

VIEWS

International SAS Programmer Community



News, Hints, Tips and Information for SAS® Users

Issue 41, 1st Quarter 2008

With SAS 9.2 about to be released, I can still include articles about SAS 9.1.3 while we all are likely to have the same version! I have a number of articles from familiar sources in this issue of *VIEWS News*: including a macro for displaying “wide” SAS data sets from LeRoy Bessler, and some specialist tips on writing Enterprise Guide add-ins and cleaning metadata repositories from the Amadeus Software Consultancy Team. Along with our regular sections, I hope you will find them all interesting and helpful.

If you would like to contribute an article, or discuss the possibility of doing so, please send an email to me at newsletter@views-uk.org. A list of possible subjects for your articles can be found on the *VIEWS* web site, and anyone is very welcome to add to that list by sending emails with your own questions to newsletter@views-uk.org.

Philip R Holland (Newsletter Editor)

Membership of *VIEWS* is **free** and you can register for notification of all future *VIEWS* events by emailing us at membership@views-uk.org, making certain you include your name and postal address. If you would like to receive email notification whenever a new issue of the free quarterly *VIEWS News* is published on the web site, please remember to also include your email address.

Stop Press!

SAS 9.2 Phase 1 has been released!

As of 10 March 2008 the Phase 1 production version of SAS 9.2 was released, including the standard components of SAS, e.g. Base, GRAPH, STAT, ACCESS, etc. If you already license SAS software then you should be receiving your copy of the latest software very soon. Please contact your SAS account manager for more details.

Philip R Holland (Newsletter Editor)

Did You Know?

If you have a useful hint or tip, please send it to the Editor, and share it with the *VIEWS* membership.

A Transposed Listing of Your Table Content

[SAS 9] Typical listings from **PROC SQL**, **PROC PRINT**, **PROC REPORT** or **PROC TABULATE** display data in a table with variable names, or labels, in the top row with values of each variable stacked in a column below its heading. If you have numerous variables, this standard convention can produce an

excessively wide listing. Even for just a few observations, sideways scrolling is an on-line viewing nuisance, and the hard copy result of printing is unacceptable.

It can be more usable for the on-line viewer or the hard-copy recipient to work with a transposed listing. Below are sample transposed prints, the macro invocations used to produce them, and the macro itself.

One Observation in HTML Format

(The data set, a copy of SASHELP.CLASS, has variable labels.)

Listing of WORK.LABELEDCLASS
for Name eq 'Carol'

Column Label	Value
Student	Carol
Gender	F
Age in Years	14
Hgt in Inches	62.8
Wgt in Pounds	102.5

Four Observations in RTF Format

(The data set has no variable labels. The header for the values in each row is customized with the word “Student”.)

Transposed Listing of SASHELP.CLASS
for Age eq 15

Column	Student 1	Student 2	Student 3	Student 4
Name	Janet	Mary	Ronald	William
Sex	F	F	M	M
Age	15	15	15	15
Height	62.5	66.5	67	66.5
Weight	112.5	112	133	112

Full Listing in PDF Format

(The bottom of the page was trimmed off for publication. Note the repeated column names when the listing wraps.)

Transposed Listing of SASHELP.CLASS

Column	Value Row 1	Value Row 2	Value Row 3	Value Row 4	Value Row 5	Value Row 6	Value Row 7
Name	Alfred	Alice	Barbara	Carol	Henry	James	Jane
Sex	M	F	F	F	M	M	F
Age	14	13	13	14	14	12	12
Height	69	56.5	65.3	62.8	63.5	57.3	59.8
Weight	112.5	84	98	102.5	102.5	83	84.5

Column	Value Row 8	Value Row 9	Value Row 10	Value Row 11	Value Row 12	Value Row 13	Value Row 14
Name	Janet	Jeffrey	John	Joyce	Judy	Louise	Mary

```

DATA work.LabelsCLASS;
SET sashelp.class;
LABEL Name='Student'
      Sex='Gender'
      Weight='Wgt in Pounds'
      Height='Hgt in Inches'
      Age='Age in Years';
RUN;

%MACRO TransposedPrint(
  Data=
  ,Where=
  ,PreTitle=
  ,UseLabelsIfAvailable=YES
  ,ValueHeadingPrefix=Value_Row
  ,FontFace=Verdana
  ,FontSize=16pt
  ,VarNameHeaderTextColor=CXFF0000
  ,VarNameHeaderBackgroundColor=CX0000FF
  ,VarNameTextColor=CX0000FF
  ,VarNameBackgroundColor=CXFF0000
  ,ValueHeaderTextColor=CXFFFF00
  ,ValueHeaderBackgroundColor=CX006600
  ,ValueTextColor=CX006600
  ,ValueBackgroundColor=CXFFFF00
  ,UseCustomColors=YES);
  * Note: Use of data set variable labels, *;
  * Where=, and PreTitle= are optional.    *;
  %LET FontFormatting =
    %STR(FONT_FACE=&FontFace
        FONT_SIZE=&FontSize);
  %LET UseCustomColors =
    %UPCASE(&UseCustomColors);
  %LET Library =
    %SUBSTR(&Data,1,%INDEX(&Data,.) - 1);
  %LET DataSet =
    %SUBSTR(&Data,%EVAL(%INDEX(&Data,.) + 1),
    %EVAL(%LENGTH(&Data) - %INDEX(&Data,.) ));
  %LET Library = %UPCASE(&Library);
  %LET DataSet = %UPCASE(&DataSet);

  PROC SQL NOPRINT;
    SELECT COUNT(*)
    INTO   :N
    FROM   DICTIONARY.COLUMNS
    WHERE  LIBNAME EQ "&Library"
    AND    MEMNAME EQ "&DataSet";
    SELECT NAME
    INTO   :COLUMN1 - :COLUMN%TRIM(%LEFT(&N))
    FROM   DICTIONARY.COLUMNS
    WHERE  LIBNAME EQ "&Library"
    AND    MEMNAME EQ "&DataSet";
  QUIT;

  %MACRO VarList;
    %DO I = 1 %TO &N %BY 1;
      &&COLUMN&I
    %END;
  %MEND VarList;

  DATA WORK.ToTranspose;
    SET &Library..&DataSet;
    %IF %LENGTH(&Where) NE 0 %THEN %DO;
      WHERE &Where;
    %END;
  RUN;

  DATA _NULL_;
    SET WORK.ToTranspose NOBS=HowMany;
    CALL SYMPUT('ValueCount',HowMany);
    STOP;
  RUN;

```

```

PROC TRANSPOSE DATA=WORK.ToTranspose
  OUT=WORK.ToPrint;

  VAR %VarList;
RUN;

%MACRO Labels;
  %DO I = 1 %TO &ValueCount %BY 1;
    LABEL COL&I = "&ValueHeadingPrefix &I";
  %END;
%MEND Labels;

%MACRO Cols;
  %DO I = 1 %TO &ValueCount %BY 1;
    COL&I
  %END;
%MEND Cols;

%LET LabelVarFound = NO;

%IF %UPCASE(&UseLabelsIfAvailable) EQ YES
  %THEN %DO;
  PROC SQL NOPRINT;
    SELECT NAME
    INTO   :LabelVarFound
    FROM   DICTIONARY.COLUMNS
    WHERE  LIBNAME EQ "WORK"
    AND    MEMNAME EQ "TOPRINT"
    AND    NAME EQ "_LABEL_";
  QUIT;
  %LET LabelVarFound =
    %TRIM(%LEFT(&LabelVarFound));
  %END;

  OPTIONS NOCENTER LINESIZE=MAX PAGESIZE=MAX;
  TITLE1 FONT="&FontFace" HEIGHT=&FontSize
  %IF %LENGTH(&PreTitle) NE 0 %THEN %DO;
    "&PreTitle"
    JUSTIFY=LEFT
  %END;
  %IF &ValueCount GT 1 %THEN %DO;
    "Transposed "
  %END;
  "Listing of &Library..&DataSet"
  %IF %LENGTH(&Where) NE 0 %THEN %DO;
    JUSTIFY=LEFT
    "for &Where"
  %END;
  ;
  PROC PRINT DATA=WORK.ToPrint LABEL SPLIT='_';
  %IF &LabelVarFound EQ _LABEL_ %THEN %DO;
    ID _LABEL_ /
  %END;
  %ELSE %DO;
    ID _NAME_ /
  %END;
  STYLE(HEADER) = [&FontFormatting
  %IF &UseCustomColors EQ YES %THEN %DO;
    BACKGROUND=&VarNameHeaderBackgroundColor
    FOREGROUND=&VarNameHeaderTextColor
  %END;
  ]
  STYLE(DATA) = [&FontFormatting
  %IF &UseCustomColors EQ YES %THEN %DO;
    BACKGROUND=&VarNameBackgroundColor
    FOREGROUND=&VarNameTextColor
  %END;
  ];
  %IF &LabelVarFound EQ _LABEL_ %THEN %DO;
    LABEL _LABEL_ = 'Column_Label';
  %END;

```

```

%ELSE %DO;
  LABEL _NAME_ = 'Column';
%END;
VAR %Cols /
  STYLE(HEADER) = [&FontFormatting
%IF &UseCustomColors EQ YES %THEN %DO;
  BACKGROUND=&ValueHeaderBackgroundColor
  FOREGROUND=&ValueHeaderTextColor
%END;
  ]
  STYLE(DATA) = [&FontFormatting
%IF &UseCustomColors EQ YES %THEN %DO;
  BACKGROUND=&ValueBackgroundColor
  FOREGROUND=&ValueTextColor
%END;
  ];
%IF &ValueCount EQ 1 %THEN %DO;
  LABEL COL1 = 'Value';
%END;
%ELSE %DO;
  %Labels;
%END;
RUN;
%MEND TransposedPrint;

ODS HTML PATH="C:\VIEWS" (URL=NONE)
  BODY="OneLabeledObs.html";
%TransposedPrint(Data=work.LabelsCLASS
  ,Where=Name EQ 'Carol');
ODS HTML CLOSE;

OPTIONS NODATE NONUMBER;

ODS RTF FILE="C:\VIEWS\FourObs.rtf";
%TransposedPrint(Data=sashelp.class
  ,Where=Age EQ 15
  ,ValueHeadingPrefix=Student);
ODS RTF CLOSE;

ODS PDF NOTOC FILE="C:\VIEWS\AllObs.PDF";
%TransposedPrint(Data=sashelp.class
  ,FontFace=Helvetica);
ODS PDF CLOSE;

```

LeRoy Bessler, Assurant Health

Cleaning Metadata Repositories

[SAS 9] PROC METACLEANSE is an undocumented procedure that allows you to clean up foundation and custom metadata repositories from metadata “orphans”, but don’t use it with project repositories.

In conjunction with the %OMABAKUP macro, it is the best approach when it comes to maintain metadata in your environment. However, before using it always make sure that you take a backup of the metadata.

```

PROC METACLEANSE
  SERVER = "host name"
  PORT = 8561
  USERID = "user_id"
  PASSWORD = "password"
  REPOSITORY = "repository_name"
  PROTOCOL = BRIDGE
  TYPE = "PropertyType"
  VERBOSE
  CLEANUP;
RUN;

```

If you want to know which objects are going to be deleted, you can run the same code without the **CLEANUP** option at the end.

Amadeus Software Consultancy Team

Ask The Consultant

This part of VIEWS News is where you can get your technical questions answered. Send your questions to the Editor.

Converting EG 3 add-ins for use with EG 4.1?

Q: Why does my Enterprise Guide 3 add-in give errors when used with Enterprise Guide 4.1?

A: [EG 4.1] Customised Enterprise Guide (EG) add-ins which have been created for EG 3 may not automatically work when deployed in EG 4.1.

The following error message may be generated when attempting to add the DLL using the ‘Add-In Manager’.

Error: the add-in does not contain the correct interface signature.

SAS have released the following hot-fix to address this problem, but in addition to applying this, the following key changes will also need to be made within the IDE used to develop the add-ins:

www.sas.com/techsup/download/hotfix/ent_guide41.html#017595

All customised EG add-ins will implement, as a minimum requirement, the following SAS supplied interfaces:

- SAS.EG.AddIns.ISASTask
- SAS.EG.AddIns.ISASTaskAddIn
- SAS.EG.AddIns.ISASTaskDescription

These interfaces are all specific to EG 3. Versions for EG 4.1 can be found under the namespace **SAS.Shared.AddIns**. Three changes need to be made within the IDE being used to implement this. The following guidelines apply to Microsoft Visual Studio .NET 2003.

Firstly, the **SAS.EG.AddIns** reference should be removed from the ‘References’ window and replaced with the **SAS.Shared.AddIns.dll**, which can be found under the ‘Shared Files\BIClientTasks\4’ folder of your SAS installation directory,

e.g. **C:\Program Files\SAS Institute\Shared Files\BIClientTasks\4**

All references should be updated to point to the DLL files under the ‘**BIClientTasks\4**’ folder, as opposed to version 3.

Within the code defined for the add-ins (class files and form code) all references to **SAS.EG.AddIns** should be changed to **SAS.Shared.AddIns**.

Making these changes and re-building the DLLs will enable the add-ins to be added to your Enterprise Guide 4.1 session.

Amadeus Software Consultancy Team

Formats, Options, and Functions

This section is devoted to the description of useful, or unusual, SAS Formats, Options, and Functions.

[SAS 9] The **WEEKUw.**, **WEEKVw.** and **WEEKWw.** SAS formats convert SAS date values into weeks in the year. There are also related SAS informats **WEEKUw.**, **WEEKVw.** and **WEEKWw.**, which can be used to re-input the formatted week values, and a function **WEEK()**, which functions in the same way as the formats. The 3 algorithms used to calculate the week number, U, V and W, are described in support.sas.com/onlinedoc/913/getDoc/en/lrdict.hlp/a002645054.htm

[SAS 8] The **GTITLE** and **NOGTITLE** options for **ODS RTF** and **ODS HTML** statements are used to include and exclude titles from graph forming part of the ODS documents, respectively. The default **GTITLE** option leaves the titles as part of the graph, and the **NOGTITLE** option includes the titles in the body of the document, so that they can be formatted by the ODS Style used. The related **GFOOTNOTE** and **NOGFOOTNOTE** options for the **ODS RTF** and **ODS HTML** statements are used in the same way to include and exclude footnotes from graphs, respectively.

PhUSE News

PhUSE Society Launched

The PhUSE Society was launched in January this year and membership is steadily rising. PhUSE are looking to provide a professional body for pharmaceutical programmers, offering a biannual journal, one day training events and e-learning, as well as continuing the annual conference. All *VIEWWS* members with an interest in pharmaceutical and life sciences industry programming are encouraged to visit www.phuse.eu to sign up, or encourage your companies to do so on your behalf.

This year's PhUSE conference will take place in Manchester UK from 13-15 October with a social start on the evening of the 12th. Registration and call for papers will be open in March.

Stephen Bamford, PhUSE Society

In Brief

- Back issues of *VIEWWS News* are available from the *VIEWWS* web site, and also from the *VIEWWS News* page on www.sascommunity.org.
- Phil Mason now has a SAS tips newsletter, which can be requested by going to www.woodstreet.org.uk and then clicking on Tips. Previous tips can also be found on the web site.
- More SAS hints and tips can be found on the SAS FAQ pages www.hollandnumerics.com/sasfaq and also on the Amadeus Software Tips pages at www.amadeus.co.uk/TipsList.aspx?ST=1.
- Looking for a SAS-related job? Try the following web pages: www.hollandnumerics.com/careers and www.amadeus.co.uk/Careers.aspx.

Diary

*Are you organising an event that would be of interest to the *VIEWWS* readership? Let us know as we are interested in all non-profit making events related to SAS.*

April 2008

8 **How-To Seminar for SAS Programmers**, Oxfordshire

See the Amadeus Software web site www.amadeus.co.uk for further details.

June 2008

18 **How-To Seminar for SAS Programmers**, Oxfordshire

See the Amadeus Software web site www.amadeus.co.uk for further details.

July 2008

17 **SAS9 Business Intelligence-Delivered**, Oxfordshire

See the Amadeus Software web site www.amadeus.co.uk for further details.

September 2008

11 **How-To Seminar for SAS Programmers**, Oxfordshire

See the Amadeus Software web site www.amadeus.co.uk for further details.

October 2008

13-15 **PhUSE Conference**, Manchester

The Pharmaceutical Users Software Exchange (PhUSE) conference is the premier programming event for the pharmaceutical industry in Europe. See www.phuse.eu for more details.

22 **SAS9 Business Intelligence-Delivered**, Oxfordshire

See the Amadeus Software web site www.amadeus.co.uk for further details.

November 2008

tba **SAS Forum UK**, tba

The SAS Forum UK is held each year and focuses on the latest SAS software releases. For more details please go to www.sas.com/uk/events/sasforum.

20 **How-To Seminar for SAS Programmers**, Oxfordshire

See the Amadeus Software web site www.amadeus.co.uk for further details.

December 2008

11 **SAS9 Business Intelligence-Delivered**, Oxfordshire

See the Amadeus Software web site www.amadeus.co.uk for further details.

*All *VIEWWS* event information will be posted and/or emailed to registered members of *VIEWWS*, and will include an event application form. Please send your queries about any *VIEWWS* events to event@views-uk.org, and don't forget to look at the web site for the latest news.*

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<u>VIEWS</u>	
Web Site	Web: www.views-uk.org
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Events secretary	Email: event@views-uk.org

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