据时运行脚本
onloadedmetadata	<i>new</i> <i>script</i>	当媒介元素的持续时间以及其他媒介数据已加载时运行脚本
onloadstart	<i>new</i> <i>script</i>	当浏览器开始加载媒介数据时运行脚本
onpause	<i>new</i> <i>script</i>	当媒介数据暂停时运行脚本
onplay	<i>new</i> <i>script</i>	当媒介数据将要开始播放时运行脚本
onplaying	<i>new</i> <i>script</i>	当媒介数据已开始播放时运行脚本
onprogress	<i>new</i> <i>script</i>	当浏览器正在取媒介数据时运行脚本
onratechange	<i>new</i> <i>script</i>	当媒介数据的播放速率改变时运行脚本
onreadystatechange	<i>new</i> <i>script</i>	当就绪状态（ready-state）改变时运行脚本
onseeked	<i>new</i> <i>script</i>	当媒介元素的定位属性 [1] 不再为真且定位已结束时运行脚本
onseeking	<i>new</i> <i>script</i>	当媒介元素的定位属性为真且定位已开始时运行脚本
onstalled	<i>new</i> <i>script</i>	当取回媒介数据过程中（延迟）存在错误时运行脚本
onsuspend	<i>new</i> <i>script</i>	当浏览器已在取媒介数据但在取回整个媒介文件之前停止时运行脚本
ontimeupdate	<i>new</i> <i>script</i>	当媒介改变其播放位置时运行脚本
onvolumechange	<i>new</i> <i>script</i>	当媒介改变音量亦或当音量被设置为静音时运行脚本
onwaiting	<i>new</i> <i>script</i>	当媒介已停止播放但打算继续播放时运行脚本

HTML5 事件属性

表单事件

由 HTML 表单内部的动作触发的事件。

适用于所有 HTML 5 元素，不过最常用于表单元素中：

属性	值	描述
onblur	<i>script</i>	当元素失去焦点时运行脚本
onchange	<i>script</i>	当元素改变时运行脚本
oncontextmenu	<i>new script</i>	当触发上下文菜单时运行脚本
onfocus	<i>script</i>	当元素获得焦点时运行脚本
onformchange	<i>new script</i>	当表单改变时运行脚本
onforminput	<i>new script</i>	当表单获得用户输入时运行脚本
oninput	<i>new script</i>	当元素获得用户输入时运行脚本
oninvalid	<i>new script</i>	当元素无效时运行脚本
onreset	<i>script</i>	当表单重置时运行脚本。 HTML 5 不支持。
onselect	<i>script</i>	当选取元素时运行脚本
onsubmit	<i>script</i>	当提交表单时运行脚本

HTML5 事件属性

键盘事件

由键盘触发的事件。

适用于所有 HTML 5 元素：

属性	值	描述
onkeydown	<i>script</i>	当按下按键时运行脚本
onkeypress	<i>script</i>	当按下并松开按键时运行脚本
onkeyup	<i>script</i>	当松开按键时运行脚本

HTML5 事件属性

鼠标事件

由鼠标货相似的用户动作触发的事件。

适用于所有 HTML 5 元素：

属性	值	描述
onclick	<i>script</i>	当单击鼠标时运行脚本
ondblclick	<i>script</i>	当双击鼠标时运行脚本
ondrag	<i>new script</i>	当拖动元素时运行脚本
ondragend	<i>new script</i>	当拖动操作结束时运行脚本
ondragenter	<i>new script</i>	当元素被拖动至有效的拖放目标时运行脚本
ondragleave	<i>new script</i>	当元素离开有效拖放目标时运行脚本
ondragover	<i>new script</i>	当元素被拖动至有效拖放目标上方时运行脚本
ondragstart	<i>new script</i>	当拖动操作开始时运行脚本
ondrop	<i>new script</i>	当被拖动元素正在被拖放时运行脚本
onmousedown	<i>script</i>	当按下鼠标按钮时运行脚本
onmousemove	<i>script</i>	当鼠标指针移动时运行脚本
onmouseout	<i>script</i>	当鼠标指针移出元素时运行脚本
onmouseover	<i>script</i>	当鼠标指针移至元素之上时运行脚本
onmouseup	<i>script</i>	当松开鼠标按钮时运行脚本
onmousewheel	<i>new script</i>	当转动鼠标滚轮时运行脚本
onscroll	<i>new script</i>	当滚动元素滚动元素的滚动条时运行脚本

thanks