

In *VIEWS News* 15 Andy Ratcliffe told you about the need to change the editorial team. As the new Co-Editor I have the difficult job of following in Andy's footsteps. I have a great interest in the obscure and the unusual, so be prepared for some SAS-related oddities amongst the usual information. You will notice in this issue that I have added version indicators to some of the hints and tips, e.g. [SAS 6.12], where the tips apply to specific versions of SAS software.

However, in spite of any changes, *VIEWS News* will continue to provide short, punchy hints and tips on all aspects of SAS software. If you would like to contribute an article, or discuss the possibility of doing so, please email me at newsletter@views-uk.org.

Philip R Holland (Newsletter Co-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, email address and postal address, so that we can send you a free copy of the quarterly *VIEWS News*.

The Consultant

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

Multiple Output Files, One ODS Destination

Q:How can I create multiple output files in the same ODS destination?

A:[SAS 8] By assigning an ID to an ODS destination you can concurrently open multiple files in the same ODS destination:

```
ods rtf(1) file="first report.rtf";
ods rtf(2) file="second report.rtf";

ods rtf(1) select modelanova;

proc glm data=sashelp.class;
  class sex;
  model weight = age;
run;
quit;

ods rtf(1) close;
ods rtf(2) close;
```

It is important to remember that as two files have been opened, both must be closed.

This technique allow individual objects to be selected or excluded from whichever output files it is desired. In the above example only the ANOVA object of the GLM is sent to the "first report.rtf" file.

Amadeus Software Consultancy Team.

Creating Graphs using Enterprise Reporter

Q:How can I create a graph with 2 different response axes for a report using Enterprise Reporter?

A:[ER 2.5] There are a number of types of graphs and charts that cannot be generated directly within Enterprise Reporter. If you have a full SAS System with SAS/GRAPH installed on your PC, then the following code can be submitted there to create an image file, which can be incorporated into your report. However, incorporated in the Standard Edition of Enterprise Reporter is enough SAS/GRAPH software to create an image file whenever a specific InfoFolder is opened. Just copy the SAS/GRAPH code into a text file called **start.sas**, and store it in the

InfoFolder directory, which, by default, will be found in

..\My SAS Files\Enterprise Reporter\User\InfoFolder_name.

This **start.sas** code will run every time this InfoFolder is opened.

```
filename picture 'c:\temp\infofolder.tif';

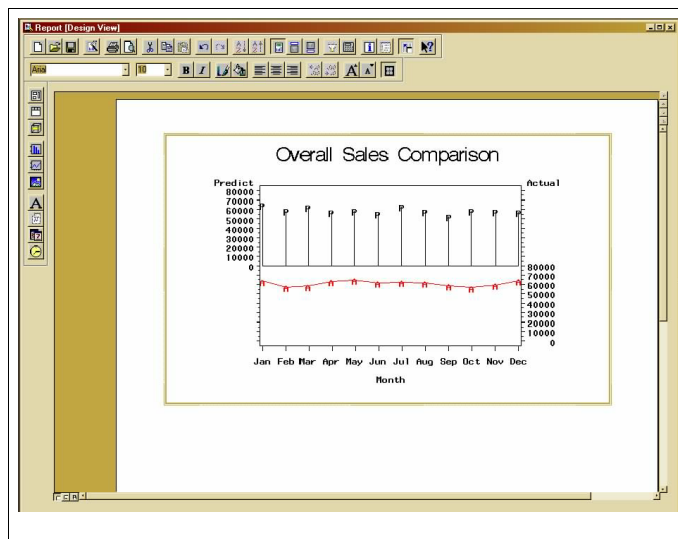
options device=tiffp gsfname=picture gsfmode=replace;

proc format;
  value axes
    low-<0 = ' ' 80000<-high = ' ' other = [6.];
run;

proc summary data=sashelp.prdsale nway;
  class month;
  var actual predict;
  output out=prdsale sum=;
run;

proc gplot data=prdsale;
  title 'Overall Sales Comparison';
  axis1 order=80000 to 80000 by 10000;
  axis2 order=0 to 160000 by 10000;
  axis3 length=60 pct;
  symbol1 color=black i=needle v='P';
  symbol2 color=red i=join v='A';
  plot predict*month / vaxis=axis1 haxis=axis3;
  plot2 actual*month / vaxis=axis2 haxis=axis3;
  label actual='Actual'
        predict='Predict';
  format actual predict axes.;
run;
quit;

filename picture clear;
```



Philip R Holland, Holland Numerics Ltd

Processing Just the Last Observation

Q:How can I process just the last observation of a SAS data set without having to read every other observation first?

A:There is a much more efficient method than reading every record, as the **point=** and **nobs=** options both work at compile time and hence are very efficient.

```
1  data temp;
2    do x=1 to 20000000;
3      output;
4    end;
5  run;

NOTE: The data set WORK.TEMP has 20000000 observations and 1
variables.
NOTE: DATA statement used:
      real time          1:06.99
      cpu time           6.22 seconds

6
7  data _null_;
8    set temp point=nobs nobs=nobs;
9    put x=;
10   stop; *required statement ;
11  run;
```

```
x=20000000
NOTE: DATA statement used:
      real time           1.30 seconds
      cpu time            0.01 seconds

12
13 data _null_;
14   set temp end=e;
15   if e then put 'last obs';
16 run;

last obs
NOTE: There were 20000000 observations read from the data set
WORK.TEMP.
NOTE: DATA statement used:
      real time           42.11 seconds
      cpu time            6.72 seconds
```

Amadeus Software Consultancy Team.

Did You Know?

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

Controlling Table Appearance with Indent=0

[SAS 6.12] One of the effects of using the **indent=** option in the **table** statement of **proc tabulate** is the suppression of class variable names and labels in the row titles. However, when using the **%tab2htm** macro, this interferes with the table structure.

Instead of:

```
proc tabulate data=mydata;
  class var1 var2;
  table var1,var2/indent=0;
run;
```

Use this:

```
proc tabulate data=mydata;
  class var1 var2;
  table var1=' ',var2;
run;
```

This will still suppress the name/label of the class variable in the first row title without interfering with the table structure.

Rory Wilsher, Woolwich

Just a Matter of Programming Style

Here is a tip that's really quite simple, but has aided me numerous times when I've had to go back over my own code, or when reformatting someone else's for my own review and understanding. It truly is a matter of form, or personal coding style. When I am working with **if-then-else** statements, the placing of my **then** tells me even if there is an **else**. This comes in very handy when a **do** block might span many lines or pages of code, and subsequently there is an **else** condition to be considered.

```
IF A=1 THEN
DO;
  /* THERE IS ONLY THE ONE CONDITION */
  /* WITH MULTIPLE STATEMENTS REQUIRED */
  /* HENCE THE USE OF A DO-END GROUP */
END; /* A=1 */

IF B=1
THEN
DO;
  /* AHAA! THE "THEN" IS ON A SEPARATE */
  /* LINE ALL BY ITSELF, THIS IS MY */
  /* FLAG TO MYSELF, THAT THERE IS IN */
  /* FACT SOME ELSE STATEMENTS AFTER */
  /* THIS DO-END BLOCK. */
END; /* B=1 */
ELSE
DO;
  /* OF COURSE, YOU'LL NEVER HAVE AN */
  /* ELSE WITHOUT A THEN, NOW WILL YOU? */
END; /* B=1 - ELSE */
```

Karl W Schaefer, Qualex Consulting Services

Date and Time from Directories

[Windows] There are various methods for finding information about disk files, such as using the Directory functions from SCL or Data step (DOPEN, DREAD, etc.). These functions cannot return the date/time of directory members though. The code below uses a pipe to read directories, which enables the date/time to also be picked up.

```
filename cmd pipe "dir d:\sas\af /s" ;
data files(keep=dir dirflag file date time) ;
```

```
format date date9. time timeampm. ;
length file line dir $ 200 ;
retain dir ;
infile cmd missover length=ll ;
*** Windows NT version ;
* input @1 date ?? Ddmmyy8.
  @11 time ?? time5.
  @11 timetext $5.
  @16 ampm $1.
  @26 dirtest $3.
  @39 file & $char200.
  @1 line $varying200. ll ;
*** Windows 98/95 version ;
input @29 date ?? Ddmmyy8.
  @39 time ?? Time5.
  @17 dirtest $3.
  @45 file & $char200.
  @1 line $varying200. ll ;
if dirtest='DIR' then
  dirflag=1 ;
if upcase(ampm)='P' & time>0 then
  time=time+'12:00:00't ;
pos=index(line,'Directory of') ;
if pos>0 then
  dir=substr(line,pos+13) ;
if date>. & file ^in ('.', '..') ;
run ;

proc print ;
  by dir notsorted ;
  id dir ;
  var file dirflag date time ;
run ;
```

Philip Mason, Wood Street Consulting

Arithmetic Operators in File Names

[SAS 6.12] If the directory or file name specified in the **htmlfile=** statement contains an arithmetic operator, **%tab2htm** will fail to execute and give the following error message:

```
ERROR: A character operand was found in the %EVAL function or %IF
condition where a numeric operand is required.
The condition was: ("%htmlfile" eq "") and (%upcase(&runmode) eq B or
%upcase(&runmode) eq S) and ("%htmlfref" eq "")
ERROR: The macro will stop executing.
```

The most common cause of this is file or directory names containing hyphens, which the macro then attempts to interpret as a minus sign, causing the above error.

To avoid this error, use the SAS system macro **%str()**. This will ensure that the file name is interpreted as a text string.

Instead of:

```
%tab2html (capture=off,
  runmode=b,
  openmode=replace,
  htmlfile="C:\Output - June.html");
```

Use this:

```
%tab2html (capture=off,
  runmode=b,
  openmode=replace,
  htmlfile=%str("C:\Output - June.html"));
```

Rory Wilsher, Woolwich

See the SAS Log in a New Light

Where would we all be without the SAS Log? Indispensable, if a little uninspiring. But with this very simple, value-for-money tip below, you can get errors and the like (assuming you ever see such things) to stand out and shout at you. Put the following in your **autoexec.sas** file.

```
dm 'log;color error r r;color warning g r;color note b r';
```

I won't explain it – try it and you will see what a really useful difference it makes. This is even more useful if you have set the log autoscroll to, say, 8 (which I would recommend). This greatly speeds up the log scrolling time, since the screen will only refresh every 8 lines, instead of the default 1 line. You can set this as follows:

V6: via Options/Preferences/Advanced...

V8: via Tools/Options/Preferences.../Advanced

And while we're talking about **autoexec.sas**, try also adding

```
dm 'list off' pgm;
```

to turn off the output window as soon as SAS starts. You can always access it again via (V6) the Globals menu, or (V8) the View menu.

Howard Lethbridge, Lethbridge Consultants

Report on the VIEWS 2001 Conference

As the first Views Conference to be held over 2 days, Views 2001 promised to be a feast of technical papers. The 200+ attendees were not disappointed with 50 presentations from a broad spectrum of SAS users.

Day 1 was dominated by the ODS Stream in the morning, which attracted large audiences. The day was brought to a close with a lively Futures Forum, where Allan Russell, Steve Rees, Jennifer Major, Katy Walker and John Raddon answered questions from the audience on SAS version 9, documentation, the future of SAS/AF and SAS certification, followed by the mixer.

Day 2 opened with a Keynote Session with Allan Russell on "The Intelligence Layer". SAS macros drew the crowds to Coder's Corner in the morning, and SAS/GRAPH was popular in the Data Visualisation Stream in the afternoon, but the choice meant that there was something of interest for everyone.

The conference closed with a summary by Andy Ratcliffe (the VIEWS Chairman), which included excerpts from the Video Booth. Louise Harvey then awarded the Amadeus Best Paper Prize, an expenses-paid trip to SUGI 27 in Orlando, to Gary Kennedy. Finally Stephanie Penning thanked Andy Ratcliffe for his hard work in organising the conference.

After the conference the Most Popular Paper Prize, a voucher for a SAS Training course, was awarded to David Shannon. This award was based on the votes of the conference delegates. Analysis of the evaluation forms and the responses from SAS to the questions in the Futures Forum can be found on the VIEWS web site.

VIEWS Subgroup - November 13th

Greg Nelson, author of a new book related to SAS and the Web, will be presenting for the day, in Marlow on Tuesday November 13th 2001, covering the following topics:

- XML and SAS: a tutorial.
- Web Development: best practices for developing enterprise applications.
- Introduction to Java for SAS programmers.
- Managing SAS services: a system administrators guide to enterprise applications.

Full booking details will be posted shortly on the VIEWS web site. This will be a day not to be missed, so book early as places are limited.

FAQ's, Hints & Tips WebRing

The web is full of information about SAS software, but it is not always easy to find. To make your searching simpler there is a group of web sites dedicated to supplying SAS-related hints and tips, and they are all linked together by a WebRing, which is a managed circle of similar sites, called the **SAS FAQ's, Hints and Tips WebRing**. If you want to see what is available in the WebRing, then one of the members of the ring is the home of the FAQ pages of Phil Holland, which can be found at www.hollandnumerics.co.uk/sasfaq/.

** Stop Press: VIEWS 2002 Conference **

This year's main conference was undoubtedly our biggest and best event to date. Sadly, VIEWS will not be organising a similar event next year. In a letter from Phil Bond (Managing Director, SAS UK & Ireland) the VIEWS committee has been told that "SAS UK is very likely to run its own user event - or series of events from January 2002 onwards. As a result SAS UK will not be participating in the VIEWS main conference next year."

VIEWS has always prided itself on its independence and so you may wonder why the withdrawal of support from SAS should affect the committee's plans. The plain fact is that big events like the main conference rely on heavy sponsorship from SAS. Without that support, the conference would necessarily be a much smaller affair.

SAS has told the committee that they will be undertaking a customer survey in the near future in order to establish what customers such as yourselves want from a user group. We encourage you to respond positively to the survey and let SAS know your opinions. VIEWS has changed over the years and responded to its members' wishes. Perhaps you will have some of the features of this year's conference in mind when you respond to those questions.

When SAS informs the VIEWS committee of their detailed plans for next year we will be able to establish the degree of technical content in their plans. If we perceive that there is a gap between what SAS will be providing and what we believe the VIEWS membership demands, we will consider organising an event to fill that gap.

In the meantime, SAS is continuing to support our other events and activities. Indeed, they have been very generous with the provision of rooms for our two upcoming BBU events, plus logistical help too.

The VIEWS committee is disappointed with SAS's decision, but our main concern is that SAS customers get what they need in terms of the ability to share and exchange technical knowledge and experience. We will make every effort to advise SAS on what we believe our members want. Don't lose your opportunity to do the same - respond positively to the survey when you receive it.

Regardless of the main conference, VIEWS continues as a focal point for SAS practitioners in the UK. The committee is also looking for new ways to help SAS customers in their quest for better product knowledge in order to better serve their employers and clients. If you have any ideas, please send them to events@views-uk.org.

Andrew Ratcliffe (VIEWS Chairman)

In Brief

- You can search the SAS Notes archive using only email. Just send an email to sasnotes@sas.com containing only the body text of HELP for full instructions on how to use the SAS Information Warehouse (IW).
- Subscribers to the SAS-L mailing list can also search the SAS-L archives by email. Just send an email to listserv@listserv.uga.edu with no subject and the body text similar to the following:

SEARCH views AND newsletter IN SAS-L SINCE 2000/12/31

- Details on how to subscribe to SAS-L can be found in *VIEWS News* issue 9.
- Back issues of *VIEWS News* are available from the VIEWS web site.

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.

November 2001

13 VIEWS Subgroup

This 1-day event in the VIEWS Book-By-Users lecture series will give us the opportunity to meet Greg Barnes Nelson. Greg will be speaking about web-enabling SAS.

February 2002

1 VIEWS News 17th edition

? VIEWS Subgroup

This 1-day event in the VIEWS Book-By-Users lecture series will give us the opportunity to meet Lauren Haworth, author of 'PROC TABULATE by Example' and 'Output Delivery System: The Basics'. Lauren will be speaking about ODS.

April 2002

14-17 SUGI, Orlando, Florida, USA

The SAS User Group International (SUGI) Conference is held each year and focuses on the technical aspects of SAS software. Venues alternate between inland or coastal locations: Orlando is inland!

May 2002

1 VIEWS News 18th edition

June 2002

11-13 **SeUGI**, Paris, France

The European SAS User Group International (SeUGI) Conference is held each year and focuses more on the commercial aspects of SAS software. The venue for 2003 is Vienna.

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

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***VIEWS News** is published quarterly by VIEWS - the UK's independent SAS user group. VIEWS is a not-for-profit organisation. Our Mission Statement and Rules can be viewed on our web site together with a list of current committee members.*