

VIEWS

NEWS

Issue 11 – 3rd Quarter 2000

News, Hints, Tips, and information for UK SAS Users

The international conference season is at an end (see *Conference Roundup*) but here in the UK we still have the annual VIEWS event to look forward to. It's moved to September this year in order to avoid any clash with SEUGI. Watch the post for details.

For the first time in a number of years I didn't attend SEUGI this year; I went to Applications Development 2000 instead (see *Applications Development 2000*). I've long argued that the SAS® world is too divorced from the mainstream IT world and that SAS practitioners should take more interest in the practices of the IT world. Indeed, I was invited to speak at this year's SUGI conference on an aspect of this very topic.

Learning the syntax of SAS software is necessary, but I believe that it should be just one step along a SAS practitioner's education path. Syntax courses should be followed by coaching and teaching on the skills of programming (and design & analysis if appropriate). Since a large amount of development time is spent on maintaining programs, it is important to write programs with that fact in mind - ease of maintenance.

Ask yourself whether you have learned good programming practices, and whether you could learn more skills (or better skills). We can always learn more, how will you improve your skills further?...

Andrew Ratcliffe (Editor)

The Consultant

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

Simple Data Validation

Q: My trial data should have a fairly uniform distribution of observations and values. Is there a simple way that I can validate this?

A: PROC FREQ can do this for you, and here is a simple macro form to minimise the syntax and to maximise the consistency.

```
/* dsname - dataset name */
/* vname - variable name */

%macro varfreq(dsname, vname);
  proc freq data=dsname;
    tables &vname / missprint norow nocol;
    title1 "&vname Freq. Report for &dsname Data Set";
  run;
%mend varfreq;

%varfreq(annedata, annevar);
```

Anne Marie Smith

My Menus Are Out Of Control!

Q: I have built some PMENU's using PROC PMENU. I have called them using the General Attributes of my frames. However, I am not able to control what choices my users see. SAS insists on placing choices on the screen I have not coded. I have a simple application and "simple" users who will "explore" the choices given. SAS insists on adding options!! I only coded a FILE menu, and it contains only an END option. SAS added OPTIONS and WINDOW and HELP and one other I don't recall. Is this the way it is meant to function?

A: No. I think you're the victim of the flexibility of SAS software... try OPTIONS NOAWSMENUMERGE. I think you'll find that the menu options that you didn't code will go away.

You probably realised that the unwanted menu

options were being inherited from the basic SAS system. The awsmenumber option specifies whether SAS software should merge SAS's standard menu options (such as Windows, Globals, File, etc) with those menu options specifically requested (by you) for the active window.

With OPTIONS NOAWSMENUMERGE you should only see your own menus when your frame is active. If you then click on the Program Editor window you'll see only the Program Editor's menus, i.e. there will be no Window menu; if you bring-up a DIR window then there's no Edit, Locals or Windows menus.

Just to prove this, build a new frame (just enter ==>bu work.work.frame), set the general attributes/pmenu as "none" (i.e. a non-existent pmenu), then test it. You'll have no menu options at all.

On a related point, you may subsequently want to grey/ungrey some of your pmenu items. To do this you must use the ID= parameter in PROC PMENU with a unique numeric ID value on each selection item that you might want to grey. Then, in your application, you can use either winfo() function or the _winfo_ method. For example:

```
menu FILE;
  item 'Export...' selection=export mnemonic='E' id=1;
```

Whilst WINFO('PMENUGRAY') is clearly documented, I've never managed to find PROC PMENU's ID= parameter documented in V6 documentation. (it is documented for V7).

For the winfo function, you code winfo('pmenugray',id). Code a positive ID value to ungrey the item, negative to grey it. It's similar for the _winfo_ method.

SAS/AF software's menus are not terribly flexible, but I generally find that I can achieve what I need. The most obvious omission is being



Conference Roundup



Theme for this year's major American and European SAS user gatherings was 'e' - you know, the little e that seems to be used as a prefix on any word that stands still long enough. Putting aside the marketing spiel, SAS do seem to have delivered a good product range in the last year or so that delivers a suite of tools and solutions for the intranet, extranet, web analysis, and points in between.

This has been facilitated by all of the good new features in SAS's Nashville vision, a.k.a. versions 7 and 8. And the really good news is that V8 went production in Europe in the 1st quarter and you can expect mass-shipment probably by the end of the 3rd quarter this year.

As ever, SUGI (held in Indianapolis in April) provided a feast of information for technical practitioners and solution builders alike, whilst SEUGI (held in Dublin in June) focused on the solutions and business perspectives. Coders Corner streams and technical papers from SAS staff at both conferences ensured code-smiths were fully satisfied, but the omission of hands-on access to SAS software at SEUGI was noted with sadness by many. An aspect noted by many attendees of both SUGI and SEUGI was e-ubiquity!

SUGI was notable for the number of papers from happy customers describing their successes with V7 and V8 projects. We can expect the same stories from European customers next year. It is clear that SAS's Nashville technologies are a significant step forward and justify the company's new sales-line: *The Power To Know™*.

Awards for SAS-L contributors were presented at SUGI, details are in the News section.

Andrew Ratcliffe and Phil Mason

able to add/remove menu items on the fly. To do this you must run PROC PMENU from your frame and then re-assign the menu to the frame. However, if your frame's using pmenu X and you run PROC PMENU to update pmenu X and then you tell SAS to assign pmenu X to the frame, SAS will be "intelligent" and ignore your request because X is already assigned to the frame. So you must assign a null pmenu to the frame and then reassign X to it.

Andrew Ratcliffe

Macro Parameter Separation

Q: When writing macros I sometimes need to provide lists of SAS variables as parameters, but if I want to use a comma between the variables e.g. some Proc SQL code inside the macro, then a space-separated list is no use; any advice?

A: Here's some code that could be used to swap between space-separated and comma-separated lists of variables:

Suppose a macro parameter &BYVARS is specified as a space-separated list of data set variables names (e.g. country subject time) then to convert to comma-delimited

```
%let com=%sysfunc(translate(%sysfunc(compl(&byvars)),',',' '));
```

To prevent errors when &BYVARS is null (blank), some error checking:

```
%if %length(&byvars) %then can proceed with the %let
```

If the user has a comma-separated list that needs to be space-separated use

```
%let byspace=%sysfunc(translate(&byvars,' ',' '));
```

Nelson Kinnersley

Transporting Data

Q: We have a data set from UNIX version 6.11 (*.ssd01) which we want to use in client/server version 6.12 (*.ssd04). The only method we know is to use the CIMPORT procedure - but since we no longer have access to version 6.11 this is not an option. Any suggestions please?

A: I'm afraid it's mostly bad news, but with some good news at the end. The different qualifiers that you quote indicate that they are from incompatible platforms - as you already realise. The only way to move data from one of those platforms to another using SAS software is to run PROC CPORT (or use PROC COPY with the XPORT engine) on the source platform.

Although both of your systems are UNIX, they are different flavours of UNIX and as such are completely different beasts. The ssd04 qualifier suggests to me that you're using Digital UNIX (Alpha/OSF) and the ssd01 qualifier suggests Solaris, HP, AIX, or MIPS ABI. I'm afraid the implementation of these different flavours of UNIX (and the different hardware that they run on) makes your situation an inevitable outcome. SAS's FAQ#1088 describes which UNIX platforms can use SAS data sets "as is" without using any transport methods.

If you have a copy of SAS/CONNECT® software licensed then you might want to take a look at this information about the SASSFIO engine: ftp.sas.com/techsup/download/technote/ts540.pdf. It describes the SASSFIO engine which you can use to read data sets from other platforms. In version 8 I believe this is replaced by the CEDA engine.

If you are willing to trust non-SAS software with your data, you might like to try Stat/Transfer (www.stattransfer.com) or DBMS/Copy (www.conceptual.com). Both of these applications are claimed to offer the facility you require (and much more too).

Andrew Ratcliffe

Test Those Batch Graphics

Q: I am currently writing my first SAS/GRAPH® software program that will run in batch mode - and I am a SAS newbie. A little window pops up that says "No device name has been given -- please enter a device name." What could be causing it to ask me for a device?

A: The "device name" message is prompting you to tell SAS what kind of graphics output it should produce. When you run SAS interactively it is able to deduce what type of terminal/interface you're using and will produce the output for display on the specific device. Now you're

running in batch mode it is unable to deduce what terminal type or printer you want the output for. You need to use the GOPTIONS DEVICE= statement to tell SAS what it wants.

So, what do you want? Given that you're running in batch you are presumably expecting the output to be written to a file. But what are you going to do with that file? Do you want to include it in a word processor as a graphic image, or do you want to send it straight to a printer, or do you want to email it to somebody? Or something else?!

If you want to include it in a word processor (or if you want to email it) then I'd suggest you might want to be creating a CGM file. To begin with I'd suggest you use GOPTIONS DEVICE=CGMC;

If you're sending it straight to a printer then maybe it's a HP device, in which case I'd suggest you start with GOPTIONS DEVICE=HPGL;

Just place the GOPTIONS statement at the top of your program. To tell SAS where to write your output file you'll need more GOPTIONS and a FILENAME...

```
GOPTIONS DEVICE=CGMC GACCESS=GSASFILE;  
FILENAME GSASFILE 'directory and file name in here';
```

I hope that this gives you something to get going with. Note that the filename statement must specify GSASFILE, you can't change it to anything else.

For experimenting with graphics, try submitting a program with PROC GTESTIT - it's a quick way of generating some graphical output, and tells you something about the graphics device you're using too. So, first of all, run PROC GTESTIT;RUN; interactively and see what you get. You'll get three images. To just generate the first image, submit PROC GTESTIT PIC=1;RUN;

To run GTESTIT in batch and to generate an output file, submit this:

```
GOPTIONS DEVICE=CGMC GACCESS=GSASFILE;  
FILENAME GSASFILE 'directory and file name in here';  
* for example FILENAME GSASFILE 'c:\temp\gtestit.cgm';  
PROC GTESTIT PIC=1; RUN;
```

See issue 10 of *VIEWS News* for some help with becoming a bit more adventurous in your choice of graphics devices.

Andrew Ratcliffe

Did You Know?

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

Oracle Date filtering in Enterprise Reporter™

When filtering on dates in Enterprise Reporter™ you must enter the value in a format that is recognised as a date by Enterprise Reporter. This can be achieved by using SAS date functions such as DHMS(MDY(01,31,2000),0,00,00).

When your data is stored in Oracle, the above functions for date filtering are not recognised by the DBMS. As a result, the query excluding the filter is executed in Oracle, passing the results back to SAS where the filtering will be carried out. There is a significant amount of unnecessary processing at the Oracle end which affects performance dramatically.

Ideally the filtering should execute in Oracle. The following work-around allows this to happen.

In the filter window, select the date you wish to filter by and assign a macro name in the value box, e.g. &date. In the Tools menu, select 'Define Prompt'. Click on the checkbox next to your macro variable you previously set up and enter the date you wish to filter by using an Oracle date parameter in 'Default Value', such as to_date('31JAN2000','DDMONYYYY').

When you select 'Data View' on your report a 'Prompt' window is displayed (shown in our figure) with the default value that you assigned to the macro variable in an editable box. Enter the date by which you wish to filter the data and press OK. The macro variable is passed to the code and resolved in the Oracle SQL code. Results are created and downloaded from Oracle using SQL pass-through.

You can define operators in the Prompt and any valid Oracle SQL



code such as 'BETWEEN' to filter by date ranges. This solution would no doubt work when using DB2 as your DBMS.

Nikkie Windsor

Catch the End

A perennial complaint from those SAS/AF programmers involved in producing industrial strength applications is that SCL provides insufficient control to capture some of the more extreme user events, such as when the user terminates the SAS session without ending the application.

Version 8 of SAS software provides documented means of trapping such events - CONTROL ENDSAS and CONTROL ENDAWS. These also work in V6.12 of SAS software but are not documented - so use them with caution!

By default, when a user issues the ENDSAS or BYE command, the TERM sections of SCL programs in the current execution stack do not execute. This is called an ENDSAS event. Use CONTROL ENDSAS to force execution of the TERM section.

Equally, when a user ends a SAS session by selecting the system closure menu in a FRAME entry that is running with the Application Work Space (AWS), the TERM sections of SCL programs in the current execution stack do not execute by default. This is called an ENDAWS event. Use CONTROL ENDAWS to force execution of the TERM section.

Andrew Ratcliffe

Formats, Options, and Functions

In version 7 (and 8) of SAS software, character formats can handle strings up to 32,767 characters (32K) long, and the DOLLARw.d, DOLLARXw.d, COMMAw.d, and COMMAXw.d formats no longer restrict d to 0 or 2.

The GWAIT graphics option (GOPTION) specifies the number of seconds that SAS/GRAPH software should wait between displaying multiple graphs. The default value is zero, implying that the user must press the Return or End key.

The RESOLVE function returns the resolved value of an argument after it has been processed by the macro facility. Sometimes useful in a DATA step to avoid too many SYMGETs.

News

SAS-L Contributors Rewarded

At this year's SUGI, four annual awards were presented to SAS-L contributors, based on votes by their peers: Most Valuable SAS-Ler (MVS), SAS-L Rookie of the Year (SASLROY), SAS Institute Consultant of the Year (SICY), SAS-L Hall of Fame.

Joint winners of MVS were Ian Whitlock, Paul Dorfman, and the UK's very own Peter Crawford. SASLROY winner was Bob Virgile; Chevell Parker won SICY.

First to be inducted into the Hall of Fame was Ian Whitlock. As a four-time winner of MVS, Ian was a very popular choice. Nearest to Ian in terms of MVS wins is VIEWS' chairman Phil Mason (he has won the award twice, in '95 and '96).

Applications Development 2000

Attended by 250 delegates from 21 countries, this year's conference was held at the Queen Elizabeth II Conference Centre, London. This year's theme was: developing objects for e-business (a strategy for the future).

My focus and interest was in process, not syntax. I spent the whole week without seeing any Java or C++ code. I attended papers on subjects as diverse as eXtreme programming, mobile commerce, process patterns, mapping objects to relational databases, and coding reuse. All were of a high quality and could be applied directly to my work in object-oriented application development projects. Food was good too!

Many of the speakers had been brought over from the USA. It was a good opportunity to meet and talk with some of the luminaries of the IT

world such as Scott Ambler, Joe Pelrine, and Alan O'Callahan.

I must be getting old! I sat through a 2-hour paper on performance benchmarking a web server and I was surprised to find that

- the techniques haven't changed since I was tuning mainframe tele-processing (TP) systems such as IBM's CICS ten years ago, and
- it was being presented as new knowledge, i.e. techniques that had been developed as a result of the web revolution.

If Applications Development 2000 sounds like it would have been of use to you, watch-out for our 2nd quarter issue next year when we'll have a competition to give away 2 free tickets (worth £1,000 each)!

In Brief

- Don't forget the Research & Development part of the SAS web site. Lots of interesting stuff at www.sas.com/rnd
- Long-time SAS Quality Partners SPS have merged with relative new-comers Info Quest Solutions. The new company is likely to be named SPS Info Quest Limited. More details at www.spsinfoquest.com
- Expect an upsurge in marketing activity and general preening from SAS Institute as it gears itself up for its IPO (launch of its shares on the US stock market) in the next eighteen months.

Diary of Events

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 software.

September 2000

26 VIEWS 2000 conference
London

April 2001

22-25 SUGI 26
Long Beach, California, USA

November 2000

1 VIEWS News 12th edition
? PharmaSIG provisional

May 2001

29-1st June SEUGI 19
Florence, Italy

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