

Dynamic HTML

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(Redirected from DHTML)

Dynamic HTML, or **DHTML**, is an umbrella term for a collection of technologies used together to create interactive and animated web sites^[1] by using a combination of a static markup language (such as HTML), a client-side scripting language (such as JavaScript), a presentation definition language (such as CSS), and the Document Object Model.^[2]

DHTML allows scripting languages to change variables in a web page's definition language, which in turn affects the look and function of otherwise "static" HTML page content, *after* the page has been fully loaded and during the viewing process. Thus the dynamic characteristic of DHTML is the way it functions while a page is viewed, not in its ability to generate a unique page with each page load.

By contrast, a dynamic web page is a broader concept — any web page generated differently for each user, load occurrence, or specific variable values. This includes pages created by client-side scripting, and ones created by server-side scripting (such as PHP, Perl, JSP or ASP.NET) where the web server generates content before sending it to the client.

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Uses

DHTML allows authors to add effects to their pages that are otherwise difficult to achieve. For example, DHTML allows the page author to:

- Animate text and images in their document, independently moving each element from any starting point to any ending point, following a predetermined path or one chosen by the user.
- Embed a ticker that automatically refreshes its content with the latest news, stock quotes, or other data.
- Use a form to capture user input, and then process and respond to that data without having to send data back to the server.
- Include rollover buttons or drop-down menus.

A less common use is to create browser-based action games. During the late 1990s and early 2000s, a number of games were created using DHTML^[citation needed], but differences between browsers made this difficult: many techniques had to

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be implemented in code to enable the games to work on multiple platforms. Recently browsers have been converging towards the web standards, which has made the design of DHTML games more viable. Those games can be played on all major browsers and they can also be ported to Widgets for Mac OS X and Gadgets for Windows Vista, which are based on DHTML code.

The term "DHTML" has fallen out of use in recent years, as DHTML scripts often tended to not work well between various web browsers. DHTML may now be referred to as unobtrusive JavaScript coding (DOM Scripting), in an effort to place an emphasis on agreed-upon best practices while allowing similar effects in an accessible, standards-compliant way.

Some disadvantages of DHTML are that it is difficult to develop and debug due to varying degrees of support among web browsers of the technologies involved, and that the variety of screen sizes means the end look can only be fine-tuned on a limited number of browser and screen-size combinations. Development for relatively recent browsers, such as Internet Explorer 5.0+, Mozilla Firefox 2.0+, and Opera 7.0+, is aided by a shared Document Object Model. Basic DHTML support was introduced with Internet Explorer 4.0, although there was a basic dynamic system with Netscape Navigator 4.0.

Structure of a web page

See also: DOM events

Typically a web page using DHTML is set up the following way:

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN" "http://www.w3.org/TR/xhtml11/
<html xmlns="http://www.w3.org/1999/xhtml">
  <head>
    <title>DHTML example</title>
    <script type="text/javascript">
      function init() {
        myObj = document.getElementById("navigation");
        // .... more code
      }
      window.onload=init;
    </script>
  </head>
  <body>
    <div id="navigation"></div>
    <pre>
      Often the code is stored in an external file; this is done by linking the
      This is helpful when several pages use the same script:
    </pre>
    <script type="text/javascript" src="myjavascript.js"></script>
  </body>
</html>
```

In the above code, the blue code represents the DOCUMENT TYPE declaration, which specifies which version of markup code is used to create the website. The red code shows browser detection Javascript, which enables web pages to adjust to browser application standards and requirements.

Example: Displaying an additional block of text

The following code illustrates an often-used function. An additional part of a web page will only be displayed if the user requests it.

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
    "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en">
  <head>
    <title>Test</title>
    <style type="text/css">
      h2 {background-color: lightblue; width: 100%}
      a {font-size: larger; background-color: goldenrod}
      a:hover {background-color: gold}
      #example1 {display: none; margin: 3%; padding: 4%; background-color: limeg
    </style>
    <script type="text/javascript">
      function changeDisplayState (id) {
        d=document.getElementById("showhide");
        e=document.getElementById(id);
        if (e.style.display == 'none' || e.style.display == "") {
          e.style.display = 'block';
          d.innerHTML = 'Hide example.....';
        } else {
          e.style.display = 'none';
          d.innerHTML = 'Show example';
        }
      }
    </script>
  </head>
  <body>
    <h2>How to use a DOM function</h2>
    <div><a id="showhide" href="javascript:changeDisplayState('example1')">Show
    <div id="example1">
      This is the example.
      (Additional information, which is only displayed on request)...
    </div>
    <div>The general text continues...</div>
  </body>
</html>
```

References

1. ^ <http://www.w3schools.com/Dhtml/default.asp>
2. ^ <http://books.google.co.in/books?id=AuO923YJTX4C&pg=PA22&dq=dhtml+scripting+languages&ei=mT2CSui-I42SkATfu6GXCg#v=onepage&q=dhtml%20scripting%20languages&f=false>

External links

- QuirksMode (<http://www.quirksmode.org/>) , a comprehensive site with test examples and instructions on how to write DHTML code which runs on several browsers.
- Introductory DHTML Tutorial (<http://www.yourhtmlsource.com/javascript/dhtmlexplained.html>) for those taking their first steps in DHTML.

- [HTML & DHTML Reference on MSDN \(http://msdn2.microsoft.com/en-us/library/ms533050.aspx\)](http://msdn2.microsoft.com/en-us/library/ms533050.aspx)

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