

APRIL 2006



YOUR SAS® TECHNOLOGY REPORT

THE POWER TO KNOW.

Dear Readers,

Thirty-one years and going strong...it's time to put another notch in the SAS Users Group International (SUGI) conference belt. However, you can officially retire your SUGI paraphernalia. Beginning in 2007, the annual conference will be known as SAS Global Forum. Read the article below ("SUGI Changes Name to SAS Global Forum") for full details.

In case you missed SUGI 31, or if you want more one-on-one time with SAS personnel, the 2006 regional users groups conferences take place later this year. Check the [Web site](#) for dates and locations.

If you attended SUGI 31, or any regional users group in the past, you are likely familiar with SAS Publishing. One of the most popular booths at the annual conferences, SAS Publishing is a global enterprise committed to providing SAS customers and prospects with the highest-quality resources for learning SAS. On its [Web site](#), you'll find information about books, e-learning, online documentation and e-books that support SAS. Check it out today – there's more SAS knowledge than ever before.

Thanks for using SAS!

A handwritten signature in black ink that reads 'Shelley Sessoms'.

Shelley Sessoms

Editor, *Your SAS Technology Report*

Sample 1605: JSP TreeView

JSP TreeView

Note: The Java classes used in this example are installed as part of SAS® AppDev Studio™ software.

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General Information

The TreeView is a TransformationBean™ that generates the appropriate HTML 4.0 and JavaScript to represent a tree. You can use TreeView beans in a Java servlet or in a JSP scriptlet. The TreeView uses a javax.swing.tree.TreeModel which should contain TreeNode tbeans for best performance. Objects of other types are also supported in the TreeModel by transforming them into tbean TreeNodes, with the default transform simply setting the tbean TreeNode text to the result of the calling toString() on the object in the model.

To create a simple TreeView, follow these steps:

1. Create a TreeModel.
2. Create a TreeView.
3. Set the model on the TreeView.
4. Render the TreeView.

This sample shows how to create and render a JSP TreeView. The code shown in the Full Code tab will create a TreeModel and display a default TreeView with that model. It does not contain the customizations shown below. To get the full code for these customizations, see the Downloads tab.

Notes

It is assumed that the user has some prior knowledge about creating and deploying Web applications. For more information regarding Web applications, see [Web Applications Reference](#) and [Deploying Web Applications](#).

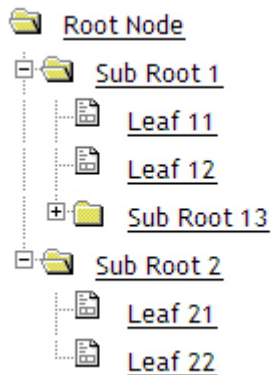
The best practise for a JSP Web application is a JSP architecture that uses servlets and .jsp files to dynamically serve up content. JSP, Model 2 uses the Model-View-Controller paradigm. See also: JavaServer Pages, [Model 2](#) (description from JavaWorld) and Model-View-Controller. For simplicity, this sample does not use the JSP Model 2 approach.

Customizations

This example contains the following customizations:

- [Customizing the Styles by changing style classes](#)
- [Customizing the images](#)
- [Expanding and Selecting Nodes](#)

A default TreeView looks like the following after you expand the nodes:



CHANGING STYLE CLASSES

You may want to change the styles of the components in the TreeView to get a different look.

To change the styles, you should:

- Add the following import statements to the top of your JSP file:

```
<%@page import="com.sas.servlet.tbeans.StyleInfo" %>
<%@page import="com.sas.servlet.tbeans.models.TreeNodeInterface" %>
<%@page import="com.sas.servlet.tbeans.html.TreeView" %>
```

- Add the following styles in the <head> section of your JSP file:

```
<style>
.MyTreeText {
font-family: "Trebuchet MS", Verdana, Arial, Helvetica, sans-serif;
font-size: x-small;
color: blue;
padding-left: 5;
cursor: default;
}
.MyTreeSelected {
font-family: "Trebuchet MS", Verdana, Arial, Helvetica, sans-serif;
font-size: x-small;
background: navy;
color: orange;
padding-left: 5;
cursor: default;
}
.MyTreeNodeText {
font-family: "Trebuchet MS", Verdana, Arial, Helvetica, sans-serif;
font-size: x-small;
font-style: italic;
color: orange;
padding-left: 5;
cursor: default;
}
```

```

.MyTreeNodeSelected {
font-family: "Trebuchet MS", Verdana, Arial, Helvetica, sans-serif;
font-size: x-small;
font-style: italic;
background: red;
color: yellow;
padding-left: 5;
cursor: default;
}
</style>

```

- Edit your TreeView tag to set new style names. Add the following lines of scriplet code (shown in green) inside the TreeView tag:

```

<:sas:TreeView id="treeView1" model="model"
nodeLoading="PROGRESSIVE"
selectionMode="SINGLE_SELECTION"
scope="session" >

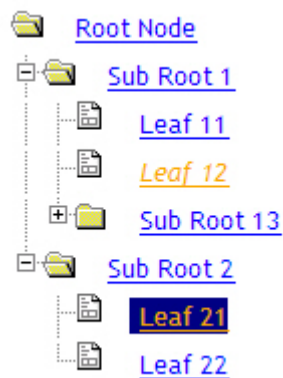
<%
// Set some styles for entire tree view
treeView1.getStyleMap().put( TreeView.TREEVIEW_TEXT,
new StyleInfo("MyTreeText") );
treeView1.getStyleMap().put( TreeView.TREEVIEW_SELECTED,
new StyleInfo("MyTreeSelected") );
%>

<%
// Set some styles for leaf 12
TreeNodeInterface root = (TreeNodeInterface)treeView1.getModel().getRoot();
TreeNodeInterface node = (TreeNodeInterface)root.getChildAt(0).getChildAt(1);
node.getStyleMap().put( TreeView.TREEVIEW_TEXT,
new StyleInfo("MyTreeNodeText") );
node.getStyleMap().put( TreeView.TREEVIEW_SELECTED,
new StyleInfo("MyTreeNodeSelected") );
%>

</:sas:TreeView>

```

Your new TreeView will look like the following when you expand the nodes:



CUSTOMIZING THE IMAGES

You may want to change the way the TreeView looks by customizing the images displayed in different nodes of the tree.

To change the images shown in the TreeView, follow these steps:

- Add the following import statements to the top of your JSP file:

```
<%@page import="com.sas.servlet.tbeans.models.TreeNodeInterface" %>
<%@page import="com.sas.servlet.tbeans.html.TreeView" %>
```

- Edit your TreeView tag to set new image names. Add the following lines of scriptlet code (shown in green) inside the TreeView tag:

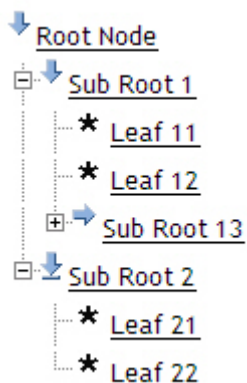
```
<sas:TreeView id="treeView1" model="model"
nodeLoading="PROGRESSIVE"
selectionMode="SINGLE_SELECTION"
scope="session" >

<%
// Set some images for entire tree view
treeView1.getImageMap().put( TreeView.OPEN_FOLDER,
"arrow-down-default.gif");
treeView1.getImageMap().put( TreeView.CLOSED_FOLDER,
"arrow-right-default.gif" );
treeView1.getImageMap().put( TreeView.LEAF_ICON, "MultiplyBlack.gif");
%>

<%
// Set some images for Sub Root 2
TreeNodeInterface root = (TreeNodeInterface)treeView1.getModel().getRoot();
TreeNodeInterface node = (TreeNodeInterface)root.getChildAt(1);
node.setDefaultImage("arrow-right-end-default.gif");
node.setExpandedImage("arrow-down-end-default.gif");
%>

</sas:TreeView>
```

You will get a TreeView that looks like this when you expand the nodes:



EXPAND AND SELECTING NODES

You may want to render your TableView with certain nodes initially expanded and selected.

To expand and select nodes, you should:

- Add the following import statements to the top of your JSP file:

```
<%@page import="com.sas.servlet.tbeans.models.TreeNodeInterface" %>
<%@page import="com.sas.servlet.tbeans.html.TreeView" %>
```

- Add the following scriptlet code inside your TreeView tag to expand nodes:

```
<%
// expand sub root 1
TreeNodeInterface root = (TreeNodeInterface)treeView1.getModel().getRoot();
TreeNodeInterface node = (TreeNodeInterface)root.getChildAt(0);
node.setExpanded(true);

// expand sub root 2
node = (TreeNodeInterface)root.getChildAt(1);
node.setExpanded(true);
%>
```

- Add the following scriptlet code inside your TreeView tag to select nodes:

```
<%
// select leaf 21
treeView1.setSelectedNode("leaf21");
%>
```

- The resulting TreeView tag would look something like:

```
<:sas:TreeView id="treeView1" model="model"
nodeLoading="PROGRESSIVE"
selectionMode="SINGLE_SELECTION"
scope="session" >

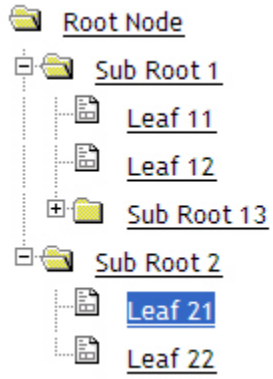
<%
// expand sub root 1
TreeNodeInterface root = (TreeNodeInterface)treeView1.getModel().getRoot();
TreeNodeInterface node = (TreeNodeInterface)root.getChildAt(0);
node.setExpanded(true);

// expand sub root 2
node = (TreeNodeInterface)root.getChildAt(1);
node.setExpanded(true);
%>

<%
// select leaf 21
treeView1.setSelectedNode("leaf21");
%>
```

</sas:TreeView>

Your new TreeView will look like the following:



SUGI 31 Daily News

Want to know what happened during SUGI 31? A daily newspaper was produced during the event. Read all four issues, get the scoop on what happened and share it with your co-workers.

[Read more](#)

Sample 1584: Reading zipped files on Windows

Use the Winzip Command Line Support Add-on and a FILENAME statement to read zipped files into a SAS data set.

Note: The Winzip Command Line Support Add-on is free and available for download from [Winzip](#).

```
/* The syntax parameters for wzunzip are:          */
/*                                                */
/*      specify the location of the downloaded add-on */
/*      -o = overwrite existing file              */
/*      -c = display contents of file to screen    */
/*      name of zip file                          */
/*      name of file inside of zip to be read     */

filename pipes pipe '"c:\program files\winzip\wzunzip.exe" -o -c
c:\sas\data.zip data1.txt';

data test;
  infile pipes firstobs=9 truncover;
  input x y $;
  put x= y=;
run;
```

SUGI Changes Name to SAS® Global Forum

Beginning in 2007, SUGI will be renamed SAS Global Forum. As explained during Sunday night's opening session, for three decades, SUGI has been the premier source of news and ideas for SAS software users. In fact, in the early years, the annual SUGI event was the only SAS specific conference. Now that SAS is established as the leading software for creating business intelligence across the enterprise, the number and diversity of SAS software users and events have expanded exponentially.

As a result, it was proposed that the name SUGI evolve to more accurately reflect the role and value of the annual conference. The new name, SAS Global Forum, will clearly:

- Differentiate the conference as the single most important SAS related global event for long time SAS users, IT and business-user audiences.
- Articulate the importance of SAS to IT professionals, programmers and an ever-expanding range of business decision makers.
- Illuminate the value of the conference as a forum, in which ideas and experiences are shared at every level: peer to peer, between long-term SAS users and business decision makers new to the SAS environment, and between SAS and every conference attendee.
- Celebrate the all-encompassing nature of the conference as it complements other SAS related events around the world.

For more information, visit www.sasglobalforum.org

FAQ # 4473

Q: How can I use PROC REPORT to link from one page in my PDF file to another?

A: In SAS 9 and later, the ANCHOR= statement inserts anchors into an ODS PDF output file. You can use PROC REPORT with CALL DEFINE to automate the process of linking to the anchored pages.

```
proc template;
  define style mystyle;
    parent=styles.sasdocprinter;

    /* TEXT= is left justified by
       default. I'd like it centered */
    style usertext from note /
      just=c;

    /* I want PAGEOF information too */
    style PageNo from TitlesAndFooters /
      font_weight=medium
      pretext = "Page "
      posttext = " of ^{lastpage}";
  end;
run;

title;
/* close the OUTPUT window */
ods listing close;
options orientation=portrait center nodate;
ods escapechar="^";

ods pdf file="file.pdf" startpage=no style=mystyle;
ods pdf text="Click on a highlighted REGION to see details";
ods proclabel="SASHELP.SHOES";
proc report nowd data=sashelp.shoes contents="LINKS Page";
  col region sales ;
  define region / group;
  compute region;

  /* for purposes of illustration, we are linking
     to 2 regions on later pages in this PDF file */
  if region in ("Pacific","Canada") then do;
    urlstring="#"||left(region);
    call define('_c1_', 'url', urlstring);
  end;
endcomp;
run;

/* create a "footnote" that is placed close to the
   REPORT table */
ods pdf text="^2n Prepared on: &sysdate9." ;

/* create an ANCHOR to point to the CANADA page
   STARTPAGE= forces this onto a new page
```

```

        COLUMNS= makes a 2 column page                                */
ods pdf anchor="Canada" startpage=now columns=2;
  title "Canada";
ods proclabel="Canada";
proc report data=sashelp.shoes(where=(region="Canada")) nowd
contents="";
  col subsidiary product sales;
  define subsidiary / group;
  define product / group;
  rbreak after / summarize;
run;

ods pdf anchor="Pacific" startpage=now;
  title "Pacific";
ods proclabel="Pacific";
proc report data=sashelp.shoes(where=(region="Pacific")) nowd
contents="";
  col subsidiary product sales;
  define subsidiary / group;
  define product / group;
  rbreak after / summarize;
run;
ods pdf close;

```

See also [FAQ 4148](#).

Join the SAS Silver Circle

For 30 years, SAS has given its customers the **Power to Know**[®]. We'd like to know about your stories – your successes with SAS. We invite any person who has used SAS for 25 years or more to share your story. All submissions meeting the minimum requirement of 25 years or more of SAS usage will be included in the SAS Silver Circle. A select group will also be highlighted in future stories on the SAS Web site, sascom magazine and at SAS events. Questions? Send e-mail to silvercircle@sas.com.

[Read more](#)

Sample 337: Overlay a plot line on a vertical bar chart

The GBARLINE procedure produces bar line charts. Bar line charts are vertical bar charts with a plot overlay. These charts graphically represent the value of a statistic calculated for one or more variables in an input SAS data set. The charted variables can be either numeric or character.

```
/******  
/* GBARLINE is supported with all SAS/GRAPH device drivers */  
/* starting with SAS 9.1. */  
/******  
  
goptions reset=all htext=1.25 htitle=2;  
  
data nyse;  
    informat day date9.;  
    format day date5.;  
    input day $ high low close volume;  
    volume=volume/1000;  
datalines;  
02AUG2002 10478.76 10346.24 10426.91 1908809  
03AUG2002 11042.92 10298.44 10274.65 1807543  
04AUG2002 10498.22 10400.31 10456.43 1500656  
05AUG2002 10694.47 10636.32 10762.98 1498403  
;  
  
title1 "NYSE Closing Price and Volume By Day";  
  
symbol1 i=join v=dot c=black;  
  
proc gbarline data=nyse;  
    bar day / sumvar=volume discrete patternid=midpoint width=15;  
    plot / sumvar=close;  
run;  
quit;
```

SAS CELEBRATES 30TH ANNIVERSARY

When SAS opened for business in 1976, the company had seven employees selling one software program.

Today, SAS employs more than 10,000 people in 424 offices worldwide, and its solutions are used at more than 40,000 sites, including 96 of the top 100 companies on the FORTUNE Global 500®.

As SAS celebrates its 30th anniversary as the leader in business intelligence (BI) – the hottest sector in the software market today – the company anticipates an even greater future.

Going Beyond BI™

SAS has been on the forefront of information technology for 30 years, maintaining an unbroken string of 29 years of growth and profitability. Revenues – totaling \$138,000 in 1976 – topped \$1.68 billion in 2005. And there's every indication that SAS' growth will continue.

BI continues as a business priority and technology trend. A Gartner press release¹ announcing results of its recent survey of "1,400 CIOs in more than 30 countries, representing more than US\$90 billion in IT spending" found that the leading technology priority is no longer security. It's BI.

SAS [BI offerings](#) – going beyond the traditional view of BI as merely a tool for reporting – are built on a stable, scalable and integrated platform of technologies that include [data integration](#), [intelligence storage](#), [analytics](#) and [reporting](#).

"BI is a growth market – the advent of BI for the masses and the nearly saturated ERP market, as well as increasing compliance regulation, point to a high demand for BI in the years to come. SAS is perfectly positioned to meet that demand," says Jim Davis, senior vice president and chief marketing officer at SAS.

Helping customers – for 30 years and counting

In addition, SAS' new global [Business Intelligence Competency Center](#) program will help customers maximize their BI investments by building cohesive strategies that address technology as well as people, processes and organizational culture. And a host of updated industry-specific SAS solutions will be rolled out during 2006.

SAS recently announced further enhancements to its flagship BI solution, [SAS Enterprise BI Server](#), including more capabilities for report management and distribution, and additional spatial analysis capabilities through integration with ESRI. The additions allow business users throughout the organization to more easily access and leverage the intelligence in their growing data stores.

"While our company has grown, our mission of adding value to our customers and being central to their success through our software remain the same," says Dr. Jim Goodnight, CEO and founder of SAS.

¹Gartner Research Press Release: "[Gartner Survey of 1,400 CIOs Shows Transformation of IT Organisation is Accelerating](#)," January 23, 2006.

Sample 1585: How to change a character date value into a SAS date value in SAS Enterprise Guide

You may have a SAS table with a character column with values such as 12/25/2005, 12/31/2005, etc. Your goal is to use the column in computations. The column, however, is defined as character and character columns can not be used in computations.

The following is a method that can be used in SAS Enterprise Guide to convert the column from character to a SAS date which can then be used in computations.

Use **File** ➔ **Open** ➔ **From SAS Server/Binder** to open the data with the character date column which you want to convert to a SAS date column. If the data is set to read only, click **Data** on the main toolbar and unselect **Read-only** to unprotect the data so that it may be edited. Click **Yes** when you are prompted about switching the data to update mode.

If you do not have write access to this data, right-click on the data icon and choose **Export** to save the data to a location on the SAS server where you have write access. Then open the data from the new location and unprotect it as instructed above.

Continue with the following step:

1. Right-click on the column to be converted and select **Properties**.
2. Change the type to Numeric and click **Yes** in the warning prompt regarding precision.
3. Change the Group to Date.
4. Click **Informats**; the selected value under Categories should be Date. Change the informat to ANYDTDTEw.
5. Under Attributes, assign an overall width of 10.
6. Click **Formats**; the selected value under Categories should be Date. Change the format to MMDDYYw.d.
7. Under Attributes, assign an overall width of 10.
8. Click **OK**. If the conversion results are correct in the Preview Results window, click **Commit changes**.

The result of this example is a SAS date column than can be used in calculations. The same technique can be used to convert between other column and data types.

Webcasts and Events

Demystifying Data Integration: Making Data Pay Off

April 25

10:00-11:00 a.m. ET

During this live Web seminar, you'll gain insight and guidance on data integration best practices, as well as the pitfalls to avoid.

IT Management Summit on BI

May 10

Chicago

This four-city series was created for busy IT professionals to acquire knowledge and insight from industry pundits as well as real-world experience on a variety of important topics concerning IT. Check the Web for additional dates and cities.

F2006

June 5-6

Cary, NC

Learn the latest forecasting theories, trends and best practices from world-renowned forecasting experts at F2006.

JMP® User Conference

June 20-21

Cary, NC

Attend exciting and insightful sessions, plus roundtable discussions, a Scripting workshop, a Genomics Discovery event and exclusive training courses.

Unify Your View of Data

Archived BetterManagement Web seminar

Join Paul Padley, SAS EMEA Strategy Technology Manager, as he explains how data relates to other information system approaches, gives some examples of business process scenarios and discusses why everything else fails without data quality.