

DOM Tree Menu Part I

by Perry Molendijk

1. Introduction

Note:

Before you go any further, these are the browsers this script works in: IE 5, 5.5 and 6 and NS 6.1. Don't even bother trying with any version 4 browser.

Ever used one of those javascripts that builds an explorer-like tree menu? They invariably are very complicated, you just end up filling in the blanks and hope it will work.

Now that DOM implementations by the major browsers is much better, you can use DOM to write the script. The result is a very short, easy to understand bit of code.

2. What You Need to Know

Knowledge of HTML, Javascript and DOM.

3. The HTML

Now I did say just before that existing scripts are complicated and this one isn't. Unfortunately the HTML used in the page gets a bit tricky to write and maintain, one 'id' attribute wrong or a <div> tag short and it won't work. However there is a solution to this complexity which I'll discuss in [Part II](#).

3.1. Link Tags

Every <a> tag is wrapped in a <div> tag like this:

```
<div>
  <a href="http://www.wired.com" id="link1"
    title="Wired News">
    Wired News
  </a>
</div>
```

3.2. <div> Tags for Grouping Links

Each group of links has a group header similar to the way bookmarks are organised in a web browser. The group header itself is a link, when clicked it will trigger the javascript that will expand the corresponding group of links. The group header is wrapped in a <div>.

The group of links underneath the header is wrapped in a <div> tag that has its display value set to none. This way only the header is visible when the page is loaded.

```
<!-- The group header div tag -->
<div>
  
  <a id="hdr1"
    title="Click to expand"
    href="javascript:showHide('group1','icon1','hdr1')">
    News Links
  </a>
</div>

<!-- the link group with wrapping div tag -->
<div style="display:none" id="group1">
  <div>
    <a href="http://www.wired.com" id="link1"
      title="Wired News">
      Wired News
    </a>
  </div>
  <div>
    <a href="http://www.xmlhack.com" id="link2"
      title="xmlhack">
      xmlhack
    </a>
  </div>
  <div>
    <a href="http://news.cnet.com" id="link3"
      title="CNET News">
      CNET News
    </a>
  </div>
</div>
```

3.3. Nesting Groups

To create groups inside a group you nest a construct like the one above inside the 'invisible'

DOM Tree Menu Part I

<div> tag.

```
<!-- The group header div tag -->
<div>
  
  <a id="hdr1"
    title="Click to expand"
    href="javascript:showHide('group1','icon1','hdr1')">
    News Links
  </a>
</div>

<!-- the link group with wrapping div tag -->
<div style="display:none" id="group1">

  <!-- the first sub-group -->
  <div>
    
    <a id="hdr11"
      title="Click to expand"
      href="javascript:showHide('group11','icon11','hdr11')">
      Internet News
    </a>
  </div>

  <!-- links in the first sub-group -->
  <div style="display:none" id="group11">
    <div>
      <a href="http://www.wired.com" id="link1"
        title="Wired News">
        Wired News
      </a>
    </div>
    <div>
      <a href="http://www.xmlhack.com" id="link2"
        title="xmlhack">
        xmlhack
      </a>
    </div>
    <div>
      <a href="http://news.cnet.com" id="link3"
        title="CNET News">
        CNET News
      </a>
    </div>
  </div>
</div>
```

```

</div>

  <!-- the second sub-group -->
  <div>
    
    <a id="hdr11"
    title="Click to expand"
    href="javascript:showHide('group11','icon11','hdr11')">
      General News
    </a>
  </div>

  <!-- links in the second sub-group -->
  <div style="display:none" id="group11">
    <div>
      <a href="http://www.cnn.com" id="link4"
      title="CNN">
        CNN
      </a>
    </div>
    <div>
      <a href="http://abcnews.go.com/" id="link5"
      title="ABC News">
        ABC News
      </a>
    </div>
    <div>
      <a href="http://news.bbc.co.uk" id="link6"
      title="BBC News">
        BBC News
      </a>
    </div>
  </div>
</div>

```

4. The JavaScript

The javascript handles displaying / hiding groups of links, changes the plus and minus icons and resets <alt> and <title> attributes.

4.1. Source Code

Below the source for the script:

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

DOM Tree Menu Part I

```
<!--
function showHide(divId, iconId, linkId) {
    // get the 'div' element you want to show or hide.
    var showHideDiv = document.getElementById(divId);
    // get the +/- icon associate with current group.
    var iconTag = document.getElementById(iconId);
    // get the link tag that was clicked.
    var currentLink = document.getElementById(linkId);
    // var to hold source for the plus and minus icons.
    var iconSrc = 'images/shim.gif';
    // var to hold string used
    // for alt and title attributes.
    var altTitleText = '';
    if(showHideDiv.style.display == '') {
        showHideDiv.style.display = 'none';
        iconSrc = 'images/icon_plus.gif';
        altTitleText = 'Click to expand';
    }
    else {
        showHideDiv.style.display = '';
        iconSrc = 'images/icon_minus.gif';
        altTitleText = 'Click to minimise';
    }
    iconTag.setAttribute("src",iconSrc);
    iconTag.setAttribute("alt",altTitleText);
    iconTag.setAttribute("title",altTitleText);
    currentLink.setAttribute("title",altTitleText);
}
//-->
</script>
```

4.2. Parameters

The scripts takes 3 parameters:

divId

the value of 'id' of the <div> that needs to shown or hidden.

iconId

the value of 'id' of the image that needs to be changed to a plus or minus sign.

linkId

the value of 'id' of the link that's just been clicked.

4.3. Variables

Five variables are declared. The 3 top ones are the most important as they hold references to the HTML tags we want to modify.

We use the `getElementById()` method to get the `<div>`, `` and `<a>` tags we need to make changes to. With `getElementById()` you can get to any tag in the document providing it has an 'id' attribute.

showHideDiv

Holds the `<div>` tag we want to show or hide.

```
var showHideDiv = document.getElementById(divId);
```

iconTag

Holds the `` tag we want to change to a plus or a minus icon.

```
var iconTag = document.getElementById(iconId);
```

currentLink

Holds the `<a>` tag that was just clicked.

```
var currentLink = document.getElementById(linkId);
```

The remaining 2 are constants used in various parts of the script.

iconSrc

Holds the value of the icon source file. I have defaulted it to `images/shim.gif`.

altTitleText

Holds the value of the 'alt' and 'title' attributes. The value will toggle between 'Click to expand' and 'Click to minimise'.

4.4. The Action

The value of the style property 'display' is checked in the 'if else' statement. If it is '' (blank, the default value), it is set to 'none' to hide the `<div>`, otherwise it is set to '' (blank, the default value), to show the `<div>`. The values for 'iconSrc' and 'altTitleText' are also set.

To finish the `setAttribute()` method is used to replace the existing values of 'src', 'alt' and 'title' with the ones set in the 'if else' statement.

5. Resources

- [Source Files](#) - The XML, XSL and an example HTML file with the Javascript.
- [Gecko DOM Reference](#) - DOM reference with examples on the Mozilla site.
- [Jeni's XSLT Pages](#) - To get started with XSLT don't look any further. Jeni Tennison's

DOM Tree Menu Part I

tutorials cover just about all you need to get you going.

- XML.com - Loads of articles and tutorials on all things XML.
- [IBM developerWorks](http://IBM.developerWorks) - Also lots of articles and tutorials on XML technologies.
- W3C.org - Here you'll find official specifications for [XML](#) and [XSLT](#) and a host of other information.