DCSUG Newsletter

Washington, DC SAS Users Group

Fourth Quarter Meeting

When: Tuesday, December 4, 2001
Time: 8:30a.m. to noon
Place: Bureau of Labor Statistics
Postal Square Building
Room G440
First Street North East
Washington DC

Agenda:

8:30 - 9:00	Registration and refreshments
9:00 - 9:15	Announcements
9:15 – 10:15	Peter Parker, US Dept. of Commerce **All I Really Want... A Wish List for New SAS â Software Enhancements**
10:15 - 10:30	Break
10:30 - 11:30	Juli Yaguda, SAS **Changes and Enhancements to ODS for Version 8.2**
11:30 - Noon	User-to User Questions and Answers Moderators - DCSUG officers

***Presentation times subject to change**

Visitors must use the visitor's entrance on First Street NE. Directions for those taking Metro: Take the Red Line to Union Station. Exit the station via the Amtrak exit, but do not go up to the train level. Instead, after going up to and out through the farecard gates, turn to the left where there is an exit to the street (First Street NE). Directly across from the exit are the employee and visitor's entrances to the building. After checking in with security, take the main elevators down to the G level. **BRING PICTURE ID!**

If you have special needs and are planning to attend this meeting, please contact any DCSUG officer no later than 11/21/01

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NOTE: If you are not currently a paid member of the DCSUG and are planning to attend the meeting, please email Karen Dennis at kdennis@enterprisefoundation.org or call (410) 772-2780 by Nov 28th and leave your name. Security at the Bureau of Labor Statistics is very tight and having your name on a list of possible attendees will make your entrance to the building easier.

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President's Message

Peter Knapp

Nothing could have prepared me for the events of September 11 that occurred while many of us were attending the third quarter DCSUG meeting. My heart goes out to all those who have been affected both directly and indirectly by the terrorist attacks. I think one of the best things we as individuals can do is to try lead our lives with as much normalcy as possible. With that said, I'd like to welcome the speakers for our fourth quarter meeting. Peter Parker, from the U.S. Department of Commerce, will present his NESUG paper "All I Really Want... A Wish List for New SAS-Software Enhancements." Juli Yaguda, from SAS Institute Inc., will be presenting the paper "Changes and Enhancements to ODS for Version 8.2." I look forward to hearing both presentations and I hope to see you at the meeting!

Speaker Abstracts

Changes and Enhancements to ODS for Version 8.2

Sandy McNeill, SAS
Presented by Juli Yaguda, SAS

What's the best thing about an ODS paper concerning Changes & Enhancements? Examples, examples, examples. The ODS group has been hard at work implementing new ODS features in the ODS system and also in some of the BASE procedures such as Proc Print and Proc Report. Some of the new features covered in this paper will be: new style option in Proc Print, stylizing Titles/Footnotes, in-line formatting that allows style changes within a paragraph or cell, and the ability to use formats as attribute values for traffic lighting in Proc Report and Proc Template. A number of changes to Proc Template will also be covered such as RESOLVE and EXP[ression] functions for use in obtaining the value for a style attribute, using dynamic vars with the style option, and changes to CELLSTYLE and TRANSLATE.

After graduating with a BS in Computer Science from North Carolina State University in 1986, Juli Yaguda began her career with SAS Institute Inc. in the Management Information Systems Division where initially she wrote internal software applications with the SAS Application Development toolset. Along her career, her additional professional experiences include: a Marketing Application Developer where she designed and built proof-of-concept applications illustrating the power of SAS software; a Technical Consultant for a SAS Report Writer, Enterprise Reporter; and a Marketing Product Manager for the Enterprise Performance Management solution, Strategic Vision. Currently, Juli is a Technology Strategist in World-Wide Marketing with a primary focus on XML, Web Services and Enterprise Application Integration, where Base SAS, the Output Delivery System and other foundation technologies play a strategic role.

All I Really Want... A Wish List for New SAS â Software Enhancements

Peter Parker**,** US Dept. of Commerce

Having used both SAS software and computers for over 21 years, I've seen a lot of changes in both, almost always good. Major improvements will continue and we'll look back five years from now, amused at what we would call state-of-the-art today. Remember when a 486 PC with a 20 MHz clock speed, 1 Mb of RAM and a 300 Mb hard drive was considered the dream machine? In order to advance technology, we must first determine what needs to be improved. While SAS software has proven itself to be adaptable, dependable, and robust, it, too, will become better. Here is my wish list of changes I hope will become part of the SAS software system soon:

System Enhancements
1. Run- time SAS applications
2. Multi-threaded processing
3. timed back up of different components- log, editor, output

Application Development Enhancements
1. Input Wizard for most types of data
2. GUI code generator
3. Intelligent Printing
4. Merge Wizard
5. Coding Critique Wizard
6. SAS code templates
7. SAS macro window overhaul

Peter Parker has been programming since 1979, mostly in SAS software. He runs an ADP shop in the U.S. Department of Commerce. As well, he runs a consulting firm, Perfect Programmer Enterprises, where he provides programming, office automation and applications development support. He has BA and MA degrees in Economics. He is a Microsoft Certified Systems Engineer (MCSE) and is certified in Lotus Notes/Domino. He has presented other papers for SAS conferences.

Questions and Answers

Moderated by DCSUG Officers

Bring your SAS programming or procedure questions to DCSUG and its members. During this open session, you can ask questions of and get answers from experienced SAS users. All are welcomed to participate

Due to the high cost of mailing out newsletters, DCSUG will be emailing notices of the availability of accessing the quarterly newsletter (and other important announcements) at the DCSUG Internet site. If you are a member, please make sure your email address is current in our database. Please notify Larry Altmayer at Lawrence.W.Altmayer@census.gov with the email address you want to use to receive notification of the publication of the newsletter. Members will still have the option of continuing to receive a hard copy of the newsletter upon request.

NESUG '01 Conference Winners

Thanks to all who participated in and attended the NESUG conference in Baltimore. Special congratulations to the following, which includes a large proportion of DCSUG members.

Winners of the Poster Presentations:

*First Place:
Howard Schreier, Graphs Without SAS/GRAPH

*Second Place:
Roger Goodwin and Jenny Thompson, Using Taylor's Linearization Technique in StEPS to Estimate Variances for Non-Linear Survey Estimators

*Honorable Mention:
Perry Watts, The Relationship Between Format Structure and Efficiency in SAS

Arlene Siller and Linda Tompkins, Analyzing Complex Sample Survey Data: A New Beginning

Neal Musitano Jr, OS/390 DASD I/O Drill Down ComputerPerformance Chart Using SAS/GRAPH and MXG Software

Winners of the Problem Solving Contest:

*Dolphin award to the contestant with the best set of answers **- Ian Whitlock**

*Tortoise award to the contestants who showed a consistent level of effort across subjects and levels of difficulty **- Wei Wang** and **Larry Gertzog**

*Seal of approval award to the contestant who demonstrated profound SAS know-how - **Edward Heaton**

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SAS Talk

By Ian Whitlock

Let's take a look at how SAS processing in the DATA step has changed under the hood.

The Program Data Vector (PDV) is the name that SAS uses for the memory area where variables available to the DATA step are held. It is an important concept for the SAS programmer because it forces him/her to think about each line of the DATA step and how it changes the PDV. One has not really arrived at good DATA step programming until one has a firm grasp of the PDV and what happens to it at each line of the step.

In Version 5 and before, the PDV was a real physical entity. The order of the variables in the PDV controlled the order of variables in each of the output data sets. Hence it is important to know the order in which the PDV is built. In Version 6 memory management changed to speed up processing, so that it might be better to speak of the logical PDV as opposed to the physical one. However, the concept still dominates how one thinks about DATA step processing. In Version 7/8 the physical order of variables in SAS data sets was divorced from the logical PDV, again to speed up processing. However there is now a logical order, the one used by PROC PRINT and other PROCs in the processing of a sequence of variables when none is specified by the programmer.

In Version 5 and before, the SAS supervisor, the program that manages your DATA step, was responsible for initializing variables. This meant that at every iteration of the step, control was passed from your program to the supervisor. It then handled default output, set the counter _N_ that counts the number of iterations of the step code, and set certain variables to missing. Variables in an explicit RETAIN statement, variables from SAS data sets, and automatic variables (implicitly retained) are not set to missing; however, all others are. Since all the variables, character or numeric, retained or not, were mixed together; in order to carry out initialization each variable had to be handled separately.

In Version 6, memory was partitioned into 4 parts - character retained, character not retained, numeric retained, and numeric not retained. This meant that two simple instructions (movelong blanks and movelong missing) could be used to initialize the non-retained variables as blocks rather than looking at each variable individually. Consequently this duty was pushed into your program and the cost in time to hand over execution to the supervisor at each iteration of the step was eliminated or made much smaller. In Version 5 the advice to put the DATA step processing in an explicit DO-loop, thereby reducing the number of iterations to one, resulted in a faster step. Even then, I did not usually approve because this practice often leads the SAS programmer, who has learned to use the rhythm of the DATA step, astray. In version 6 and after, it is a very poor suggestion unless every micro second counts.

Now the order of the logical PDV is separated from the physical order. Consequently a RETAIN statement at the top of the step, without assigning an initial value, can determine the order of the logical PDV. This means that it is easy to reorder the variables of a SAS data set whenever there is a need to do so.

The concept of _TEMPORARY_ arrays was added. These arrays are stored contiguously and hence operate very efficiently. These arrays are not part of the PDV. The variables have no names, do not go on output data sets, and do not appear with

```
put _all_ ;
```

In version 7/8 all 8 byte numeric variables are stored first, followed by pairs of 4 byte numeric variables, then all other numeric variables and finally all character variables. This means that data can be moved faster from the memory area of the DATA step to the output buffers of SAS data sets. Programmers who use PROC CONTENTS with the OUT= option, DICTIONARY.COLUMNS, or the corresponding view SASHELP.VCOLUMN to generate SAS code can no longer depend on NPOS to give the logical order of the file. Now VARNUM keeps the logical order.

As one can see, the speeding up of SAS has involved a gradual separation of the consequences of physical memory order from the logical consequences that all good SAS programmers have come to expect. So with all this efficiency, why do some of your DATA steps seem to take longer to execute? Well, they do, because you are taking advantage of some of the many new features that have been added and cost more time.

With this history in mind let's look to the future. The next big step will be parallel processing. Version 9 will provide the first stage of the development. I/O, PROC SUMMARY, and PROC SORT will get smarter and be able to use parallel processing when available. Then in Version 10 one can hope to see this functionality permeate throughout SAS processing.

One of the immediate consequences will be the dropping of older operating systems that cannot handle parallel processing instructions. Thus there will be no Version 9 for Windows 95, 98 or ME and some others like OpenVMS VAX and CMS.

Calendar of Meetings and Events

This feature is meant to give users an idea of some of the activities of area users groups and special interest groups, as well as regional and international groups. If your group would like to be regularly included in this feature, please call Mike Rhoads or one of the DCSUG officers. There is a DCSUG directory with phone, fax, and E-mail contact information elsewhere in this newsletter.

December

4 **DCSUG** DC SAS Users Group, General Meeting
Time: 8:30 am - 12:00 noon
Site: Bureau of Labor Statistics
2 Massachusetts Ave. N.E.
Program: See front page announcement
Contacts:
Mike Rhoads at (301) 251-4308
RhoadsM1@Westat.com
Peter Knapp at (202) 482-1359
peter_knapp@ita.doc.gov

March 2002

5 **DCSUG** DC SAS Users Group, General Meeting
Time: 8:30 am - 12:00 noon
Site: Bureau of Labor Statistics
2 Massachusetts Ave. N.E.
Program: TBA

April 2002

14-17 **SUGI 27** SAS Users Group International
Site: Walt Disney World® Swan and Dolphin Resort, Orlando
Chair: Cyndie Gareleck
Further Info:
www.sas.com/usergroups/sugi/sugi27/index.html

September/October 2002

29-2 **NESUG 2002** NorthEast SAS Users Group 15th Annual Conference
Site: Adam's Mark Hotel, Buffalo NY
Co-Chairs: Michael Mace, Chris Roper
Further Info: www.nesug.org (later)

Other Groups

CENSUG Census SAS Users Group
Contact: Andrea Potter at (301) 457-1687

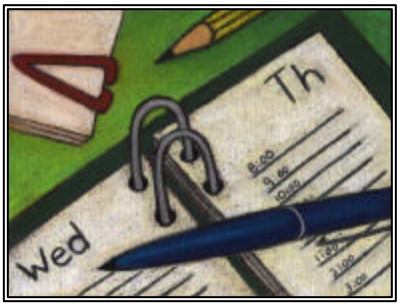
MDSUG Maryland SAS Users Group
Contact: Mr. R.H. Miller, (410) 740-4229
millerrh@juno.com

NCHSSUG National Center for Health Statistics SAS Users Group
Contacts: Arlene Siller at (301) 458-4498
asiller@cdc.gov
Linda Tompkins at (301) 458-4533

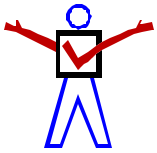
NIHSUG National Institutes of Health SAS Users Group
Contact: Ray Danner at (301) 496-6037

NOVASUG Northern Virginia SAS Users Group
Contact: Gary McQuown at (703) 628-5681
gmcquown@dasconsultants.com

VASUG Virginia SAS Users Group (Richmond area)
Contact: Peter Rikard at (804) 828-4878
liaison@vasug.org



Election of 2002 DCSUG Officers



Peter Knapp — Candidate for Chair

Peter Knapp interned at the Bureau of Labor Statistics (BLS) where he learned the joys of SAS on an MVS mainframe environment. After contracting with BLS for three years, he joined the International Trade Administration (ITA) at the Commerce Department. For ten years Mr. Knapp has helped administer international trade law at ITA. During this time he has guided SAS processing from a central mainframe shop to an end user PC based system.

Arlene Siller -- Candidate for Treasurer

Arlene Siller is a Computer Specialist with the National Center for Health Statistics and has used SAS for 23 years. Her responsibilities include programming and analysis using SAS/Base and SAS/Stat for National health surveys. She is the SAS Site Representative for her agency and co-chair of the in-house NCHS Users Group (NCHSSUG). She is very involved in providing support for NCHS SAS users, and enjoys this personal interaction part of her responsibilities the most. She has programmed using the TSO, Wylbur, VMS, DOS, Windows and UNIX operating systems.

Larry Altmayer -- Candidate for Secretary

Larry Altmayer has been with the U.S. Census Bureau for twenty three years and is a computer specialist. He has more than eleven years SAS programming experience, most recently with macros. He has used SAS and SUDAAN for modeling household survey nonresponse based on demographic person and household variables, and SAS for producing tables of employment percents and unemployment rates for the Current PopulationSurvey. His programming experience has been mainly in the VMS operating system. He has a B.A. in Statistics from the Univ.of Buffalo, and Master of Applied Statistics from Ohio State University.

Mike Rhoads -- Candidate for SAS Liaison

Mike Rhoads has served on DCSUG's steering committee for the past several years. He has also contributed to various SUGI and NESUG conferences as a paper presenter and session coordinator. 2002 marks the 23rd anniversary of his initiation into the wonderful world of SAS software. He is currently a Vice President in the Computer Systems and Applications group at Westat, where he still manages to sneak in an occasional DATA step or two when not overburdened by his other responsibilities.

DCSUG 2002 BALLOT

Place an "X" In the Box beside the candidate of your choice. You may write in the name of someone who has not been nominated if you wish.

DCSUG Officers

Chairperson
Description: Lead DCSUG, delegate assignments, chair group meetings, preside over nomination and election of officers.
☐ Peter Knapp ☐

Treasurer
Description: Manage the group finances: collect dues and fees, make disbursements, maintain record of income and disbursements. The Treasurer will also prepare a report of income and disbursements for distribution at the fourth quarter general meeting.
☐ Arlene Siller ☐

Secretary
Description: Record minutes of group meetings, maintain membership list, prepare meeting notices.
☐ Larry Altmayer ☐

SAS Liaison
Description: Represent and increase the influence of DCSUG to the SAS Institute
☐ Mike Rhoads ☐

DCSUG Dues
Dues are set annually by the steering committee and voted on by the member ship at the fourth quarter meeting. Dues will be payable by the first quarter general meetings. Dues will be used to finance mailings, telephone charges, newsletter and other expenses as approved by the group of officers.
☐ Keep proposed (current) rate ($10.00 per year individual, $50.00 per year corporate)
☐ Increase ☐ Decrease

Please mail ballot to:

Washington DC SAS Users Group
P.O. Box 44670
Washington, DC 20026-4670

Desktop Special Interest Group

The next meeting TBA
Check the DCSUG home page for the next meeting announcement:
http://www.ita.doc.gov/industry/otea/dcsug
Please contact Yesvy Gustasp or Joe Mirabal (see Steering Committee column) with questions, requests, suggestions, and offers.

NOVASUG

Next NOVASUG Meeting :
Thursday February 7th
Freddie Mac in Tysons Corner Virginia
Topic 1: Macro Development
Topic 2: Speaker supplied by SAS Institute
Time 6:30 pm - 8:00 pm
More information is available at WWW.NOVASUG.ORG

SIGSTAT Schedule: November, 2001 - June, 2002

November 14, 2001	What's New in SAS 8	February 13, 2002	SAS INSIGHT
December 12, 2001	PROC BOXPLOT & UNIVARIATE IN SAS/STAT	March 13, 2002	R for Windows
		April 10, 2002	PROC GAM in SAS/STAT
January 9, 2002	Output Delivery System (ODS) in SAS	May 8, 2002	PROC VARMAX IN SAS/ETS
		June 12, 2002	PROC KDE in SAS/STAT

SIGSTAT is the Special Interest Group in Statistics for the CPCUG, the Capital PC User Group, and WINFORMS, the Washington Institute for Operations Research Service and Management Science.

All meetings are in Room 3056, 1800 M St, NW from 12:30 to 1:30. Enter the South Tower & take the elevator to the 3rd floor to check in at the guard's desk.

First-time attendees should contact Charlie Hallahan, 202-694-5051, hallahan@ers.usda.gov, and leave their name. Directions to the building & many links of statistical interest can be found at the SIGSTAT website, www.cpcug.org/user/sigstat/.

Membership Application/Renewal

Date: _____
Name: _____
Company Name: _____
Mailing Address: _____
_____
City, _____ State _____ Zip _____
Phone # _____ Fax # _____
E-Mail: _____
Preferred mode of contact (check one):
☐ Fax ☐e-mail
SAS Version(s) _____
SAS Product(s): _____
Operating System(s) _____
Check one:
☐ Individual membership for 1 year is $10.00
☐ Corporate sponsorship for 1 year is $50.00
Please indicate a contact person for Corporate Sponsorships!
_____
Check one:
☐ New membership ☐ Renewal membership
Mail to:

Washington DC SAS Users Group
P.O. Box 44670
Washington, DC 20026-4670

2002 Meetings

Plan ahead and mark your calendars now. The DCSUG will meet on the following dates in 2002: March 5, June 4, September 10, December 3. Meeting times and locations to be announced. If at any time you have a question about an upcoming meeting or other DCSUG information, call one of the members of the Steering Committee.

To visit the DCSUG home page

The URL for the DCSUG home page on the Web:
http://www.ita.doc.gov/industry/otea/dcsug

Remember to Join DCSUG!!!

Don't forget to renew your DCSUG membership for 2002. Dues are used to defray the costs of producing and mailing the newsletter and provide refreshments at our meetings. You'll make sure that you keep receiving the newsletter and keep DCSUG going. If you have not joined DCSUG, now is a great time to do so. Joining DCSUG is as easy as completing the membership form included in this newsletter. Individual memberships are only $10; corporate memberships are $50

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