



Using a Server Side Include to Place Dynamic Content in a Web Page

What is an SSI?

SSI (Server Side Include) is a directive that is placed within HTML pages, and evaluated on the server as the server sends the page to the browser. It allows you, the Webmaster, to add dynamically generated content to an existing HTML page, without having to serve the entire page via a CGI program, or other dynamic technology.

What's that you say? As a Webmaster, you can divide your page into parts. For example, these might be: header, navigation bar, content well, text insert, site footer, and copyright footer. The parts that don't change very often, like the header, navigation bar, and footers can be stored separately as text files and imported dynamically into all the pages where they are used. As you update the content well (that piece which changes frequently) or any other piece, the browser assembles the parts dynamically, and the page is displayed to the site visitor as if the page had been created as a single unit. In fact, when you look at the source code from the browser window, it's a seamless unit. The "magic wand" that "glues" the pieces together is an **SSI**.

Why use a server side include?

The advantage of using a server side include in a page is that the browser builds the page using the latest version of the included file and dynamically updates all the pages using that block the next time the pages are refreshed or loaded by the browser. Thus, blocks of code that are reused in many pages only have to be updated once. SSI use can work like frames, without the disadvantages of using a framed site.

The example in **Appendix A** uses several server side includes to assemble designated blocks of code that might be used repeatedly throughout a related set of web pages. Using SSI's is a good way to place headings, navigation elements, News Box Publisher or Calendar Box Publisher content, as well as local and site-wide footers in a web page. The text SSI (server side include) used in this example is processed on the fly by the server as the page is rendered by the browser for the site visitor.

Note: Our MCPS servers DO NOT support SSI execs that execute a program on the server because they pose a high security risk to our servers.

What does a server side include look like?

The format of the server side include of text is **one line of code**:

```
#include file="filename.txt" or  
#include virtual="/directory/filename.txt"
```

If the browser can't process this kind of statement (If browser is too old, pre-Netscape 4.0 or IE 5), it will skip the command and try to display the include statement as text on the page. To avoid this situation, we place the command inside of HTML comment tags thus:

```
<!-- #include file="filename.txt" -->
```

That's it. One line of code tells the browser "go get this file and insert it here."

What else do I need to do to use an SSI?

It can't be that easy, can it? Well, there are a couple of other little things you need to do once for each page. You must use the file extension **.shtm** or **.shtml** instead of **.htm** and **.html**. This is simply a naming convention that says "This html file includes Server commands - please parse it

before delivering to the browser site" (hence the "s"). That way parsing can be skipped for all "plain" .html [or .htm] files. Shtml is the default extension for a page with server-side includes.

Make the pieces to assemble

The pieces are made in the same way you make your pages. The pieces, though, only include their part of the page. You don't need any <html>, <head> or <body> tags as you need for a complete page. You can preview your "piece" in your HTML editor the same way you'd preview an .html page. To make the piece into an includable file, save it as a text file. Give it an identifiable name with the suffix of .txt (i.e. footer.txt) and save it in your school/office root directory. You'll need one text file for each include command in your web page.

Keeping your visitors coming to your site

The last thing you need to do is keep your friends who used to view your page at the .htm /.html URL address.

When using the SSI, you're actually changing your home page name from index.html to index.shtm. If you delete the old index.html and put up index.shtm, your new page is the default. It displays in the browser when your directory is opened and everybody's happy. Few will even notice that the page name has changed.

But, if a visitor has bookmarked or linked to the page named index.html, and they use their bookmark or link to return to your page, it won't be there anymore. The site visitor will see 404 – Page not found. What can you do so you don't lose this site visitor? You can make a redirect page to send those seeking the old index.html and forward them to your new page now named index.shtm. An example of this code is included in **Appendix B**. It's good practice to put up a redirect to replace the old index.html to avoid frustrating your site visitors.

Easy as pie.... That's the essentials of using SSI.

See our sample assembled web page in **Appendix A**.

I want to know more

The attached **Appendix A** includes the HTML code used and resultant browser displays for the .shtm page and its related parts.

To learn more about server side includes see the following sites.

http://www.smartwebby.com/web_site_design/server_side_includes.asp

<http://www.w3.org/Jigsaw/Doc/User/SSI.html>

http://en.wikipedia.org/wiki/Server_Side_Includes

<http://www.wdvl.com/Authoring/SSI/>

<http://websitetips.com/ssi/>

Where can I get help?

For questions on using SSI's, contact the Web Services Team by email to webmaster@mcpsmd.org or post questions to the Webmasters Conference in Outlook.

9/21/06

Appendix A SSI Usage Dissected

When we put all the pieces below together we get the web page as viewed below.

MCPS
Montgomery County Public Schools
ROCKVILLE, MARYLAND

My Favorite Middle School

Home
Calendar
About Us
Administration
Contact Us
Departments
Media Center
Grade 6 Teams
Grade 7 Teams
Grade 8 Teams
Athletics
Music
Drama
Students
Resources
Gallery
SGA
Our PTA

1234 Maple Street | Silver Spring, MD 20901
Phone: 301.279.3333 | Fax: 240.279.2222
Principal: Ms. Bobo Link

This week at our school...

- Back-To-School Night for 7th & 8th Grade 9/20 @ 7:30
- Back-To-School Night for 6th Grade 9/19 @ 7:30
- MCPS Quicknotes: An Email News Service

Last updated Sept. 21, 2006 | Maintained by [Webmaster](#)

[MCPS HOME](#) | [ABOUT MCPS](#) | [SCHOOLS](#) | [PARENTS](#) | [STUDENTS](#) | [STAFF](#) | [COMMUNITY](#)
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The following sections are for the engineer-types among us who want details... Others may skip lightly through the following sample sections of code noting where to place the #include statements.

Sample core HTML code using SSI: /schools/templatesms/index.shtm

```
<html>
<head>
<title>Template Home Page for MS </title>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
</head>

<body bgcolor="#FFFFFF" topmargin="0">

<!-- the code for the top banner begins here-->

<div align="center"> 
</div>

<!-- the code for the top banner ends here -->

<div align=center>
<h1>My Favorite Middle School</h1>
<table width="95%" border="0" cellspacing="0" cellpadding="0">
<tr>
<td width="20%">
<!--#include file="sitenavbar.txt"-->
```

```

</td>
<td width="80%">

        <!--This is where your code starts -->
<center>
    <p>    </p>
    <h4><b>1234 Maple Street |
    Silver Spring, MD 20901</b><br>
    <font size="2">Phone: 301.279.3333 |
    Fax: 240.279.2222<br>
    </font>Principal: Ms. Bobo Link</h4>
    <h4 align="center"><font face="Verdana, Arial, Helvetica, sans-serif" color="#FF0000">This
    week at our school...</font></h4>

    <!--#include file="/schools/schoolnews/useridnews.txt"-->

</center>
    <!--This is where your code for this page ends -->
</td>
</tr>
</table>

```

```

</div>

<!-- Following is the code for the footer for your site with webmaster contact info -->

```

<!--#include file="sitefooter.txt"-->

```

<!-- Following is the code for the mcps footer that gets you back to MCPS home and other areas and has copyright info,
and links to Privacy Policy, and downloads for Acrobat Reader and
RealAudio Player -->

```

<!--#include file="/copyright.txt"-->

```

</body>
</html>

```

Now let’s look at the pieces that we are bringing into the page. (Again, optional reference material.)

A. Content of “/copyright.txt” for site wide use on MCPS web

```

<!-- bottom include for MCPS copyright and links footer -->
<div align=center>
    <hr size="1" noshade>
    <font size="-1">
        <a href="http://www.montgomeryschoolsmd.org/">MCPS HOME</a>
        | <a href="http://www.montgomeryschoolsmd.org/about/">ABOUT MCPS</a> | <a
        href="http://www.montgomeryschoolsmd.org/schools/">SCHOOLS</a>
        | <a href="http://www.montgomeryschoolsmd.org/parents/">PARENTS</a> | <a
        href="http://www.montgomeryschoolsmd.org/students/">STUDENTS</a>
        | <a href="http://www.montgomeryschoolsmd.org/staff/">STAFF</a> | <a
        href="http://www.montgomeryschoolsmd.org/community/">COMMUNITY</a><br>
        &copy; 1995-2006
        Montgomery County Public Schools. All rights reserved.<br>
        <a href="http://www.montgomeryschoolsmd.org/info/contact/">Contact</a> | <a
        href="http://www.montgomeryschoolsmd.org/privacy.shtm">Privacy
        Policy</a> | <a href="http://www.montgomeryschoolsmd.org/info/nondiscrimination.shtm">Nondiscrimination/ADA</a>
        | <a href="http://www.adobe.com/products/acrobat/readstep2.html">Get Adobe
        Acrobat Reader</a> | <a href="http://www.real.com">Get RealPlayer</a> | <a
        href="http://www.montgomerycountymd.gov/">Montgomery
        County</a>
    </font>
</div>    RealPlayer</a><br>
    </font><font size="-3" face="Verdana, Arial, Helvetica, sans-serif"> </font>
</p>
</div>

```

Which displays in the browser as:

[MCPS HOME](#) | [ABOUT MCPS](#) | [SCHOOLS](#) | [PARENTS](#) | [STUDENTS](#) | [STAFF](#) | [COMMUNITY](#)
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B. The Site footer with the site webmaster and content information is called “sitefooter.txt” in this example. This is the sample code:

```
<!-- bottom include for local site webmaster -->
<div align=center>
<font face="Verdana, Arial, Helvetica, sans-serif" size="2">Last updated Sept.
21, 2006 | Maintained by <a href="mailto:my_mcps_mail@mcpsmd.org">Webmaster</a> </font></div>
```

As viewed in the browser, this renders as:

Last updated Sept. 21, 2006 | Maintained by [Webmaster](#)

C. The sample page also uses an SSI for the left navigation bar, known as “sitenavbar.txt” in our example page. This is simply a table with links to pages within the site.

```
<a href="#content"></a>
<table width="150" border="0" cellpadding="2" cellspacing="2">
<tr>
<td valign="top" bgcolor="#99cccc"><b><font face="Verdana, Arial, Helvetica, sans-serif" size="2"><a
href="http://www.mcps.k12.md.us/schools/templatesms/">Home</a></font></b></td>
</tr>
<tr>
<td valign="top" bgcolor="#FFFFCC"><b><font face="Verdana, Arial, Helvetica, sans-serif" size="2"><a
href="http://coldfusion.mcps.k12.md.us/cfms/webteam/calendar/calendar.cfm?calendarID=test,mcps">Calendar</a>
<a href="/schools/templates/news/"></a></font></b></td>
</tr>
<tr>
<td valign="top" bgcolor="#FFFFCC"><b><font face="Verdana, Arial, Helvetica, sans-serif" size="2"><a
href="/schools/templatesms/about.shtm">About
Us </a> </font></b></td>
</tr>
<tr>
<td valign="top" bgcolor="#FFFFCC"><b><font face="Verdana, Arial, Helvetica, sans-serif" size="2"><a
href="/schools/templatesms/admin.shtm">Administration</a></font></b></td>
</tr>
<tr>
<td valign="top" bgcolor="#FFFFCC"><b><font face="Verdana, Arial, Helvetica, sans-serif" size="2"><a
href="/schools/templatesms/feedback.shtm">Contact
Us </a></font></b></td>
</tr>
<tr>
<td valign="top" bgcolor="#99cccc"><b><font face="Verdana, Arial, Helvetica, sans-serif" size="2"><a
href="/schools/templatesms/depts/">Departments</a></font></b></td>
</tr>
<tr>
<td valign="top" bgcolor="#FFFFCC"><b><font face="Verdana, Arial, Helvetica, sans-serif" size="2"><a
href="/schools/templatesms/depts/media/">Media
Center </a></font></b></td>
</tr>
<tr>
<td valign="top" bgcolor="#FFFFCC"><b><font face="Verdana, Arial, Helvetica, sans-serif" size="2"><a
href="/schools/templatesms/depts/grade6/">Grade
6 Teams</a> </font></b></td>
</tr>
<tr>
<td valign="top" bgcolor="#FFFFCC"><b><font face="Verdana, Arial, Helvetica, sans-serif" size="2"><a
href="/schools/templatesms/depts/grade7/">Grade
7 Teams</a></font></b></td>
</tr>
</tr>
```

```

      <td valign="top" bgcolor="#FFFFCC"><b><font face="Verdana, Arial, Helvetica, sans-serif" size="2"><a
href="/schools/templatesms/depts/grade8/">Grade
      8 Teams</a></font></b></td>
    </tr>
    <td valign="top" bgcolor="#FFFFCC"><b><font face="Verdana, Arial, Helvetica, sans-serif" size="2"><a
href="/schools/templatesms/depts/athletics/">Athletics</a></font></b></td>
  </tr>
  <tr>
    <td valign="top" bgcolor="#FFFFCC"><b><font face="Verdana, Arial, Helvetica, sans-serif" size="2"><a
href="/schools/templatesms/depts/music/">Music</a></font></b></td>
  </tr>
  <tr>
    <td valign="top" bgcolor="#FFFFCC"><b><font face="Verdana, Arial, Helvetica, sans-serif" size="2"><a
href="/schools/templatesms/depts/drama/">Drama</a></font></b></td>
  </tr>
  <tr>
    <td valign="top" bgcolor="99cccc"><b><font face="Verdana, Arial, Helvetica, sans-serif" size="2"><a
href="/schools/templatesms/students/">Students
      </a></font></b></td>
  </tr>
  <tr>
    <td valign="top" bgcolor="#FFFFCC"><b><font face="Verdana, Arial, Helvetica, sans-serif" size="2"><a
href="/schools/templatesms/students/resources/">Resources</a></font></b></td>
  </tr>
  <tr>
    <td valign="top" bgcolor="#FFFFCC"><b><font face="Verdana, Arial, Helvetica, sans-serif" size="2"><a
href="/schools/templatesms/students/gallery/">Gallery</a></font></b></td>
  </tr>
  <tr>
    <td valign="top" bgcolor="#FFFFCC"><b><font face="Verdana, Arial, Helvetica, sans-serif" size="2"><a
href="/schools/templatesms/students/sga/">SGA</a></font></b></td>
  </tr>
  <tr>
    <td valign="top" bgcolor="99cccc"><b><font face="Verdana, Arial, Helvetica, sans-serif" size="2"><a
href="/schools/templatesms/pta/">Our
      PTA </a></font></b></td>
  </tr>
</table>

```

D. News Box Publisher Tool SSI

This include is used in the content well to bring in the text generated by the news publisher utility application. The code used is :

```
<!--#include file="/schools/schoolnews/useridnews.txt"-->
```

Note: The #include statement can be placed within a table so as to control placement within the web page.

When the server puts all the pieces together and the browser displays the page, we get the completed web page as shown at the beginning of this appendix.

Appendix B Using a Redirect to Forward Site Visitors

Sample Redirect

For the non-techies among us, just use the code, changing the links and names to your school/office addresses. For those wanting to understand the mechanics of how it works, read on. You can make a redirect almost invisible by setting the content variable to 0. Optionally you can announce the change and ask visitors to update their bookmarks. To do this, increase the value of the content variable number to display a message and the new URL for a specified number of seconds followed by the auto-redirect. The Meta tag does the work here. The text and link in the body are optional.

```
<html>
<head>
<title>This page has moved...</title>
<meta http-equiv="Refresh" content="0;
URL=http://www.montgomeryschoolsmd.org/schools/ssims/index.shtm">
</head>

<body bgcolor="#FFFFFF">
<p><font size="5"><b>The Silver Spring International MS site has moved to</b></font></p>
<p><font size="5"><b><a
href="http://www.montgomeryschoolsmd.org/schools/ssims/index.shtm">http://www.montgomeryschoolsmd.org/schools/s
sims/index.shtm</a></b></font></p>
<p>Please update your links to reflect this change.<br>
If you are not automatically redirected to the new page, please click the link
  above. </p>
</body>
</html>
```

This redirect displays thus:

The Silver Spring International MS site has moved to

<http://www.montgomeryschoolsmd.org/schools/ssims/index.shtm>

Please update your links to reflect this change.

If you are not automatically redirected to the new page, please click the link above.