From the President

Happy 2015! It’s a brand-new year. Please let us know if you have new ideas for SAS programming and SAS user community.

Entrepreneur magazine calls 2014 “the year of the storyteller platform.” When you look back on 2014, what’s your story? We had a very successful meeting sponsored by WUSS last November. About seventy people attended the afternoon workshop and evening meeting. We had international guests show up at our meeting!

In the upcoming February meeting, our perennial speaker Kirk Lafler from Software Intelligence Corporation will introduce SAS data step hash programming techniques in the afternoon workshop. Additionally, he will show you how to create interactive data-driven dashboards from SAS as the featured presentation. The second talk in the evening meeting will be presented by Teresa Powell from Deployment Health Research Department of Naval Health Research Center. She will discuss methods of applying time-dependent variables in survival analysis.

This meeting is our favorite of the year. We look at the trends that we expect to see in the coming months. It is also election time for SANDS! SANDS has three annually elected positions on the Executive Committee, open to any SANDS member. They are: President, Vice President, and Secretary/Treasurer. If you are interested in running, please email me your name and the position you would like to apply for. At the meeting, we will take nominations from the floor as well. I encourage you to step up and serve your local SAS community. I look forward to seeing you in the business portion of the meeting to vote!

This year, the SAS Global Forum will be held in Dallas, Texas, from April 26 to April 29 (http://www.sas.com/en_us/events/sas-global-forum/sas-global-forum-2015.html). WUSS 2015 Annual Conference will be held in San Diego from September 9th to September 11th (http://www.wuss.org/)

As usual, let’s take this chance to thank our sponsors, advertisers, SANDS Executive Committee members, and the volunteers, who continuously support our local SAS community.

See you at the meeting!
— Wei Cheng

Please fill out the RSVP form for the workshop and/or meeting by Friday, Feb. 4th, at http://www.sandsug.org/rsvp.html
**Workshop:**

**An Introduction to SAS® DATA Step Hash Programming Techniques**

*Kirk Paul Lafler, Software Intelligence Corporation*

**Abstract**

SAS software supports a DATA step programming technique known as hash that enables faster table lookup, search, merge/join, and sort operations. This workshop introduces what a hash object is, how it works, and the syntax required. Attendees learn essential programming techniques to define a simple key, sort data, search memory-resident data using a simple key, match-merge (or join) two data sets, handle and resolve collision scenarios where two distinct pieces of data have the same hash value, as well as more complex programming techniques that use a composite key to search for multiple values.

**Featured Presentation:**

**Dynamic Dashboards Using SAS®**

*Kirk Paul Lafler, Software Intelligence Corporation*

**Abstract**

Dynamic interactive visual displays known as dashboards are most effective when they show essential graphs, tables, statistics, and other information where data is the star. The first rule for creating an effective SAS® dashboard is to keep it simple. Striking a balance between content and style, a dashboard should be void of excessive clutter so as not to distract and obscure the information displayed. The second rule of effective dashboard design involves displaying data that meets one or more business or organizational objectives. To accomplish this, the elements in a dashboard should convey a format easily understood by its intended audience. Attendees learn how to create dynamic interactive user- and data-driven dashboards, graphical and table-driven dashboards, statistical dashboards, and drill-down dashboards with a purpose.

**Biography**

*Kirk Paul Lafler* is consultant and founder of Software Intelligence Corporation and has been programming in SAS software since 1979. He is a SAS Certified Professional, sasCommunity emeritus advisory board member, application developer, data scientist, and provider of IT consulting services and training to SAS users around the world. As the author of six books including Google Search Complete! (Odyssey Press. 2014), PROC SQL: Beyond the Basics Using SAS, Second Edition (SAS Institute. 2013) and PROC SQL: Beyond the Basics Using SAS (SAS Institute. 2004), he has written more than five hundred papers and articles, been an invited speaker at four hundred-plus SAS International, regional, special-interest, local, and in-house user group conferences/meetings, and is the recipient of 23 “Best” contributed paper, hands-on workshop (HOW), and poster awards.

**SANDS Membership**

Membership in the San Diego SAS Users Group, Inc. (SANDS) provides an opportunity for SAS users to meet and keep updated on SAS issues. Seminars and presentations allow SAS users to gain knowledge with little or no cost. It is also an opportunity for consultants and prospective employees to meet possible employers, and companies to show their SAS-related products and host a meeting. We welcome those interested in giving presentations and writing articles for the newsletter. Presently, there is no charge to attend our meetings or to receive our newsletter; small fees may be asked for some special functions or workshops.

The SANDS membership list is not given out to others and is used only to disseminate SANDS related business, such as newsletters or special announcements. Those wishing to sell their products or services have the opportunity to advertise in the newsletter at reasonable rates.

To become a member, please email the following to Cathy Liu: Name, Title, Organization, Telephone, E-mail, Fax, Address, Work or Home indicator, Computer Platform, SAS version, and SAS related areas of interest.
Short Talk:
Your “Survival” Guide to Using Time-Dependent Covariates
Teresa M. Powell, Deployment Health Research Department

Abstract
Survival analysis is a powerful tool with many strengths, like the ability to handle variables that change over time. Including time-dependent variables in survival analyses models, such as income, marital status, location, or treatment can more accurately assess the data. This paper will give examples of the counting process syntax and programming statements, which are the two methods to apply time-dependent variables in PROC PHREG. Coding techniques will be discussed as well as the pros and cons of both methods.

Biography
Teresa M. Powell works at the Naval Health Research Center as a biostatistician on the Millennium Cohort Study. She is responsible for data cleaning, writing analysis plans, conducting longitudinal data analyses, writing manuscripts for peer reviewed journals, and mentoring graduate students and junior analysts in study design and SAS programming. Her research has included the therapeutic areas of mental health, suicide, Gulf War Illness, women’s reproductive health, and smoking and alcohol use in a large US military cohort. Teresa has been using SAS for 7 years.

SANDS Sponsorship
We would like to thank Pfizer for having once again generously provided our meeting room. This month, SANDS is sponsoring our meeting dinner and activities. It is our sponsors who make it possible for us to hold our meetings free of charge so, at the event, please do let sponsor representatives know how much you appreciate their support. If your company would like to

Stump the Programmer
#71
Equality Expressions
Art Carpenter, CA
Occidental Consultants

Each of the assignment statements in this DATA step have multiple equal signs. The step runs without error, although there is a note. What values will be assigned to the variables X and Y? Notice that the variable C is character, will this change the result?

We have looked at assignment statements with multiple equal signs in the past (see http://www.pharmasug.org/proceedings/2013/BB/PharmaSUG-2013-BB03.pdf) and this problem is an extension of that discussion.

data a;
a=0; b=0; c='0';
x=a=b=c;
y = a=b and b=c;
put(_all_=)(=);
run;

Data Explorations
Data Management & Analyses for Biological, Ecological & Health Sciences.
Statistical and data analysis support for clinical trial studies. Data entry and reporting systems. Application Development. Database conversion services. SAS Training services. Experimental Design and Data Management.
Data Explorations is a SAS Alliance Affiliate Member™ with SAS Advanced Certified Professionals.

Art Carpenter & Richard Smith - Partners
(907) 865-9167 Art
(760) 613-5373 Richard
Email: Art: Art@DataXplorations.com
Richard: RSmith@DataXplorations.com
Web: http://www.DataXplorations.com
Tips for Using a Data Warehouse

Curtis Smith, Defense Contract Audit Agency

In our last episode, we looked at a way to clean up dirty data before we start using our data. This time, we will take a look at a way to solve a pesky problem when appending two or more data sets with one or more variables of varying lengths between the data sets.

When I am using data sets from my data warehouse, I will often need to combine two or more of them into a single data set. For example, I might have a separate data set for indirect expenses for each year, but for a particular application, I need to combine the indirect expense data set for two years into one data set. SAS gives us different ways to accomplish this, including a Data Step, PROC DATASETS, and PROC APPEND. But, what if the data sets contain a variable whose length is different between the different data sets? What if, in this example, the description variable in the year1 data set is 25 characters long, but the description variable in the year2 data set is 30 characters long? Well, what will happen is that SAS will use the length from the first data set processed as the length for the output data set. So, in this example, the output data set would have a description variable length of 25. Is this bad? Well, any observation coming from the second data set that has a description between 26 and 30 characters in length will be truncated in the output data set, which probably is not a desirable outcome. We will know when this undesired outcome happens because our trusty SAS log will warn us that the input data sets had variables of different lengths and truncation took place.

When I typically create data sets for my data warehouse, I use a Data Step to read external data and use the wealth of available statements and options to carefully control the attributes of my data sets so each data set has the comparable attributes, including the same length for each same variable in each data set that contains that same variable. However, sometimes I create data sets quickly using an import wizard, such as reading Excel files from SAS Enterprise Guide. When I get lazy, I don’t use the options in the wizard to make sure I use consistent variable lengths across data sets. Instead, when I’m lazy, I let SAS interrogate the external file’s metadata and accept the characteristics SAS chooses.

While I really like the simplicity of PROC APPEND for combining multiple data sets, to avoid the problem just described, I like to use a Data Step with the LENGTH and FORMAT statements. After checking the metadata manually for the data sets I want to combine, I can use the LENGTH statement to declare the length I need to accommodate the longest incoming data set’s variable and I can use the FORMAT statement to set the desired output data set variable format length. Continuing our example, the Data Step code could look like the following:

```
data out.indirect(label="Indirect Account Detail 2013-2014");
  length Description $30.;
  set in.indirect_2013 in.indirect_2014;
  format Description $30.;
run;
```

Let’s get some background on the length of variables from the SAS Institute. (Sas(r) 9.4 language, 2014).

---

Length refers to the number of bytes used to store each of the variable’s values in a SAS data set. You can use a LENGTH statement to set the length of both numeric and character variables. Variable lengths specified in a LENGTH statement affect the length of numeric variables only in the output data set. During processing, all numeric variables have a length of 8. Lengths of character variables specified in a LENGTH statement affect both the length during processing and the length in the output data set.

---

Of course, we can also use the ATTRIB statement to set both the length and format in a single statement. I love the flexibility SAS gives us. Thanks for reading.

Kirk’s Korner

A Review of “Free” Massive Open Online Content (MOOC) for SAS® Learners

Introduction to the World of MOOCs

The age of massive open online content (and courses), often referred to as MOOC, is not only a reality; it is gaining huge popularity among students and professionals. With education costs on the rise, and in many cases increasing out of control, several higher-education institutions and organizations are challenging the current education financial model by offering MOOCs for students, professionals, and others from which to choose. Higher-education universities such as Princeton University, Stanford University, Harvard University, Massachusetts Institute of Technology (MIT), University of Pennsylvania, Duke University, University of Michigan, and organizations in the private sector such as, SAS Institute Inc., Coursera, and a number of other organizations and universities around the world are now offering online courses and certificate programs.

The MOOC format allows courses and content to be freely taught by the best and brightest in open- and online-learning environments to massive audiences. By delivering education in a MOOC format, anyone with a computer (workstation, laptop or “smart” device), an Internet connection, and a web browser can select or enroll in one of the many “free” courses currently being offered, learn from “real-time” or recorded lessons from the comfort of their living rooms, bedrooms, dorms, offices, beach houses, or anywhere else they are in the world.

How is a MOOC Structured?

A MOOC is frequently structured very similarly to an online course. A MOOC’s structure typically consists of a course title, abstract or description of its content, a syllabus, expected learning objectives, “live” or recorded lectures or lessons, reading assignments, hands-on assignments, and quizzes. Students tune in to the “live” or recorded lectures, perform the required reading and hands-on assignments, and take the quizzes, adhering to the required scheduled timeline. At the completion of a MOOC, students often receive a grade from the MOOC leader or instructor, just as if they had enrolled in a traditional course.

A Review of “Free” MOOC Resources

The world of the SAS user is being positively impacted with many “free” MOOC resources. Numerous MOOC courses and content are now available to help support SAS users in their quest to improve their analytical, programming, statistical, and reporting skills. For content and courses that may contain a sizable amount of material, some MOOC offerings may involve splitting larger and more involved topics into smaller, more digestible, pieces, a process known as specializing. So, where can SAS users find “free” MOOC resources? The following list of “free” MOOC resources is available to SAS users everywhere.

1. SAS® University Edition software
2. Online SAS documentation in PDF and HTML format on support.sas.com
3. SAS Proceedings “White” papers on LexJansen.com
4. SAS Press and SAS Talks Webinars
5. SAS YouTube Channel Videos

SAS® University Edition Software

The SAS® University Edition is “free” to anyone. It is under the SAS Analytics U umbrella and includes e-Learning modules to help you learn the SAS software. Available for PC, Mac, or Linux Workstations, the SAS University Edition includes Base SAS®, SAS/STAT®, SAS/IML®, SAS/ACCESS® for Windows, and SAS Studio. It works through Virtualization Software in standalone mode and your Browser to access SAS software.
SAS’ Technical Support Website

SAS’ technical support website, support.sas.com, contains a wealth of “free” SAS technical support content. Users are provided with access to timely information pertaining to: Admin, Programmer, Statistician, and User content; the “best” in class comprehensive technical support content; training and books; what’s happenings including User Group Information; access to “free” webinars and podcasts; access to code samples; access to SAS comprehensive documentation; and much more.

Published SAS Proceedings and “White” Papers

Users are provided access to thousands of “free” published SAS “white” papers all in the form of PDF documents. Provided with a built-in Google® search applet, users are able to search for content from 1976 to the present from SGF / SUGI, SEUGI, the various Regional conferences, PharmaSUG / PharmaSUG China, PhUSE, CDISC Forum, and other venues. Papers can be accessed from http://www.lexjansen.com/.

SAS Press and SAS Talks Webinars

SAS Press and SAS Talks provide users with a number of presentations developed by SAS experts, instructors, authors, customers, and students. I recommend that user groups everywhere take advantage of a cost-effective method of upgrading staff member skills by scheduling monthly lunch-time pizza webinars where staff member view, eat, and discuss the merits associated with the techniques they have learned from webinars. The SAS Press Webinar Series provides users with a series of “free” informative Webinars developed and presented by authors at http://support.sas.com/publishing/bbu/webinar.html. The SAS Talks Webinar Series provides users with a series of “free” informative Webinars developed and presented by SAS experts, instructors, authors, customers, and students at http://support.sas.com/community/events/sastalks/#s1=2. The Archived SAS Talks Webinars provide users with a number of monthly archived webinars at http://support.sas.com/community/events/sastalks/ondemand.html.

SAS YouTube Channel Videos


Trademark Citations

SAS and all other SAS Institute Inc. product or service names are registered trademarks or trademarks of SAS Institute Inc. in the USA and other countries. ® indicates USA registration. Other brand and product names are trademarks of their respective companies.

About the Author

Kirk Paul Lafler is consultant and founder of Software Intelligence Corporation and has been using SAS since 1979. He is a SAS Certified Professional, provider of IT consulting services, trainer to SAS users around the world, and sasCommunity.org emeritus Advisory Board member. As the author of six books including Google® Search Complete (Odyssey Press. 2014); PROC SQL: Beyond the Basics Using SAS, Second Edition (SAS Press. 2013); PROC SQL: Beyond the Basics Using SAS (SAS Press. 2004); Kirk has written more than five hundred papers and articles, been an Invited speaker and trainer at four hundred-plus SAS International, regional, special-interest, local, and in-house user group conferences and meetings, and is the recipient of 23 “Best” contributed paper, hands-on workshop (HOW), and poster awards.

Kirk Paul Lafler
Senior SAS® Consultant, Application Developer, Data Scientist, Trainer and Author
Software Intelligence Corporation
E-mail: KirkLafler@cs.com
LinkedIn: http://www.linkedin.com/in/KirkPaulLafler
Twitter: @sasNerd
Google Search Complete!

For a copy of my “free” 17-page MOOC paper, access http://www.slideshare.net/KirkLafler/a-review-of-free-massive-open-online-content-mooc-for-sas-learners-43239295. Enjoy!
The mission of Synchrony Solutions is simple:

To provide your company with timely and effective search solutions that exceed expectations. Our business is about relationships. We build our network, and our reputation, one person at a time, every time. When you have a position that needs to be filled, or you are ready to find your next opportunity, let us do the work for you!

molly@synchrony-solutions.com
Phone: 1-866-272-1228

SAS Global Forum 2015
April 26-29
Dallas, TX

WUSS 2015
September 9-11
San Diego, CA

Need a Math Tutor?
Call/Text Archie at 858-633-8486 or info@askawaytutoring.com

Algebra
Geometry
Pre-Calculus
Trigonometry
SAS
Discrete Math
Differential Equations
Number Theory
Math Sections of:
SAT, GRE, GMAT

Ask A Way Tutoring
Directions to the Campus Buildings

Please refer all Contractors and Visitors that will be visiting CB1-CB6, CB10 or The Pfizer Incubator to the CB2 Visitors Check-in Center. A photo ID is required for visitor check in.

Groups of 15 or more will check-in at the lobbies of the buildings visited.

Visitors should arrive 15 to 20 minutes early to allow enough time for check-in.

CB2 Visitors Center
10770 Science Center Drive, San Diego, CA 92121

From San Diego International Airport.
Follow signs to I-5 North.
Proceed on I-5 North for approx. 10 miles.
Exit I-5 at Genesee Ave. and make a left at the stop light.
Make a right at the second stop light which will be Science Center Drive.
CB2 Visitors Center is located at the end of the cul-de-sac.
Visitor Parking is to the left. Please follow Visitors Signs.
SANDS EXECUTIVE COMMITTEE

ELECTED OFFICERS:
President  Wei Cheng  760-603-3807  wcheng@isisph.com
Vice-President  Archie Medrano  858-550-0466  amedrano@ucsd.edu
Secretary/Treasurer  Song Lin  858-677-9637  Song.Lin@nielsen.com

Advertisements
Tyler Smith  619-251-1275  tsmith@nu.edu
Vivian Huang  Vivian.sdasa@gmail.com

<table>
<thead>
<tr>
<th>Type</th>
<th>Dimensions (w x h)</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Card</td>
<td>3.5&quot; x 2&quot;</td>
<td>$25</td>
</tr>
<tr>
<td>Quarter Page</td>
<td>3.5&quot; x 4.5&quot;</td>
<td>$50</td>
</tr>
<tr>
<td>Half Page</td>
<td>7&quot; x 4.5&quot;</td>
<td>$125</td>
</tr>
<tr>
<td>Full Page</td>
<td>7&quot; x 9&quot;</td>
<td>$225</td>
</tr>
</tbody>
</table>

Note: Prices may change without notice. Additional fees may be charged if modifications are needed. For verification of current prices and/or to send ads in PDF format, please contact Tyler Smith and/or Vivian Huang.

Catering  Vivian Huang  Vivian.sdasa@gmail.com
Facilities Coordinators  Yiyun Tang  Yiyun.Tang@pfizer.com
Ren-Yu Tzeng  renyutzeng@gmail.com
Jia Hu  whujia@gmail.com

Job Bank  Cathy Liu  760-476-8800  Cathy.Liu@synteracthcr.com
Chieko Seto  chiekoseto@gmail.com

Membership Coordinators  Andrea Littleton  Andy.Littleton@sas.com
Scott Leslie  scott.leslie@medimpact.com
Jia Hu  tsmith@nu.edu

SAS Institute Liaison  Tyler Smith  619-251-1275  Vivian.sdasa@gmail.com

Speakers/Program Coordinator  Vivian Huang

Sponsorship

Newsletter Editor/Webmaster  Archie Medrano  858-550-0466  amedrano@ucsd.edu

The SANDS newsletter is published quarterly and distributed to members by e-mail. The SANDS EC team appreciates the efforts of all contributors, without whom this newsletter would not be possible. We are always looking for volunteers to contribute original content to the quarterly newsletter. If you have ideas or suggestions for the newsletter, please share them with us. We would love to hear them!

Newsletter text not otherwise indicated was written or edited by the Editor. Please send any questions or comments to the Editor.

SAS and all other SAS Institute Inc. product or service names are registered trademarks or trademarks of SAS Institute Inc. in the USA and other countries. ® indicates USA registration.

Websites:
www.sandsug.org
sasCommunity.org
Facebook