

DCSUG Newsletter

Washington, DC SAS Users Group

Second Quarter Meeting

*******NOTE CHANGE FROM PREVIOUSLY ANNOUNCED DATE*******

When: Tuesday, **June 15**, 2004
Time: 8:30a.m. to 11:30
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	Michael Raithe, Westat Measuring SAS Software Usage on Shared Servers with the RTRACE Facility
	10:15 - 10:30	Break
	10:30 - 10:45	User-to User Questions and Answers Moderators - DCSUG officers
	10:45 - 11:15	Larry Altmayer, U.S.Census Bureau An Introduction to SAS/SHARE, By Example
	11:15 - 11:30	Wrapup

***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 06/07/04

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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 Paul Gorrell at pgorrell@s-3.com or call him at 301-628-3237 by June 9th 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.

President's Message

Peter Knapp

Last month's SAS Users Group International conference was held in Montréal, the first SUGI to take place outside the borders of the U.S. For the June 15 DCSUG meeting, we are pleased to present two of the talks from SUGI. Both are by long-time DCSUG contributors: Michael Raithe and Larry Altmayer.

We are also proud of the fact that several area presenters won awards for their SUGI papers -- see page 7 of the newsletter for details.

If you weren't able to make it to SUGI this year (or even if you were), don't forget about this fall's regional SAS conferences. SESUG will be held in Nashville beginning October 31, followed two weeks later by the NESUG conference in Baltimore. More information is available elsewhere in the newsletter.

Speaker Abstracts

Measuring SAS Software Usage on Shared Servers with the RTRACE Facility

Michael Raithel, Westat

How often is SAS software being used in your organization, who is using it, and what SAS products are being used? These questions are not always easy to answer, particularly for organizations that run SAS on multiple platforms. However, an innovative technique for exploiting SAS RTRACE files can provide you with a way to record and report information about SAS usage in your organization. This paper presents a methodology for exploiting SAS's native RTRACE facility to track all SAS batch and interactive sessions in the Windows, UNIX, and Linux environments. It provides an overview of the RTRACE facility and how to set it up to run behind-the-scenes in shared server environments. The paper contains example programs that process RTRACE files and store the information in SAS data sets. It includes a sample program that reports SAS usage based on the captured RTRACE information. After reading this paper, you will have all of the tools that you need to exploit RTRACE, and determine the "who," "what," "when," and "where" of SAS software usage in your own organization.

Michael A. Raithel has been a section chair at SUGI, SESUG, and NESUG, and he co-chaired NESUG in 1995. He has been a mainframe computer performance analyst for Marriott International and for the U.S. Customs Service, as well as an independent consultant specializing in mainframe and Unix performance issues. He now works as a Senior Systems Analyst for Westat. A copy of the first edition of this book, entitled Tuning SAS Applications in the MVS Environment, resides in the Smithsonian Institution of American History's Permanent Research Collection of Information Technology.

An Introduction to SAS/SHARE, By Example

Larry Altmayer, U.S.Census Bureau

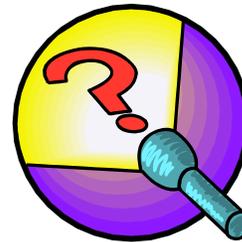
SAS/SHARE software is a useful tool for allowing several users to simultaneously access and edit the same data set at the same time in their individual SAS sessions. Without this software, data sets are available for simultaneous use only if the data set is set to browse mode in the Properties window of a SAS frame application. With the software, if the data set properties are set to an edit mode, different users can

simultaneously edit different rows of the same table at the same time. This paper gives an introduction to using SAS/SHARE to access and edit a variation of the HOUSES SAS data set in a small SAS/AF application to be used by several users at the same time. We demonstrate how to start and stop a SAS/SHARE server, and assign a libname to the server. We also show how the application works while different users are simultaneously editing the data. From the software viewpoint, we touch on the requirement for having the server name in the /etc/services file. Finally, we look at SAS/SHARE macros as a way to condense code.

Larry Altmayer has been with the Bureau of the Census for twenty-five years, and is an information technology specialist. He has more than fourteen years SAS programming experience. He has processed National Crime Victimization Survey data. Most recently, he joined the Bureau's StEPS Team, which develops a batch and SAS/AF system for economic surveys. He has a B.A. in Statistics from the Univ. at Buffalo, and Master of Applied Statistics from Ohio State University.

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

SAS Talk

by Ian Whitlock

A common question on SAS-L has been about making arrays of macro variables. There is no macro statement to create an array, but one mimics the referencing of an array via multiple ampersands using a technique of delayed referencing. For example, given variables I, Q1, Q2, and Q3, when I = 2 one can reference Q2 as &&Q&I because on the first scan the double ampersand is reduced to one and the &I to 2, then on the second scan &Q2 is resolved as desired.

Often the questions arise because a person did not know that you can use ampersands in a %GLOBAL statement as in

```
%global q&i ql&i ;
```

Other times it arises because of some mistake in referencing the variables, since things can get tricky with complexly constructed names.

My main interest here is macro design and what techniques lead to bad or good designs. I would like to explore this question for arrays of macro variables. The case for arrays is that they are often fast and efficient. They provide the ability to reference one of a group of variables through an index variable. The case against is that the code is ugly since the referencing method makes the code harder to read, and that arrays often lead to declaring the array of variables global, since they may be assigned in one macro and used in another. The harm here is that global variables reduce the ability to produce modular programs with data encapsulation, hence reducing the ability to control large programs particularly when more than one person is involved. Note that the important point about arrays is that the elements can be referenced via an index variable. What other ways can this be achieved? Often the values are related and can be calculated via a common procedure dependent on the index variable.

In one recent example, the person wanted an array of consecutive quarters of the form YYYY_QQ, except that he also expected to be interested in consecutive months. Now the format YYQ6. is so handy that I modified the problem to produce YYYYQN where Q is constant and N is the number of the quarter. If necessary the translation of Q to _0 is simple with the TRANWRD function, so my simplification is not essential.

So why is an array needed as opposed to obtaining single elements at a time? Well, probably, you want to loop over the array executing some code. The nature of that code doesn't really matter. In its simplest form, you could simply put the values on the log with %PUT statements. Is an array necessary? Of course not. What you need is the ability to obtain values in terms of the loop index. Arrays form the most common method of storage to achieve this objective, but not necessarily the best one.

Let's look at another. Here are two simple macros to obtain the required values.

```
%macro pd ( period=qtr
            , start="15oct2003"d
            , p=0
            , pos=e
            ) ;
    /* return SAS date in given period */
    %sysfunc(intnx(&period,&start,&p,&pos))
%mend pd ;

%macro pdl ( date=
            , fmt=yyq6.
            ) ;
    /* return formatted date */
    %sysfunc(putn(&date,&fmt))
%mend pdl ;
```

These macros provide the ability to calculate the needed values; hence there is no need to store the values at all.

Now let's make a test. Can you write out the eight date values and their labels using the above macros instead of an array?

```

%macro test ( dt = "1jan2000"d , np = 8 ) ;
  %local i date;
  %do i = 1 %to &np ;
    %let date = %pd(start=&dt, p=&i) ;
    %put &i) &date %pdl(date=&date, fmt=yyq6.) ;
  %end ;
%mend test ;

%test()

```

Now let's see that we haven't lost the ability to make an array if really required. Incidentally this solution shows how to solve the problem using local variables instead of global ones, so one really has to ask what was gained at the price of having many global variables.

```

%macro test2 ( dt = "1jan2000"d , np = 8 ) ;
  %local i ;
  %do i = 1 %to &np ;
    %local q&i ql&i ;
    %let q&i = %pd ( start = &dt , p=&i ) ;
    %let ql&i = %pdl ( date=&q&i ) ;
  %end ;

  %do i = 1 %to &np ;
    %put &i) &q&i &ql&i ;
  %end ;
%mend test2 ;

%test2()

```

Historically arrays played an important role in converting a column from a SAS dataset into a related group of macro variables. However, now macro variables can be up to 64K long, and PROC SQL allows one to transfer a column of data into one macro variable, say Q, with the INTO operator. This has often proved to be a cleaner and simpler solution, since now the elements may be referenced as %SCAN(&Q,&I). Arrays also played an important role in making lists, but the same use of the INTO operator provides a more direct solution. So when are arrays still important? If the values are functionally independent and cannot be held in a list, i.e. because there are too many values or there is no common separator, then an array is the only option. If the values are functionally dependent, cannot be held a list, and the expense of calculation is too high, i.e. because many different loops reference the same array, then an array may be advisable. But having many loops over the same array suggests that perhaps the design could be improved.

I conclude that before you think an array is the best technique, you should carefully consider the design of the system to see to what extent the design has forced your conclusion.

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.

June

15 **DCSUG** DC SAS Users Group, General Meeting
Time: 8:30 am – 11:30 am
Site: Bureau of Labor Statistics
2 Massachusetts Ave. NE
Program: See front page announcement
Contacts:
Roger Goodwin at (301) 763-4774
roger.l.goodwin@census.gov
Peter Knapp at (202) 482-1359
peter_knapp@ita.doc.gov

September

14 **DCSUG** DC SAS Users Group, General Meeting
Time: 8:30 am - 12:00 noon
Site: TBA
Program: TBA

October/November

31-2 **SESUG** SouthEast SAS Users Group Conference
Co-Chairs: Imelda Go, Neil Howard
Site: Nashville
Further Info: www.sesug.org

November

14-17 **NESUG** NorthEast SAS Users Group Conference
Co-Chairs: Warren Stinson, Earl Westerlund
Site: Baltimore
Further Info: www.nesug.org

December

7 **DCSUG** DC SAS Users Group, General Meeting
Time: 8:30 am - 12:00 noon
Site: TBA
Program: TBA

Other Groups

CENSUG Census SAS Users Group
Contact: Andrea Potter at (301) 763-1687

MDSUG Maryland SAS Users Group
Contact: Jayne May Miller, (410) 455-6849
jmiller@chpdm.umbc.edu
www.umbc.edu/chpdm/mdsug/

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
www.novasug.org

SIGSTAT Special Interest Group in Statistics, CPCUG and WINFORMS
Contact: Charlie Hallahan, 202-694-5051
hallahan@ers.usda.gov

VASUG Virginia SAS Users Group (Richmond area)
Next meeting: June 16, 2004
Contact: Carrie Mariner at president@vasug.org
www.vasug.org

DCSUG 2004 Steering Committee Officers

CHAIR -- Peter Knapp

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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 membership (group)

for 1 year is \$50.00

Corporate sponsorship

for 1 year is \$250.00

Check one:

New membership

Renewal membership

Mail to:

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



Winning Contributed Papers by Local Users

[*A Recipe for Success: Migrating SAS/AF Applications to the Web Using SAS, HTML, and JavaScript.*](#)

Jonah P. Turner, United States Bureau of the Census

[*Subsetting SAS Data Set by Using PROC SQL Self-Join with Compound Key.*](#)

Zizhong Fan, Westat

[*Perfecting REPORT Output to RTF.*](#)

Steven Feder, Federal Reserve Board

[*SAS Macros are the Cure for Quality Control Pains.*](#)

Gary M. McQuown, Data and Analytic Solutions, Inc.

[*Methods of Storing SAS® Data into Oracle Tables.*](#)

Lois Levin, Independent Consultant

DCSUG Evening Special Interest Group

The Evening Special Interest Group (SIG) will (Re)Start This Fall!

TOPIC: An Introduction to SAS Enterprise Guide

SPEAKER: Yesvy Gustasp

Learn how Enterprise Guide can be used instead of the SAS Display Manager. Submit SAS jobs on a server and use SAS locally. Learn what else Enterprise Guide can do. Generate code you can use right away, or modify it to suit your special task!

DATE/TIME: Planned for late September. Stay tuned.

LOCATION: Social & Scientific Systems, Inc. (near the Silver Spring metro)



**October 31 –
November 2, 2004
Loews Vanderbilt Hotel**

Visit us at www.sesug.org for more information about the conference, how to participate as a presenter, and links to everything you need to plan your trip to Nashville in October.

Online registration for the **12th** annual SouthEast SAS Users Group (**SESUG**) Conference in **Nashville, TN** begins on **June 14!**

You will have the best SAS training and learning opportunities in a prime conference location!

Entertainment in **Music City USA...**



Arts & culture in the **Athens of the South...**



Sports in the **Home of the Titans...**



We'll see you there!

SESUG 2004 Nashville Conference Co-Chairs	
<p><i>Imelda "Mel" Go</i> igo@sde.state.sc.us (Operations)</p>	<p><i>Neil Howard</i> neil.howard@i3data.com (Academic)</p>



NESUG 2004

The seventeenth annual NESUG Conference will be held November 14 - 17, at the Renaissance Harborplace Hotel in Baltimore, Maryland. The hotel overlooks Baltimore's Inner Harbor and is within walking distance of many popular attractions, including:

- The National Aquarium
- Maryland Science Center
- Harborplace Pavilion and The Gallery, with restaurants, shops, boutiques, galleries and sidewalk cafes
- Baltimore Maritime Museum

Other attractions a short distance away are the Walters Art Gallery, Fort McHenry National Monument and Historic Shrine, USS Constellation Museum, the B&O Railroad Museum, the Babe Ruth Museum, and Camden Yards. Baltimore is a beautiful, exciting city!

We are planning an informative, exciting conference for you. Planned concurrent sessions for Monday, Tuesday and Wednesday include:

- Programming and Manipulation
- Applications
- Analytics
- Presentation
- Storage and Management
- Administration and Support
- Ins and Outs
- Hands-on Workshops
- Posters

Join us also for fun at the Opening Session, the Sunday night mixer, the NESUG Coffee House Monday evening, and the Tuesday night party.

SAS will provide on-line demonstrations in the staffed Demo Area.

We would like your help:

volunteers are always needed to present papers, serve as section chairs, session coordinators or registration staff, and aid with the Code Clinic.

Fill out the Conference Volunteer form when you register, or contact the [Conference Co-Chairs](#):

Warren Stinson

D&B

Global Decision Sciences
899 Eaton Avenue
Bethlehem, PA 18025
610-882-7158

stinsonw@dnb.com

Earl Westerlund

University of Rochester

Clinical Trials Coordination Center
1351 Mount Hope Avenue, Suite
223

Rochester, NY 14620

585-275-8871

ERWesterlund@nesug.org

2004 Meetings

Plan ahead and mark your calendars now. The DCSUG meetings in 2004 are scheduled for June 15, Sept 14, Dec 7. 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://dc-sug.org>**

Remember to Join DCSUG!!!



Don't forget to renew your DCSUG membership for 2004. 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 membership is \$50 and corporate sponsorship is \$250