From the President

We had a very successful one-day conference on December 7th, 2012. The conference had two parallel tracks with six sections. Nearly ninety people enjoyed the presentations by more than ten speakers. You can find some of the presentations on the SANDS web site at www.sandsug.org. Thanks again to the conference committee for spending extra effort to make this happen! We also want to give thanks to the sponsors and members who attended the conference.

Wow! Believe it or not, it’s March already, and we are ready to have our first SANDS meeting for 2013. As a SAS user, you probably always wonder how to become a good programmer, which kind of knowledge or skills you need to learn for your profession. Your questions will be answered in the evening meeting. We will have two very useful presentations on this topic. Our featured speaker, Kirk Paul Lafler, from Software Intelligence Corporation, will help SAS users identify and explore the areas that are hot and not-so-hot in the world of professional SAS programming. Following Kirk’s presentation, Larry Shen, from Amylin Pharmaceuticals, LLC, will show you how a SAS programmer can be successful in the biopharmaceutical industry from a customer’s perspective. In the afternoon, I will present a workshop on statistical graphics for clinical research using ODS Graphics Designer. I presented the same topic at the PharmaSUG conference last year and won the “Best” paper award in the Data Visualization and Graphics section. I believe you will learn something new from the meeting.

As usual, it is election time for SANDS in the first meeting of the year! 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. At the March meeting, we will take nominations from the floor as well. I look forward to seeing you in the business portion of the meeting and VOTE!

Don’t forget, the SAS Global Forum will be held in San Francisco, April 28-May 1, this year.

For the past few years, Pfizer has always provided a great location for our quarterly meetings. Unfortunately, our facility coordinator Ren-Yu Tzeng is leaving Pfizer. We really appreciate all the wonderful work she has done for SANDS. If your company can provide the location for our meetings, please let us know. Let us take this chance to thank the sponsors, advertisers, 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, Mar 8th, at http://www.sandsug.org/meetings.html.
Workshop:
Statistical Graphics for Clinical Research Using ODS Graphics Designer
Wei Cheng, Isis Pharmaceuticals, Inc.

Abstract
Statistical graphics play an important role across various stages in clinical research. They help investigators to explore and understand raw data in the early stages of statistical analysis, as well as present final analysis results in the formal publications. The graphs need to be specifically designed and carefully drawn to best represent data and analysis. While this can be done by SAS® programming using traditional SAS DATA steps and SAS/GRAPH procedures, the process is time-consuming and time is spent to find the right options or annotation syntax. With SAS 9.2M3, ODS Graphics Designer (Designer) becomes production software. This is an interactive “point and click” application that can be used to design and create custom graphs. This new application greatly enhances the ability to effectively generate statistical graphs for clinical research. In this workshop, I will show you the application interface and walk you through creating some commonly used statistical graphs for clinical research. The intended audience does not need to know SAS/GRAPH syntax, but wants to create high-quality statistical graphs for clinical trials. Examples will use scrambled data from the real world in CDISC format.

Biography
Wei Cheng is presently an executive director of Biometrics Department at Isis Pharmaceuticals, Inc. in Carlsbad, California. He is serving on the San Diego SAS Users Group (SANDS) as president and has served on the WUSS Executive Committee as user group liaison. He has contributed and been invited to SUGI/SGF, WUSS, PharmaSUG, SANDS, and NVSUG as a paper presenter, section chair, code doctor, judge, or session coordinator.

Featured Presentation:
What’s Hot, What’s Not – Skills for SAS® Professionals
Kirk Paul Lafler, Software Intelligence Corporation

Abstract
As a new generation of SAS® users emerges, current and prior generations of users have an extensive array of procedures, programming tools, approaches and techniques to choose from. This presentation identifies and explores the areas that are hot and not-so-hot in the world of the professional SAS user. Topics include Enterprise Guide, PROC SQL, JMP, PROC REPORT, Macro Language, ODS, DATA step programming techniques such as arrays and hashing, sasCommunity.org®, LexJansen.com, JMP®, and Output Delivery System (ODS).

Biography
Kirk Paul Lafler is consultant and founder of Software Intelligence Corporation and has been programming in SAS since 1979. He is a SAS Certified Professional, sasCommunity emeritus board member, and provider of IT consulting services and training to SAS users around the world. As the author of five books including PROC SQL: Beyond the Basics Using SAS, 2nd 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 three hundred-plus SAS International, regional, special-interest, local, and in-house user group conferences/meetings, and is the recipient of 22 “Best” contributed paper, hands-on workshop (HOW), and poster awards.
Second Presentation:
What Makes a Good SAS Programmer in Drug Development?
--- A Customer’s Perspective
Larry Shen, Amylin Pharmaceuticals, LLC

Abstract
In this presentation I will explain the critical and expanding roles of SAS programmers in drug development. I will use my own experience as a customer to offer my view of how a SAS programmer is likely to succeed in the biopharmaceutical industry.

Biography
Dr. Shen is Vice President of Quantitative Sciences and Medical Disclosures at Amylin Pharmaceuticals, LLC, a Bristol Myers Squibb subsidiary. He has built and led Amylin’s Biometrics Department for many years and has helped Amylin successfully develop its first-in-class products in the treatment of diabetes. Dr. Shen is the Past President of the San Diego chapter of the American Statistical Association. He obtained his Ph.D in Statistics from the University of California, Berkeley.

SAS® Around the Web/World
Archie Medrano

SAS® Visual Analytics
- SAS Website
  - Overview
  - Fact Sheet
  - Press Kit
  - User’s Guide (6.1)
  - Training
- YouTube
  - SAS Visual Analytics
  - SAS CEO Jim Goodnight Talks About SAS Visual Analytics
- SAS Voices - How to make data visualization more intuitive with auto charting
- eWeek
  - SAS Visual Analytics Targets Workgroups, Midsize Businesses
- Yahoo! Finance
  - SAS® Visual Analytics Now Supports Work Groups, Midsize Businesses, Large Enterprises for Data Visualization
- Hong Kong - Hong Kong Government Chooses SAS® Data Visualization to Improve Citizen Services
- Indonesia - SAS Visual Analytics Data Visualization Support for Enterprise (Indonesian)
- Italy - SAS Visual Analytics, Not Just for Big Companies (Italian)
- Japan - Japan Launches "SAS Visual Analytics" (Japanese)
- South Africa - SAS Brings Visual Analytics to SA
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.
Stump the Programmer
#63
Understanding DATA Steps with Two SET Statements #2
Art Carpenter, CA Occidental Consultants

In the previous Stump the Programmer (December 2012), we examined the behavior of a DATA step with two SET statements, one of which was embedded within a DO loop. Building on that understanding, take a look at the third DATA step shown here, where we again find two SET statements.

The two incoming data sets do not have the same number of observations. How many observations will be in the new data set (WORK.NEW)? And perhaps more importantly, which PUT statement executes last and with what values of X and Y?

data a;
  do x =1to 3;
  output a;
  end;
run;
data b;
  do y = 1 to 2;
  output b;
  end;
run;
data new;
  set a;
  put 'after A ' x= y=;
  set b;
  put 'after B ' x= y=;
run;
Tips for Using a Data Warehouse
Curtis Smith, Defense Contract Audit Agency

In our last episode, we compared and contrasted three fundamental ways of reporting the data in our data warehouse: PROCs PRINT, REPORT, and TABULATE. This time, we will consider a simple way to validate data in our data warehouse by combining a control table with a SAS data set in our data warehouse. There are more than one ways to merge (combine) two SAS data sets, PROC SQL being one of them. But, I will use the Data Step with the Merge statement for simplicity. If you are not familiar with using the Merge statement, an Internet search of the SANDS, WUSS, or SAS Global Forum archives will yield lots of great examples.

Our premise is that in our SAS data set are fields that should contain anticipated values. For example, there might be a department field that should contain a value for one of the existing valid departments; or there might be a salespersons field that should contain an employee number for one of the existing valid salespersons. So, let us assume that we have a SAS data set in our data warehouse that is updated weekly for all the sales transactions for the week. And, we have 32 current and former salespersons. So, we want to create a subset SAS data set containing all of the rows from the sales transactions SAS data set that contain an invalid salesperson employee number. We will want to run this error checking routine each week after our SAS data warehouse is updated. The number of current and former salespersons changes occasionally, so we don’t want to hardcode employee numbers into a SAS Data Step IF statement. Solving this is fairly straightforward.

If we maintain a control table that contains a single row for every salesperson employee number, we can simply merge the control table with our sales transaction SAS data set and keep the mismatches. That is, when there is a salesperson employee number value in the sales transaction SAS data set that does not exist in the control table, then that employee number in the sales transaction SAS data set row is invalid.

Thus, our SAS Data Step would look something like the following:

```sas
DATA sands.empl_errors;
MERGE dw.sales_detail(in=a) dw.empl_cntl(in=b);
BY emplno;
IF a and not b;
RUN;
```

In this example, our data warehouse library is referenced as “dw.” Our sales transaction SAS data set is “sales_detail” and our employee number control table is “empl_cntl.” Both the transaction SAS data set and the control table have a field named “emplno” that contains the employee number. We use the IN= operator to identify each of the tables for the IF statement. Then, we use the IF statement to tell the Data Step that we want to keep the rows that are in the A data set (the transaction table) but not in the B data set (the control table). So, the rows on the transaction SAS data set that contain an employee number that is not found in the control table will be kept in the output SAS data set. Now we have a universe of the sales transactions that contain an invalid employee number for the salesperson.

Thanks for reading.

Curtis Smith, IT Technical Specialist

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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 sponsor SANDS activities, please contact the SANDS sponsorship coordinators, Tyler Smith and Vivian Huang.
**Displaying Additional SAS Log Messages with MSGLEVEL=**

SAS users can control how much information the SAS System writes to the SAS log by specifying the MSGLEVEL= SAS System option in an Options statement. The MSGLEVEL= option supports two possible values: N (which is the default) to print standard notes, warnings, and error messages; and I to print standard notes, warnings, error messages, plus additional information about sort, merge, and index processing. When specifying MSGLEVEL=I in an options statement, SAS displays the sort product that was used in a sort operation, a warning when variables are overwritten during merge processing; and the name of the available index that was used in index processing (or helpful suggestions on what can be done to influence SAS to use an available index); along with the usual assortment of notes, warnings, and error messages.

To demonstrate the effect of specifying a MSGLEVEL=I option statement, the following example illustrates a simple SQL join query on two tables, MOVIES and ACTORS. As shown in the resulting SAS Log, an informative message was generated explaining that the SAS system chose to use an available index, Rating, to optimize WHERE clause processing. This use of the MSGLEVEL=I system option provides users with a better understanding of what the SAS system did to improve processing, as well as the specific name of the index that was selected during processing of the query.

**SAS Code**

```sas
OPTIONS MSGLEVEL=I;
PROC SQL;
  SELECT MOVIES.TITLE, RATING, LENGTH, ACTOR_LEADING
  FROM MOVIES, ACTORS
  WHERE MOVIES.TITLE = ACTORS.TITLE AND RATING = 'PG';
QUIT;
```

**SAS Log Results**

```sas
OPTIONS MSGLEVEL=I;
PROC SQL;
  SELECT MOVIES.TITLE, RATING, LENGTH, ACTOR_LEADING
  FROM MOVIES, ACTORS
  WHERE MOVIES.TITLE = ACTORS.TITLE AND RATING = 'PG';
INFO: Index Rating selected for WHERE clause optimization.
QUIT;
```

**Contact Information**

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Twitter: @sasNerd
Upcoming Conferences

April 28-May 1, 2013
SAS Global Forum
San Francisco, CA

May 12-15, 2013
PharmaSUG
Chicago, IL
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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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.
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