From the President

In our February meeting, we held our annual elections (for the SANDS officers), which traditionally occur during the first meeting of the year. Wei Cheng, Archie Medrano, and Song Lin were elected as President, Vice President, and Treasurer to serve our local SAS user community for another year. Congratulations!

I really appreciate what Archie and Song have done for the SANDS group in the past few years! For example, Archie’s work on the quarterly newsletters. I have not seen such high quality work in any other local SAS user group, nationally or internationally. Archie is also maintaining a great web site for SANDS (www.sandsug.org). In addition, Song files taxes every year for SANDS and makes sure we are financially sound enough to support all the SANDS activities.

I would like to take this chance to give thanks to our newsletter contributors and advertisers. We have learned a lot from Art Carpenter’s “Stump the Programmer”, Curtis Smith’s tips on data warehouse, and Kirk Lafler’s “Kirk’s Korner”. These SAS experts have been consistently providing articles for more than ten years! You (the reader) can also submit a tip you learned or found, even in a short paragraph, to us. I would like to see more articles from members like you in our newsletter.

In the upcoming May meeting, the featured speaker is Dr. Bob Rodriguez from SAS Institute. He will update us on the new focus areas in SAS/STAT 13.1 as well as give us a sneak preview of SAS/STAT 13.2. We are very grateful that Dr. Rodriguez can find time in his busy schedule to present at our meeting as he has been the keynote speaker for all of the one-day SANDS conferences so far and has always brought SANDS members the most important and up-to-date SAS/STAT updates. The speaker for the second talk in the evening is William Benjamin from OWL Computer Consultancy. He will show how to use Microsoft Excel to control SAS processes and get the analysis result in Excel. Bill is a SAS Press book author and his book on using Excel data in SAS is coming soon. In the afternoon workshop, Kemal Oflus from JMP, a division of SAS, will present using JMP software to turn big data to big statistics.

All three presentations are sponsored by SAS Institute and, in addition, SAS is providing the networking dinner and giveaways for the meeting. Also, Pfizer will provide our meeting locations for the rest of the year as it has done for the past several years. SANDS meetings are held with no cost to our members because of generous sponsorships from companies such as SAS and Pfizer (thank you!). If your company or other companies you know would like to be sponsors for our meetings or advertisers in our quarterly newsletters, please let us know.

There are a few SAS conferences that you can attend in 2014. PharmaSUG’s annual conference will be held here in San Diego from June 1st to June 4th (http://www.pharmasug.org/us/index.html). WUSS’s annual conference will be held in San Jose from September 3rd to September 5th. The call for papers is now open, and the abstract submission deadline is May 5, 2014. Check out the details at: http://www.wuss.org/.

SANDS is run by volunteers and we always welcome all the help we can get from members like you who can step up and serve our local user group. Please let me or any SANDS EC member know if you would like to help.

I look forward to seeing you all on May 14th!

— Wei Cheng
Workshop:
From Big Data to Big Statistics
Kemal Oflus, JMP

Abstract

Now that we have lots of data and can process it amazingly fast, we still need ways to look at it without being overwhelmed. We don’t want to look at 10,000 graphs – we want one graph that shows the bright spots among 10,000 graphs. We need volcano plots and false-discovery-rate plots. We want the computer and software to do the work of finding what is most interesting and bringing it to our attention. We want our results sorted and summarized, but with access to the detail we need to understand it. Also, when we look at the most significant of thousands of statistical tests, we want to know if we are seeing random coincidence selected out of thousands, or if we are seeing real effects. Note: This is a JMP presentation.

Biography

Kemal Oflus works as a Systems Engineer in the JMP division of SAS. A native of Turkey, he studied engineering and graduated with a bachelor’s degree in physics in 1996 from Middle East Technical University in Ankara, Turkey. After moving to the US, he earned a master’s in applied physics from the University of Maryland in 2002. Since then, he has been involved in a wide range of projects, including design, simulation, testing, and risk assessment for guidance and control systems. His interests include the use of simulation to inform design decisions and improve product outcomes.

Featured Presentation:
SAS/STAT® 13.1 Round-Up
Bob Rodriguez, SAS Institute

Abstract

SAS/STAT® 13.1 brings valuable new techniques to all sectors of the audience for SAS statistical software. Updates for survival analysis include nonparametric methods for interval censoring and models for competing risks. Multiple imputation methods are extended with the addition of sensitivity analysis. Bayesian discrete choice models offer a modern approach for consumer research. Path diagrams are a welcome addition to structural equation modeling, and item response models are available for educational assessment. This paper provides overviews and introductory examples for each of the new focus areas in SAS/STAT 13.1. The paper also provides a sneak preview of the follow-up release, SAS/STAT 13.2, which brings additional strategies for missing data analysis and other important updates to statistical customers.

Biography

Bob Rodriguez joined SAS in 1983 and is a senior director in SAS Research & Development with responsibility for the development of statistical software. He received his PhD in statistics from the University of North Carolina at Chapel Hill and worked as a research statistician at General Motors Research Laboratories before joining SAS. Bob is a Fellow of the American Statistical Association, and he is the 2012 President of the ASA.
Short Talk:
Give the Power of SAS® to Excel Users Without Making Them Write SAS Code
William E. Benjamin, OWL Computer Consultancy, LLC

Abstract
Merging the ability to use SAS® and Microsoft Excel can be challenging. However, with the advent of SAS® Enterprise Guide®, SAS® Integration Technologies, SAS® BI Server software, JMP® software, and SAS® Add-In for Microsoft Office, this process is less cumbersome. Excel has the advantages of being cheap, available, easy to learn, and flexible. On the surface, SAS and Excel seem widely separated without these additional SAS products. But wait, BOTH SAS AND EXCEL CAN INTERFACE WITH THE OPERATING SYSTEM. SAS can run Excel using the command and Excel can run SAS as an "APPLICATION." This is NOT DDE; each system works independently of the other. This paper gives an example of Excel controlling a SAS process and returning data to Excel.

Biography
William E. Benjamin, Jr's expertise includes Base SAS® Software, SAS/AF, and SAS Macros. William has a BS degree in computer science from Arizona State University and an MBA from Western International University. He has been a SAS software user since 1983 and a computer programmer since 1973. His programming experience spans from vacuum tube mainframes to current PC computers. William currently owns a consulting company called OWL Computer Consultancy, LLC in Phoenix AZ. Look for his new SAS Press book about Using Excel Data in SAS coming soon.
* Conditional DO block;
data notes;
  set sashelp.class;
  if sex='F' then do;
    note1=1;
    gender='Female';
  end;
run;
proc print data=notes;
run;

* DO block has a missing semicolon;
* What errors? Does anything change?;
data notes2;
  set sashelp.class;
  if sex='F' then do
    note1=1;
    gender='Female';
  end;
run;
proc print data=notes2;
run;

Stump the Programmer #68
DO Syntax Has a Missing Semicolon
Art Carpenter, CA Occidental Consultants

In the second step below, the DO statement is missing a semicolon. What happens and why?

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Tips for Using a Data Warehouse

Curtis Smith, Defense Contract Audit Agency

In our last episode, we explored a few SAS functions that I mention in my SUGI 27 paper on the use of Benford’s Law. This time, we will explore the DO statement that I mention in that paper.

On page 5 of my Benford’s Law paper, I show the following fundamental code I use to create a SAS data set containing one observation for each expected first digit. The new SAS data set will have only two variables, FIRSTDGT and EXPECTED.

```sas
data work.expected(index=(firstdgt) drop=i);
format expected 8.3;
do i = 1 to 9;
   firstdgt=i;
   expected=(log10(1+(1/i))*100);
   output;
end;
run;
```

The value of FIRSTDGT will be 1, 2, 3, 4, 5, 6, 7, 8, or 9 in each of the nine observations we need to create. The value of EXPECTED for each of the nine observations will be the result of the formula log10(1+(1/x))*100, where x is the value of the FIRSTDGT for the observation for which we are calculating the EXPECTED value. So, if the FIRSTDGT is 5, then EXPECTED is calculated as log10(1+(1/5))*100.

So, to create the data set we want, we need to have our trusty Data Step run 9 times, and in each of the 9 iterations, we need to use the value of 1 to 9 for setting the FIRSTDGT value and for calculating the EXPECTED value within the same observation. To accomplish this task, we need to force the DATA Step to run 9 times and to increment a counter each time the DATA Step runs another iteration. Fortunately, SAS makes this easy with the DO statement, Iterative.

The DO statement, Iterative executes the statements between the DO and END statements repetitively, based on the value of an index variable that we create. In my example, the index variable is “i”. The statements between the DO and END statements are called a DO group. Let's get some background on DO statement, Iterative from the SAS Institute. (SAS® 9.2 language, 2014).

\[ \text{index-variable names a variable whose value governs execution of the DO group. The index-variable argument is required.} \]

So, the DATA Step will execute, set the index variable to 1, execute the statements between the DO and END, then increment the index variable, and repeat until the DO group executes for the 9th time.

That was easy. But, we have one issue to resolve. The DATA Step would normally write out an observation and the end of the DATA Step iteration, rather than at the end of the DO group iteration within the DATA Step iteration. So, we would end up with a data set with just one observation with a FIRSTDGT equal to 9 and its corresponding EXPECTED value. To solve this issue, we need to force the DATA Step to write out an observation at the end of each iteration of the DO group. We accomplish this with the OUTPUT statement. Let's get some background on OUTPUT statement from the SAS Institute. (SAS® 9.2 language, 2014a).

\[ \text{By default, every DATA step contains an implicit OUTPUT statement at the end of each iteration that tells SAS to write observations to the data set or data sets that are being created. Placing an explicit OUTPUT statement in a DATA step overrides the automatic output, and SAS adds an observation to a data set only when an explicit OUTPUT statement is executed. You can use the OUTPUT statement alone or as part of an IF-THEN or SELECT statement or in DO-loop processing.} \]
So, the OUTPUT statement will force the DATA Step to write out our FIRSTDGT and EXPECTED values into a new observation at the end of each DO group iteration. Voila!

Thanks for reading.


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.

SANDS Sponsorship

We would like to thank Pfizer for having once again generously provided our meeting room. This month, SAS Institute 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 sponsor SANDS activities, please contact the SANDS sponsorship coordinators, Tyler Smith and Vivian Huang.
Highlights of the 2014 SAS® Global Forum Conference
“Potential of One, Power of All”

After just returning home from the greatest SAS® conference on earth, I wanted to share a few highlights from the 2014 SAS Global Forum (SGF) Conference, where more than 4,500 attendees from every corner of the globe took part in a multi-day SAS-fest. For four days, from sun-up to well after sun-down, conference attendees heard about a number of new product introductions, features and solutions, and learned countless tips, tricks, shortcuts, programming techniques and other content.

The 2014 SAS Global Forum (SGF) Conference took place in our nation’s capital in Washington, DC from Sunday, March 23, through Wednesday, March 26. Not rain, sleet, or snow could prevent conference goers from attending, learning, and networking with like-minded colleagues. Attendees gathered to watch and listen to speakers in the many informative and content-filled sessions, including the opening session, presentations, papers, keynotes, hands-on workshops (HOWs), demonstrations, e-posters, mixers, networking events, and other venues. In fact, many sessions were so well attended that not an empty seat could be found.

So, what were the highlights from the 2014 SAS Global Forum conference? I’ve listed a series of clickable links, below, to enable you to relive and enjoy the conference experience. Using your favorite web browser, access an overview of the 2014 conference highlights; the complete list of published conference papers; select presentations, demos and interviews featuring conference leaders, presenters and the SAS staff; and a brief look at what you can expect at next year’s 2015 SAS Global Forum conference in Dallas, Texas.

Enjoy, learn, and experience the greatest show on earth for SAS users!

SAS® Global Forum 2014 Conference Overview
SAS® Global Forum 2014 Live and On Demand
SAS® Global Forum 2014 Conference Published Papers
SAS® Global Forum 2015 Conference Highlights

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inventivhealthclinical.com/staffing
Map to Pfizer La Jolla Campus

CB2 (VISITORS Check In)
10770 Science Center Drive
San Diego, CA 92121

VISITORS PARKING
Please Check-In with Security

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.

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Make a right at the second stop light which will be Science Center Drive.
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