

# DCSUG Newsletter

Washington, DC SAS Users Group

## First Quarter Meeting

When: Tuesday, March 4, 1997  
Time: 8:30a.m. to noon  
Place: Bureau of Labor Statistics  
Postal Square Building  
Room G440  
First Street North East  
Washington DC



**NOTE START TIME**

Agenda:	8:30 - 9:00	Registration and refreshments
	9:00 - 9:15	Announcements
	9:15 - 10:15	Andrew Karp, Sierra Information Services, Inc. <i>Efficiency Ideas for Large Files</i>
	10:15 - 10:30	Break
	10:30 - 11:00	Michael Rhoads, Westat <i>Call Routines that Provide Pattern Matching</i>
	11:00 - 11:30	User-to User Questions and Answers Moderators - DCSUG officers
	11:30 - noon	Andrew Karp, Sierra Information Services, Inc. <i>Using PROC EXPAND with Time Series Data</i>

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 2/27/97

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### President's Message

Peter Knapp  
U.S. Department of Commerce

Thank you for your vote of confidence in electing me President of the DCSUG. I've enjoyed attending DCSUG events over the years and look forward to becoming active in the running of the organization. If you have any ideas or suggestions on how the Steering Committee can improve DCSUG, please contact me or my colleagues with your input.

I look forward to seeing all of you at our First Quarter Meeting when we welcome Andrew Karp, Sierra Information Systems and Mike Rhoads, Westat as our featured speakers. Bring a friend or a coworker if you can. The more the merrier!

## Speaker Abstracts

### Efficiency Ideas for Large Files

This paper, prepared by Andrew Karp and J. Meimei Ma (Quintiles, Inc., Research Triangle Park, NC) will be presented in the Beginning Tutorials Section at SUGI 22 in San Diego. It presents options on what SAS System users should consider when using SAS System software for handling large files, and touches on a variety of topics and approaches to these sorts of data sets. Although a few operating-system specific issues are addressed, the techniques and approaches presented in the tutorial are applicable to essentially all hardware platforms. Among the topics covered are: machine vs. human efficiency elements, repetition value, programming strategies, data set storage hints, compressing and indexing SAS data sets, and documenting SAS System programs.

*J. Meimei Ma, Ph.D. is Associate Director at Quintiles, Inc. and is co-author, with William Calvert, of "Concepts and Case Studies in Data Management," published last year by SAS Institute's Books by Users program.*

*Andrew H. Karp, MA, is President of Sierra Information Services, Inc., a San Francisco-based SAS Institute Quality Partner. He has presented many papers at regional and local SAS user groups throughout the United States and was a featured speaker at the 1996 SAS Users New Zealand conference. He is chair of BASIC--Bay Area SAS Independent Consultants--a newly formed user group for independent SAS System consultants in the San Francisco Bay Area.*

### Using PROC EXPAND with Time Series Data

**Andrew Karp, Sierra Information Systems, Inc.**

This presentation discusses use of PROC EXPAND, a procedure in the SAS/ETS module which provides a number of tools used when working with data collected in the time domain. The procedure, new to the SAS System in Version 6 and substantially enhanced in recent releases of the SAS System, easily aggregates data from one sampling frequently to another (e.g., from hourly to daily) as well as provides transformation operations on the series either before or after aggregation occurs. PROC EXPAND is therefore often a preferred approach to Data Steps and/or other SAS Software procedures when aggregating data.

Two other key features of PROC EXPAND will be presented: The first, interpolation of higher frequency

values from a series of observations collected at a lower sampling frequency, permits users to estimate, for example, weekly values of a series from a vector of monthly observations. Second, PROC EXPAND's abilities to estimate values of missing observations in a series will be discussed. This feature allows SAS Software users to replace missing values in a series, either during interpolation/aggregation of a series, or without performing further operations on the series.

### Some Practical Ways to Use the New SAS Pattern-Matching Functions

**Mike Rhoads, Westat**

The 6.11 and 6.09E releases of SAS® software contain, in experimental form, a powerful new set of pattern-matching functions, which can be used in DATA steps, macros, or SCL code. This presentation provides a summary description of these new routines and includes several examples of how their use can significantly reduce the coding effort required to perform common tasks.

*Mike Rhoads is a Vice President in the Computer Systems and Applications group at Westat, a statistical survey research firm located in Rockville. He has used SAS software for 18 years and is currently serving as a member of the DCSUG Steering Committee.*

### Invitation from Pittsburgh

The Pittsburgh SAS Users Group (PSUG) is celebrating its 10th anniversary with a celebration on April 11 at the Pittsburgh SAS Regional Office, and is extending an invitation to the members of neighboring user groups (including us!) to attend. This will be an all-day bash with gifts, prizes, and breakfast, lunch and late afternoon mixers. Barrett Joyner of SAS Institute will be the Keynote Speaker, and there will be special presentations and posters by NESUG Executive Committee members, SAS Institute speakers, and local PSUG members. For more information, call JoAnn Matthews at (412) 624-1451 or email her at [jmatthews@v1.wpic.pitt.edu](mailto:jmatthews@v1.wpic.pitt.edu).

## 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

## Desktop Special Interest Group

by David Barnes

DCSUG's Desktop Special Interest Group held its first quarter, 1997 meeting the evening of January 22nd at Westat, Inc. in Rockville, Md. Yesvy Gustasp gave a talk on Data Base Engines and I gave a brief talk on what new features have been included in SAS 6.12. Interest in Data Base Engines was so great that we have decided to continue the topic for our Wednesday April 23, 1997 meeting. Our second topic for our April meeting will be what we learned at SUGI related to desktop systems. The April 23rd meeting will also be held at Westat, 1650 Research Blvd. in Rockville at 7:30PM. If you have any suggestions for future meeting topics, speakers, or alternate locations, or if you'd like to be added to our group's mailing list so you can get announcements of upcoming meeting events, please contact David Barnes at (301) 350-4752 or Yesvy Gustasp at (301) 589-4530. Also, if you need a ride from the Metro, please call either one of us.

Directions to Westat: Take I-270 8 miles from the Capital Beltway to exit #6B - Route 28 (toward Darnestown). Once on 28, go past the traffic light at the Shell station and turn right at the next traffic light, which is Research Blvd. The 1650 building is less than 1/4 mile on the left. You can park in any non-reserved space. Signs will be posted in the lobby to direct you to the meeting room. Westat has many buildings on Research Blvd. so make sure you're at 1650.

## DCSUG 1997 Steering Committee OFFICERS

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appalt@gnn.com

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# SAS EFFICIENCY TECHNIQUES

## BEWARE THE END OF THE CENTURY! by David Hopkins

Have you made your reservations for the New Years Eve party on Dec. 31, 1999? I hear its going to be one heck of big party. Is it too early to be thinking about this? Maybe not. New York hotel rooms near Times Square are going fast. AND, you might be one of the million or so computer programmers WORKING that night to keep computers running as the magic clock turns over to the new century. The year 2000 is very magical, especially to computers, because of the last two digits, 00, found at the end of the year. Those two little zeros look innocent so what's up? Well, those two little zeros are going to wreck many programs and computers as they click into place.

The problem is that we like to represent our years in shorthand notation as 2-digits. For example, this is '96. Last year was '95. Four years from now will be '00. Did that catch in your throat too? The year 2000 is obviously 4 years from now (1996) but is 00 4 years from now too, or 95 years ago? To a computer, and its internal programs, 00 is a smaller number than 95 or 99. So the year 2000, represented as 00, actually occurred a hundred years ago, according to our computers. Despite the obvious shortcomings of two-digit years, surprisingly many programs rely on them and assume that two-digit years belong to the 1900s. This is a problem. But how widespread is this little problem?

This little problem might be a little bigger than we expect. For example, as a researcher or programmer in ERS, when was the last time you actually coded four digits years into your spreadsheets or data? Did you innocently type in 93 instead of 1993? Are your time-series analysis done with 2-digit years or four? How about those programs that we write. Do we read in 2-digit years or 4-digit years? How about those little IF statements that ask whether year-x is GT than year-y? Do you ever sort on a year variable that contains only 2-digit values? The data for the year 2000 is going to go to the end of the line and look like it is a hundred years old.

We are going to have some uncomfortable and trying times as the year 2000 approaches. Already in ERS, we have a few problems. Our tape inventory reports from KCCC had to be modified to accommodate Julian dates that have zeros up in front in the year field. 00015 is January 15th, 2000. If we ignore the problem and deny that it exist, we will only intensify the problem when it occurs. Being aware that there is a problem will help us between now and then to prevent many mistakes.

So what does this long-winded warning have to do with SAS? Answer: SAS can handle it. Period! Beginning with SAS version 6.06, the SAS system considers two-digit years to be between 1900 and 1999. This can be set through the system option YEARCUTOFF=. The default setting is OPTION YEARCUTOFF = 1900. The YEARCUTOFF specifies the first year of a hundred-year period for which two-digit years can be represented. The option also affects the meaning of SAS dates and SAS datetime constants. The default setting (OPTION YEARCUTOFF = 1900) can be modified if you have two-digit years which will spill over into the next century. For example, if we set our option to the year 1920 (OPTION YEARCUTOFF = 1920), then the date value of '02/14/11' would correctly represent Valentines Day in 2011. With that setting, any two-digit years would represent years between 1920 and 2019.

Even though SAS has a "fix" for the turn of the century, people will continue to write the years of any century shortened to two digits. This kind of abbreviation should only be used for values that fall within a span of under a 100 years. You might want to avoid using two-digit years for birthdates or the dates of real estate transactions, for example. Try to code your data with 4-digit years whenever possible. And remember, if you use SAS, you can make your New Years reservation for the BIG PARTY in 1999. Hopefully there will be no headaches or hangovers in the year 2000.

## DATING TIPS FROM SAS by David Hopkins

The passage of time, like our data, needs good tools to mark the highlights and mileposts. SAS provides a great set of tools to deal with date and time information so we can accurately measure the difference between any two points in time. Except for temporal anomalies near worm holes and PC DOS SAS 6.04, most of the examples below are available on all of our SAS platforms.

Other computer languages have a separate variable type just for time. SAS does not, however. SAS dates are stored as regular, numeric data. According to SAS, the world began on January 1, 1960. This is day zero (0) in SAS. Each day since then has a positive integer value and each day before that has a negative integer value. I think this is a great design feature for date calculations. All mathematical operations on dates are straight-forward and obvious. You can subtract a starting date from an ending date and get the number of days between two dates. The downside to this, however, we do not represent our dates as positive integer since JAN 1 60. Instead, date information is displayed to us in many forms. For example, all of these dates represent the same day:

102696, 10/26/96, 261096, 26/10/96, 961026, 26OCT96, 26OCT1996 etc.

Luckily, SAS gobbles this up and asks for more! Some of the INFORMAT (SAS reading formats) that you can use on these values include:

MMDDYY6.    MMDDYY8.    DDMMYY6.    DDMMYY8.    YYMMDD6.    DATE7.    DATE9.etc.

The INFORMATS that read SAS date values are generally tolerant of extra characters like hyphens, spaces and slashes in the input data. Remember, all the date values above are converted into integers with a zero reference point on JAN 1 60, so they don't look anything like the raw file that you just read.

On the printing side, SAS has about 5 times more FORMATS (SAS printing formats) that allows you to represent a date value any way you like. For example, the date AUG 15 1991 is represented internally as 11549. It can be printed many different ways using these FORMATS:

FORMAT	WHATS PRINTED	FORMAT	WHATS PRINTED
MMYYS5.	8/91	WORDDATE12.	AUG 15, 1991
MMYYD5.	8-91	WORDDATX3.	AUG
MMYYP5.	8.91	WORDDATX9.	AUGUST
MMYYS7.	8/1991	WORDDATX12.	15 AUG 1991
MMYYD7.	8-1991	WEEKDATE3.	THU
YYMON5.	91AUG	WEEKDATE9.	THURSDAY
YYMON7.	1991AUG	WEEKDATE15.	THU, AUG 15, 91
YYQ4.	91Q3	WEEKDATE17.	THU, AUG 15, 1991
YYQS4.	91/3	WEEKDATE23.	THURSDAY, AUG 15, 1991
WORDDATE3.	AUG		etc, etc, etc.
WORDDATE9.	AUGUST		

The formats that print SAS date values truncate and punctuate differently depending on the width specification used. They usually right-align, printing leading blanks, if the number of characters they produce is less than the width specification used. However, if the output they produce is a single word, they left-align, padding with trailing blanks. The multitude of formats that you can use came about during SAS release 6.06. You will not be able to use a lot of the special formats in the PC DOS SAS 6.04.

This has been a brief explanation of SAS dates and date formats. Time, like in hours and minutes, is similar to dates, but the formats are more complicated. We will try to explain how to use time in another article.

*Dave Hopkins, USDA/Economic Research Service, can be reached at [dhopkins@econ.ag.gov](mailto:dhopkins@econ.ag.gov)*

# 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.

## March 1997

**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:  
Linda Atkinson at (202) 219-0934  
atkinson@econ.ag.gov

**16-19 SUGI** SAS Users Group  
International Conference  
Site: San Diego Marriott/Marina  
San Diego CA

## April 1997

**23 DCSUG** DC SAS Users Group,  
Desktop SIG  
Time: 7:30 pm  
Site: Westat  
1650 Research Blvd.  
Rockville MD  
Program: News from SUGI  
Contact:  
David Barnes at (301) 350-4752  
appalt@gnn.com  
Yesvy Gustasp at (301) 589-4530  
Yesvy.Gustasp@mix.cpcug.org

## June 1997

**3 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  
Contacts:  
Linda Atkinson at (202) 219-0934  
atkinson@econ.ag.gov

## July 1997

**23 DCSUG** DC SAS Users Group,  
Desktop SIG  
Time: 7:30 pm  
Site: Westat  
1650 Research Blvd.  
Rockville MD  
Program: TBA  
Contact:  
David Barnes at (301) 350-4752  
appalt@gnn.com  
Yesvy Gustasp at (301) 589-4530  
Yesvy.Gustasp@mix.cpcug.org

## Other Groups

**CENSUG** Census SAS Users Group  
Contact: Rick Denby at (301) 763-8174

**CONSUG** Consultants SAS Users Group  
Contact: Eric Brinsfield at (919) 518-1070  
merecb@interpath.com

**MDSUG** Maryland SAS Users Group  
Contact: Marjorie Bedinger, (410) 786-5800  
mbedinger@hcfa.gov

**NCHSSUG** National Center for Health Statistics  
SAS Users Group  
Contact: Arlene Siller at (301) 436-8522  
abs2@cdc.gov  
or Linda Tompkins at (301) 436-7022

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

**VASUG** Virginia SAS Users Group  
Contact: Peter Rikard at (804) 786-4828

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Please forward your resume to: America Online, Attn: Dave Uhly, Dept. DU-695, 8615 Westwood Center Drive, Vienna, VA 22182. Fax: (703)918-2702. e-mail: [work4us@aol.com](mailto:work4us@aol.com) For additional opportunities, explore the AOL home page at [www.aol.com/careers](http://www.aol.com/careers) An equal opportunity employer. No phone calls please.

# One-Day Workshops in the SAS® System

March 6 and 7, 1997

The George Washington University

K Street Center for Professional Education

2020 K Street NW (lower level)

Washington, DC (Farragut West METRO station)

Presented by:

Sierra Information Services, Inc.

1-888-747-1411 (toll-free voice) (415) 441-9175 (fax)

SFBAY0001 @ AOL.COM



## Date:

March 6, 1997

March 7, 1997

## Topic:

*Reporting and Summarizing Data Using the SAS® System*

*Efficient SAS® System Programming: Tips and Techniques*

## Workshop Synopses:

- **Reporting and Summarizing Data Using the SAS System**

This workshop is intended for the **beginning to intermediate SAS System user** who wants to **learn how to summarize and report data using key SAS software tools** for these tasks. Among the **topics covered** are: creating frequency tables; obtaining summary statistics and related measures; creating SAS data sets containing summarized values; creating simple reports using PROC PRINT; customizing PROC PRINT output with headers, formats, footnotes and titles; and, using PROC REPORT in batch mode. Attendees should be familiar with core SAS System subjects such as: data set, data step, procedure step, variable and observation

- **Efficient SAS System Programming: Tips and Techniques**

This one day session is for the **beginning to intermediate SAS System user** who want to **learn how to improve the efficiency of their SAS programs and applications**. The **topics addressed** apply to all operating systems and will teach you how to **reduce: Central Processing Unit (CPU) resource requirements; storage space required** for both disk and tape data sets; **Input/Output (IO) operations**; how to **speed retrieval of observations** from a SAS data set; and, tips on **writing SAS programs to maximize resource utilization**. Attendees should be familiar with core SAS System topics such as data set, data step, procedure step, variable and observation.

## Workshop Attendees Will Receive:

- Notebook containing copies of all materials presented in the workshop
- Refreshments
- Certificate of completion

**Instructor:** Andrew H. Karp has over 13 years experience using and teaching others how to use SAS System software. To date he has given over 40 papers at SAS user group meeting throughout North America and has presented at SUGI and SUNZ, the annual SAS user group meeting in New Zealand.. For seven years he taught semester-length classes in SAS System topics for the University of California, Berkeley Extension Division. His firm was among the first to receive designation as a Quality Partner of SAS Institute, Inc. and specializes in strategic data analysis and data management using SAS System Software

## Workshop Fees:

Register for **both days**

**\$179**

**\$325**

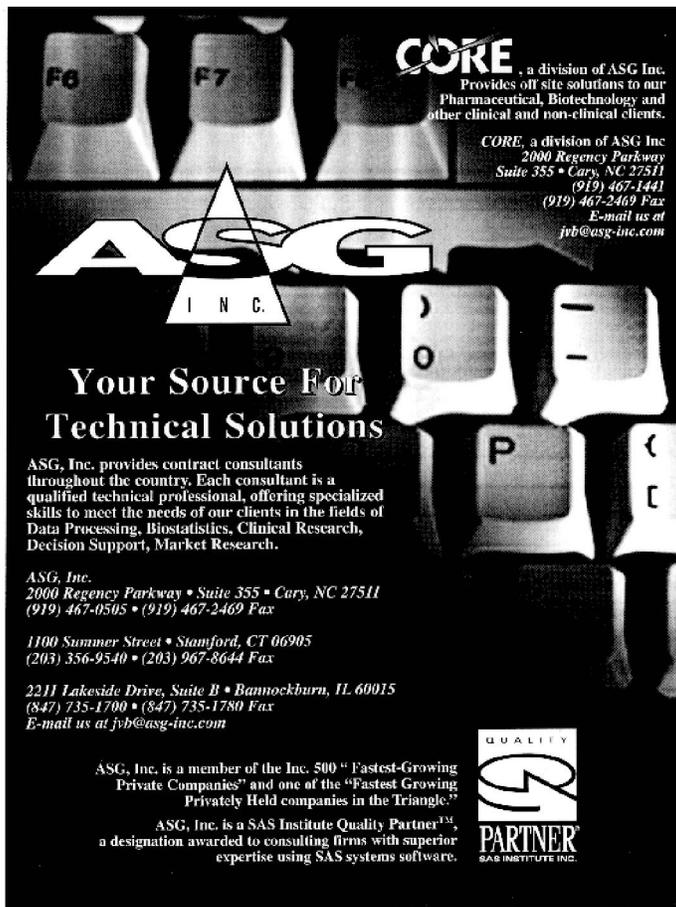
**per workshop (before February 15) \$189 (after February 15)**

**(before February 15)**

**\$350 (after February 15)**

## Important Information About the Workshops:

- Call (toll free) 1-888-747-1411 to register for or receive more information about these workshops. We also have a list of **area hotels** for those requiring overnight accommodations.
- Group **discounts** for **three or more attendees** at the same workshop from the same organization are available.
- Sierra Information Service's liability in the event of workshop cancellation is *limited to refund of course fees*. We are not liable for hotel reservations or other *incidental or consequential damages* which may arise if the workshops are canceled.
- Please make checks payable to **Sierra Information Services, Inc.** Sorry, we do not accept credit cards. Our **Federal Tax Identification Number** is **94-3199501**.
- SAS is a trademark of SAS Institute, Inc. in the USA and other countries. ® indicates USA registration. The Quality Partner logo is a trademark of SAS Institute, Inc.
- Workshop fees are **non-refundable** after March 1, 1997. Cancellations received before then are subject to a **\$50 cancellation fee**.



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\_\_\_\_\_

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

### **DCSUG Membership Directory**

DCSUG is considering publishing a membership directory in 1997, containing members name, work affiliation (name of institution), work telephone number, e-mail address, and any areas of expertise that you would be willing to identify. This directory would be provided to DCSUG members only and would not be given to outside sources. If you would like to be included in such a directory please mark the boxes below, as appropriate.

- I would like to be included in the membership directory DCSUG is considering publishing. Include my name, work affiliation, and work telephone number.
- Include my e-mail address as shown on this form.
- Include the following areas of expertise (up to 2 products, platforms).

\_\_\_\_\_  
\_\_\_\_\_

Mail to:  
**Washington DC SAS Users Group**  
**P.O. Box 44670**  
**Washington, DC 20026-4670**

## 1997 Meetings

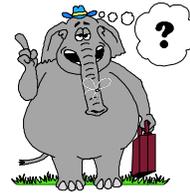
Plan ahead and mark your calendars now. The DCSUG will meet on the following dates in 1997: **Mar 4, June 3, September 9, December 2.** Meeting times and locations to be announced. If at any time you have a question about an upcoming meeting or other DCSUG information, call one of the members of the Steering Committee.

**You're Invited**

**to visit the DCSUG  
home page**

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

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



**Remember to Join DCSUG!!!**

Don't forget to renew your DCSUG membership for 1997. 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.