

VIEWS

International SAS Programmer Community



News, Hints, Tips and Information
for SAS® Users

Issue 34, 2nd Quarter 2006

We are into the conference season again. I have gathered together reports and news from the last SUGI conference in San Francisco, the SAS Forum International in Geneva, and PhUSE 2006 in Dublin later this year.

In this issue of *VIEWS News* I have again included 3 articles from 2 well-known sources: more ODS tips from LeRoy Bessler and some function tips from the Amadeus Software Consultancy Team. You will also find my regular Formats, Options, and Functions section. I hope you will find them all interesting and useful.

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.

Did You Know?

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

All of the ODS Customization Possibilities for PROC PRINT without PROC TEMPLATE

[SAS 8] If you want to create a custom ODS style for general re-use, **PROC TEMPLATE** is the tool you must master. However, if you are satisfied to do some extra coding, in a case-specific manner, then you can apply any ODS style parameters (and possibly use **PREHTML** and **POSTHTML** to get even more control) by using the **STYLE=** parameter in the right places in a **PROC PRINT** code step. The same technique is available for **PROC TABULATE** and **PROC REPORT**, but the details of getting access to the various parts of the data delivery table are different.

The web page and SAS code below demonstrate all of the different parts of a **PROC PRINT** table that you can customize:

All The Places To Apply ODS STYLE= in PROC PRINT Output

Age	Name	Weight
13	Alice	84.0
	Barbara	98.0
13		182.0
N = 2		
14	Carol	102.5
	Judy	90.0
14		192.5
		374.5
N = 2		
Total N = 4		

```
PROC SORT DATA =
    sashelp.class (WHERE = (name IN
        ("Alice" "Barbara" "Carol" "Judy")))
        OUT = ToPrint;
    BY Age Name;
RUN;

%LET FontFormatting = %STR(FONT_FACE = Georgia
    FONT_WEIGHT = BOLD FONT_SIZE = 6);
%LET TitleText = %STR(All The Places To Apply
    ODS STYLE= in PROC PRINT Output);

GOPTIONS RESET = ALL;

ODS NORESULTS;
ODS LISTING CLOSE;
ODS HTML PATH = "c:\EasyODS" (URL = NONE)
    BODY = 'STYLEinPROCPRINToutput.html'
        (TITLE = "&TitleText")
    STYLE = styles.printer;

TITLE COLOR = CX000000 FONT = "Georgia"
    HEIGHT = 16 PT "&TitleText";
FOOTNOTE;

PROC PRINT DATA = ToPrint LABEL N
    STYLE(HEADER) = [&FontFormatting]
    STYLE(DATA) = [&FontFormatting]
    STYLE(TOTAL) = [&FontFormatting
        BACKGROUND = MAGENTA FOREGROUND = CYAN]
    STYLE(N) = [&FontFormatting
        BACKGROUND = CYAN FOREGROUND = MAGENTA
        JUST = LEFT];
    BY age;
    ID age / STYLE(HEADER) = [&FontFormatting
        BACKGROUND = BLUE
        FOREGROUND = RED]
    STYLE(DATA) = [&FontFormatting
        BACKGROUND = RED
        FOREGROUND = BLUE];
    VAR Name / STYLE(HEADER) =
        [BACKGROUND = BLACK
        FOREGROUND = CX999999]
```

```

STYLE(DATA) =
  [BACKGROUND = CX999999
   FOREGROUND = BLACK];
VAR Weight;
SUM Weight / STYLE(HEADER) =
  [BACKGROUND = CX009900
   FOREGROUND = YELLOW]
STYLE(DATA) =
  [BACKGROUND = YELLOW
   FOREGROUND = CX009900]
STYLE(TOTAL) = [&FontFormatting
  BACKGROUND = BLACK
  FOREGROUND = WHITE];

SUMBY age;
RUN;

ODS HTML CLOSE;
ODS LISTING;

```

The colour extravaganza above is not offered as good design, but is simply a demonstration artifice. The familiar colour names are the only SAS English language colour names that are browser-safe or web-safe. **CX999999** and **CX009900** are browser-safe SAS RGB colours.

FOREGROUND and **BACKGROUND** are used to specify the text and cell background colours. Three font-related style parameters are used. Any other valid ODS style parameters can be used, but our focus here is on where to customize, not how to.

STYLE(N) can be specified only on the **PROC PRINT** statement. **STYLE(HEADER)**, **STYLE(DATA)**, and **STYLE(TOTAL)** can be specified on the **PROC PRINT** statement to set the style in one place for all table elements, but, as you can see, can also be specified directly for a table element as an override.

The only option not shown is **STYLE(GRAND)**, which I did try to use in order to display a different colour scheme for 374.5 and Total N=4. Unfortunately, if you re-run the program with

```

STYLE(GRAND) = [&FontFormatting
  BACKGROUND = CX996600
  FOREGROUND = CXFF9900]

```

on either the **PROC PRINT** statement or the **SUM WEIGHT** statement, you will see no effect, and there will be no ERROR, WARNING, or NOTE message in the SAS log.

LeRoy Bessler, Assurant Health

Ask The Consultant

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

Using the %DS2CSV macro

Q: Can you use the %DS2CSV macro outside SAS/IntrNet?

A: [SAS 9] In SAS 9 you can use the %DS2CSV macro to convert SAS datasets into CSV files. This macro was previously available in SAS/IntrNet, but now it can be used by any SAS program.

```

%DS2CSV(DATA = sashelp.vmacro
,CSVFILE = c:\temp\results.csv
,RUNMODE = B
,OPENMODE = REPLACE
,COLHEAD = Y);

```

This code gives the following CSV file:

```

"Macro Scope",
"Macro Variable Name",
"Offset into Macro Variable",
"Macro Variable Value"
"DS2CSV","NOTES","0","NOTES"
"DS2CSV","DATA","0","sashelp.vmacro"
"DS2CSV","CSVFREF","0",""
"DS2CSV","SAVEFILE","0",""
"DS2CSV","INVOKE","0","MACRO"
"DS2CSV","VAR","0",""

```

Parameters:

- Data. Name of data set to export
- Csvfile. CSV file to be created
- Runmode. Needs to be set to 'b' for batch or interactive SAS programs
- Openmode. Replace or Append
- Colhead. Y or N to add column headers into CSV file

Other useful parameters include:

- Formats. Y or N to keep format values
- Labels. Y or N to keep labels on column headings
- Sepchar. To specify the hex code of the separator character, e.g. you can also create tab-separated files
- Var. List of variables to keep on the CSV file
- Where. Expression to subset data for CSV file

Amadeus Software Consultancy Team

How to use _ODSDEST

Q: Can a web application write to anything other than HTML?

A: [SAS 9] This tip can be used with the Stored Process Web Application, which is available when the WIK (Web Infrastructure Kit) has been installed, or with SAS/IntrNet software.

Executing SAS programs via a web-server returns output back to the browser in the HTML format by default. Using **_ODSDEST** allows the default output type to be modified.

Whilst there are existing methods of changing the output type programmatically, **_ODSDEST** can simply be added to the URL in the browser window.

An example URL (to be typed in a single line!) used to execute a SAS Stored Process returning HTML output:

```

http://myserver:8080/SASStoredProcess/do?
&_program=//Foundation/myStoredProcess

```

Adding **_ODSDEST** to the above URL (to be typed in a single line!) will return the output as a PDF document:

```

http://myserver:8080/SASStoredProcess/do?
&_program=//Foundation/myStoredProcess
&_ODSDEST=pdf

```

Bingo! – Now we have generated a PDF document.

There are many destinations available, including:

- HTML
- CSV
- RTF
- CHTML
- PHTML
- XML
- PDF

Simple as that!

Amadeus Software Consultancy Team

Formats, Options, and Functions

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

Another 'old' format **NEGPARENw.d** displays positive values like **COMMAw.d**. However, it displays negative values using the same layout as **COMMAw.d**, but enclosed in parentheses. The corresponding informat is **COMMAw.d**, which is exactly the same as the informat **DOLLARw.d**.

[SAS 8] Confidence limits can be calculated for means, medians and quartiles using options for **PROC UNIVARIATE**. The **CIBASIC** option calculates the confidence limits for the mean, standard deviation and variance based on normally distributed data. The **CIPCTLNORMAL** option calculates the confidence limits for quartiles based on normally distributed data. The **CIPCTLDF** option calculates the confidence limits for quartiles using a distribution-free method. All these options can use the confidence level set using the **ALPHA=** option, or set their own confidence level using the (**ALPHA=**) sub-option. The (**TYPE=**) sub-option can request the type of confidence limit, e.g. **TWOSIDED**, **SYMMETRIC**, **ASYMMETRIC**, **LOWER** or **UPPER**.

[SAS 8] Data provided to or from web interfaces is often encoded to remove unsuitable characters. The conversion functions **HTMLENCODE()** and **HTMLDECODE()** can be used to convert plain text to and obtain plain text from HTML-encoded text. For example, "<", ">" and "&" are converted to "<", ">" and "&"

News

The Last SUGI (but it is not the end)

The SUGI conferences in North America, were organised by an executive committee of past and future conference chair(wo)men. They are all customers/users rather than SAS Institute employees. However, bringing together approximately 4000 users/customers ensures a high level of involvement from SAS Institute. Of course "selling SAS" is important motivation. But we do get more! I have appreciated the high level of interest that is shown among a group of SAS Institute people I would call "developers". They want to hear how "we users" use their product. It is a forum quite unlike the UK and European conferences I attended from 1994 to 2000. These conferences seemed more "user-to-user" or high level "Solution" presentation sometimes presented by the IT Director or CIO. SUGI delegates seemed more interested in how to use the tools and solutions, than how they fit into corporate strategies. These SAS "developers" seem really interested in helping us make more of

their products' functionality. They'll help solve your problems with their application, only to a limited extent. That's because there is a very effective Customer Support service available.

After attending a few of these conferences, you establish more than nodding acquaintance with some interesting people. I got to hear at least one motivation behind the name change to SAS "whatever" Forum. Standardising the name across all SAS conferences brings a more consistent image. With Blues, VIEWS, Disk, Club, etc., in Europe, the profile was becoming particularly confused, so that is where the name change emerged. I'm sure it is probably not because SAS International (once identified as SAS Europe), wants to remove the "International" from SUGI (SAS Users Group International).

As well as pre- and post-conference courses, SUGI provides access to the SAS Training people. Not only can they quickly tell you what courses are most appropriate for you, they also provided chances to try the web-training classes. Also regularly at the conference are the SAS Publishing team. These people are well worth speaking to if you have some ideas for a book that you might write, or are interested in collaborating with others to publish.

One of the challenges you face when attending SUGI is the multitude of opportunities to network or listen to SAS Presents or to papers presenting user experience and expertise. You can find all of the papers in the Proceedings website at www2.sas.com/proceedings/sugi31/toc.html and read papers presented by SAS people at support.sas.com/saspresents. As well as these presentations you have the chance to see the demonstrations of the latest SAS components and to network with the people from SAS, highly valuable networking, but it is time-limited to these few days.

I think the conference previously known as SUGI was very well worth the time and money. I've had more expensive trips to the SEUGI, now referred as SAS Forum International. SUGI, or however the SAS Global Forum name will be reduced, provides unparalleled access to see how SAS is being used, and to learn how to use it better.

Trends at SUGI 31 (San Francisco, 26-29 March 2006):

- SAS Enterprise Guide seems the strategic interface for SAS programmers. The interface for WEB Report Studio and Information Map seem "outside SAS". SAS Display Manager was seldom seen.
- SAS/AF presentations reappeared, emphasising that there is a future there.
- The next release was not released: SAS 9.2 will come sometime next year (2007), not this year.
- SAS Futures Forum nearly disappeared, but was held late one afternoon. Hopefully it will not disappear completely.
- The future described outside of that forum included a new SAS data storage server referred to as the SAS Table Server. This is intended to provide improved data handling performance, in particular support for threading. It is sometimes referred to as DS2 (Data Step 2) because so many new ideas are introduced.
- It seems that installing and configuring SAS Business Intelligence platform also cause people at SAS Institute the occasional problem. So they are beginning to distribute their internal "Enterprise Guide diagnostic tools" which check your installation. It should be available by now. If, like me, you have trouble setting up your Enterprise Guide environment, see support.sas.com/techsup/unotes/SN/013/013331.html.

The next SUGI, (sorry) SAS Global Forum, will be in Orlando from 16-19 April 2007. If you want to get involved, see support.sas.com/events/sasglobalforum/2007.

Peter Crawford, Crawford Software Consultancy

Report on the 2006 SAS Forum International

Having attended SEUGI and SAS Forum International conferences since 1993 I seen the events evolve over time. My early conferences were quite technical in content, then they turned much more commercial, but most recently they have levelled out at about 70% commercial and 30% technical in 14 parallel streams, which suited an individual like me very well. There were over 2,500 attendees from 58 countries at the 2006 SAS Forum International in Geneva from 16-18 May. Most of the attendees were not looking for technical details, so I was able to see all the presentations I wanted to see without being overcrowded, or having to choose between 2 concurrent papers. Then, in between papers, I was able to talk to the European SAS developers in the Knowledge Centre, and exhibitors in the Exhibition Area, which gave me ample opportunity to keep up-to-date with the latest developments.

This year's conference themes were Data Integration, SAS BI Server, SAS Enterprise Intelligence Platform and Performance Management (financial, not hardware!). A quick search of the agenda produced 35 papers mentioning Data Integration.

There was also more news about SAS 9.2:

- incremental cube updating.
- Stat Studio to replace SAS/INSIGHT.
- production version of ODS Graphics for SAS/STAT.
- improved support for Web Services.
- support for Citrix and VMware virtualisation.
- predicted to be available in 2007 Q2.

Finally, the next SAS Forum International will be held in Stockholm, Sweden, on 22-24 May 2007. I'm already planning my trip, and SAS 9.2 may be the current version by then!

Philip R Holland, Newsletter Editor

PhUSE News

PhUSE Conference 2006

PhUSE 2006 will be held in Dublin from 9-11 October 2006.

PhUSE (Pharmaceutical Users Software Exchange) is the European forum for programmers working in the areas of Health and Life Sciences to facilitate and promote the exchange of new information and ideas relating to software used within the industry.

The conference aims to cater for all levels of experience, from new beginners through to the more advanced. It is now in its second year following last years very successful inaugural event in Heidelberg. As last year, the 2006 conference will focus on the use of SAS software in the pharmaceutical industry. But recognizing the importance of the industry's multifaceted use of software this year's conference will be open to other software vendors, providers and presentations as well. PhUSE will run for two and a half days with three parallel streams of presentations.

Highlights include:

- Multiple streams covering all aspects of programming in the pharmaceutical industry
- Panel discussion
- Demo and exhibition area
- and not forgetting the Monday night party at the world famous Guinness Brewery.

Quotes:

- *"Perfect balance. Excellent presenters. Superb!"*
(PhUSE 2005 – PharmaNet).
- *"Great. Too much for just one single attendee. Go on!"*
(PhUSE 2005 - Chiron Behring).
- *"An appropriately named conference bringing the pharmaceutical industry's people and ideas together"*
(PhUSE 2005 - Quintiles)

For sponsorship please contact: john.hirst@covance.com.
For general enquiries please send an e-mail to: info@phuse.info.
Go online and register at: www.phuse.info/registration.php now.

PhUSE Committee

In Brief

- Back issues of *VIEWS News* are available from the *VIEWS* web site.
- 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 at www.hollandnumerics.com/sasfaq.

Diary

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

July 2006

11 **Tricks of the Trade**, Oxfordshire

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

11 **SAS SIGs**, Marlow

The SAS SIGs will be held this year as a separate event from the SAS Forum UK, and will allow SAS users to discuss specialised SAS topics.

27 **Changes and Enhancements in SAS9**, Edinburgh

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

August 2006

10 **Tricks of the Trade**, Edinburgh

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

September 2006

14 **Changes and Enhancements in SAS9 for the Applied Statistician**, Oxfordshire

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

October 2006

9-11 **PhUSE**, Dublin

The Pharmaceutical Users Software Exchange (PhUSE) conference is the premier programming event for the pharmaceutical industry in Europe.

19 **Tricks of the Trade**, Oxfordshire

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

November 2006

1-2 **SAS Forum UK**, Birmingham

The SAS Forum UK is held each year and focuses on the latest SAS software releases.

21 **Changes and Enhancements in SAS9 for the Applied Statistician**, Edinburgh

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

28 **Changes and Enhancements in SAS9**, Oxfordshire

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

December 2006

5 **Changes and Enhancements in SAS9**, Edinburgh

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

April 2007

16-19 **SAS Global Forum**, Orlando, USA

The SAS Global Forum (formerly called SUGI) is held each year and focuses on the technical aspects of SAS software.

May 2007

22-24 **SAS Forum International**, Stockholm, Sweden

The SAS Forum International is held each year and focuses on the more commercial aspects of SAS software.

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

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