

SANDS Newsletter

MAY 29, 2013

3:30 - 5:00

WORKSHOP

Advanced PROC REPORT:

Doing More in the

Compute Block

Art Carpenter

WORKSHOP

Advanced PROC REPORT:

Getting Your Tables

Connected Using Links

Art Carpenter

5:15 - 6:00

**LIGHT DINNER /
NETWORKING**

6:00 - 6:15

**WELCOME /
SANDS BUSINESS**

6:15 - 7:30

**FEATURED
PRESENTATION**

An Introduction to Social

Media

Archie Medrano

7:30 - 8:00

DISCUSSION

How to Be a Good SAS

Programmer

Moderated by Wei Cheng

8:00 - 8:15

**STUMP THE
PROGRAMMER AND
CODERS' CORNER**

8:15 - 8:30

**DOOR PRIZES AND
GIVEAWAYS**

[Pfizer Global R&D, La Jolla Labs](#)
[10770 Science Center Drive](#)
[Building CB2, Room 1110*](#)
[San Diego, CA 92121](#)

From the President

“April showers bring May flowers!”

We had our annual election for the SANDS officers at our March meeting. Wei Cheng, Archie Medrano, and Song Lin were elected again as President, Vice President, and Treasurer. The same team had been elected to serve this local SAS community for the past few years. Congratulations!

In the upcoming May meeting, Art Carpenter from California Occidental Consultants will present two of his papers on the advanced techniques of PROC REPORT in the afternoon. Our vice president Archie Medrano will be the featured speaker. He will do an introduction of social media. Archie has been using all kinds of social media tools to promote SANDS with Facebook, Twitter, LinkedIn, etc. Even though we are SAS programmers, we probably still need to know how to use the social media utilities for our work or personal life. As a follow-up topic from the last meeting, we will have a discussion on “How to be a good SAS programmer” in the evening meeting as well. All the abstracts and biographies are on the next few pages.

I just came back from San Francisco after attending the SAS Global Forum. For the first time ever, SAS Global Forum had a theme: Strength in Numbers. We heard the phrases “Visual Analytics”, “Advanced Analytics”, and “Big Data” a lot, but the most exciting news to me is that SAS version 9.4 will be available in June! We will definitely see lots of new features from this major SAS version release. If you did not get a chance to attend the conference, you can watch some live streaming videos on the web site below: <http://support.sas.com/events/sasglobalforum/2013/index.html>.

Do not forget - the WUSS (Western Users of SAS Software) annual conference will be held at Planet Hollywood in Las Vegas from November 13 to 15. The call for papers is now open. Check it out at: <http://www.wuss.org/>.

Our new facility coordinator, Yiyun Tang from Pfizer, just joined our Executive Committee. She will work with Ren-Yu Tzeng to secure our meeting location with Pfizer. Our members have been enjoying and getting used to this great location for years, and it would not have happened without their hard work. Welcome and thank you!

As always, if you like to make contributions to our local users group, please let me know.

I look forward to seeing you on May 29th!

— **Wei Cheng**

Please fill out the RSVP form for the workshop and/or meeting by Friday, May 24th, at <http://www.sandsug.org/meetings.html>.

Workshop:
Advanced PROC REPORT:
Doing More in the Compute Block
Art Carpenter, California Occidental Consultants

Abstract

One of the unique features of the REPORT procedure is the Compute Block. This PROC step tool allows the use of most DATA step statements, logic, and functions, and through the use of the compute block you can modify existing columns, create new columns, write text, and more! This provides the SAS programmer a level of control and flexibility that is unavailable in virtually all other procedures. Along with this flexibility comes complexity and this complexity often thwarts us as we try to write increasingly interesting compute blocks.

The complexity of the compute block includes a number of column identification and timing issues that can confound the PROC REPORT user. Of course, to make matters even more interesting, there can be multiple compute blocks that can interact with each other and these can execute for different portions of the report table.

This tutorial will discuss the essential elements of the compute block, its relationship to the processing phases, and how it interacts with temporary variables and other compute blocks. We will discuss timing issues and naming conventions through a series of examples.

Workshop:
Advanced PROC REPORT:
Getting Your Tables Connected Using Links
Art Carpenter, California Occidental Consultants

Abstract

Gone are the days of strictly paper reports. Increasingly, we are being asked to render our tables and reports using a variety of electronic file types that can be browsed and read using our computers. Besides the cost savings associated with the purchase of paper, paperless reports also minimize the costs associated with the printing and distribution of the reports. Another, often overlooked and potentially more important, side benefit of the paperless report is the increased availability of linked graphs, reports and tables. Navigation of the paper report is dependent on the table of contents, a strong index, and visual aids such as captions and footnotes; however, in paperless reports, we can easily jump from one table to its supporting and dependent tables with the click of a mouse... easily, that is, if we have created the necessary links.

Within PROC REPORT and with the help of the Output Delivery System, there are a number of techniques that we can use to build and maintain these links. Individually, these techniques are not complicated, however we do need to be aware of the syntax, alternative approaches, and issues associated with the automation of the process that coordinates the links between tables.

Biography

Art Carpenter's publications list includes five books and numerous papers presented at SAS Global Forum and other user group conferences. Art has been using SAS® since 1977 and is a SAS Certified Advanced Professional Programmer. Through California Occidental Consultants, he teaches SAS courses and provides contract SAS programming support nationwide.

**Featured Presentation:
An Introduction to Social Media
Archie Medrano, Ask A Way Tutoring**

Abstract

In the beginning (well, 1991), we had Web 1.0, the first version of the web, sometimes known as the informational web. Then around the year 2000, a new version of the web emerged: web 2.0, or the social web. In this presentation, we are going to discuss some of the major social utilities and how social media has taken over our lives.

Biography

Archie Medrano is the owner of Ask A Way Tutoring. Previously, he was an analytic scientist at FICO/Fair Isaac/HNC Software, a senior business information analyst at HSBC Auto Finance, an independent contractor who provided SAS programming for Synteract, a contract SAS programmer (through Kforce and SAIC) who adapted and developed SAS programs for CSC, and an operations programmer at Statprobe. He has been the SANDS newsletter editor since the August 2008 issue and the SANDS vice president since May 2008. He has been programming in SAS since 1999. He has a doctorate degree in mathematics from the University of California at San Diego.



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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](mailto: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 #64

Double SET Statement (Part 3) Art Carpenter, CA Occidental Consultants

In the previous two Stump the Programmers ([December 2012](#) and [March 2013](#)), we examined the behavior of a DATA step with two SET statements. Use what you learned in those two problems, and the program below to answer the following questions:

1. Are the data sets DOUBLESSET and ONESET the same?
2. Will they have the same variables and observations?
3. Will either be equivalent to the original data set (SASHELP.CLASS)?



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```
data Males;
  set sashelp.class (where=(sex='M')) ;
run;
data Females;
  set sashelp.class (where=(sex='F')) ;
run;

data doubleset;
  set females;
  set males;
run;

data onest;
  set females males;
run;
```

The next meeting's Stump the Programmer puzzle will be the final exam on double SET statements. Here it is:

Using the two data sets (MALES and FEMALES) created above, use a DATA step to perform a many to many merge matching each female with each male.

Tips for Using a Data Warehouse

Curtis Smith, Defense Contract Audit Agency

In our last episode, we considered a simple way to validate data in our data warehouse by combining a control table with a SAS data set in our data warehouse. This time, we will explore three of my favorite data set options that help resolve common issues within a DATA step. We will start with the DATA step that we used in our last episode, which was as follows:

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

One common issue is having variables in an input SAS data set that we do not need for an output data set and do not want to waste the space storing the unneeded variables. We can use the DROP= or the KEEP= data set option to drop or keep the variables we chose. As their names imply, DROP= will drop variables we specify, while KEEP= will keep only those we specify. Frequently, when creating a subset or summary SAS data set (or just processing a SAS data set with a procedure), we do not need all of the variables in the input SAS data set. However, we need to be sure not to delete any variables that we need to process within the DATA step (or procedure). For example, if we need to perform a WHERE selection on a variable but do not want that variable in the output SAS data set, we will need to keep it in the input SAS data set but can drop it from the output SAS data set. So, in our example above, if our empl_cntl data set included variables we did not want for our output SAS data set, except for the emplno variable, to prevent the unwanted variables from existing in the output SAS data set, we could do the following:

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

Another common issue is needing to filter a SAS data set. We can do this by using the WHERE= data set option, which works just like the WHERE statement. The SAS help tells us the following: "Use the WHERE= data set option with an input data set to select observations that meet the condition specified in the WHERE expression before SAS brings them into the DATA or PROC step for processing. Selecting observations that meet the conditions of the WHERE expression is the first operation SAS performs in each iteration of the DATA step." So, in our example above, if we only want sales data from our location in Cucamonga, we could do the following:

```
DATA sands.empl_errors;
  MERGE
    dw.sales_detail(in=a where=(loc="CM"))
    dw.empl_cntl(in=b keep=emplno);
  BY emplno;
  IF a and not b;
RUN;
```

A third common issue is needing to rename a variable. This can be a particular problem when merging two or more data sets that share a common variable name that is not being used as the key to the merge. The SAS help tells us the following: "If you use RENAME= on an input data set, the new name is used in DATA step programming statements. If you use RENAME= in the same DATA step with either the DROP= or the KEEP= data set option, the DROP= and the KEEP= data set options are applied before RENAME=. You must use the old name in the DROP= and KEEP= data set options. You cannot drop and rename the same variable in the same statement." So, in our example above, if we want to change the name of the AMOUNT variable in the sales_detail data set to something else when storing that variable into the output SAS data set, we could do the following:

```
DATA sands.empl_errors;
  MERGE
    dw.sales_detail(in=a where=(loc="CM") rename=(AMOUNT=SALES_AMT))
    dw.empl_cntl(in=b keep=emplno);
  BY emplno;
  IF a and not b;
RUN;
```

Thanks for reading.

Curtis Smith, IT Technical Specialist

Kirk's Korner

Kirk Paul Lafler, Software Intelligence Corporation



Lafler's Top 10 "Best" Papers at SGF 2013

Having just returned home from the 2013 SAS Global Forum (SGF) Conference in beautiful San Francisco where 4,287 attendees from every corner of the globe gathered to take part in a multi-day SAS-fest, I have compiled my annual list of my personal favorite papers. Because there were far more papers and presentations than I could possibly read or see during my time at the conference, I carefully spent the evening before the start of the conference, and a week after the conference, reading the more than 400 abstracts and papers so I could reduce my list to the top 10 "Best" papers.

Note: Readers are encouraged to access the complete list of published SGF 2013 papers using your favorite web browser by clicking the following link, <http://support.sas.com/resources/papers/proceedings13/>. Also, due to time constraints, concurrent and overlapping presentations, and other commitments, I was unable to attend every presentation and read every paper during the conference, but I did make the time to attend and read the papers of nearly two dozen presentations while at the conference. Once I arrived home, I spent the next week reading the remaining papers from which I compiled my top 10 list of my personal favorite "Best" papers. Finally, any of the papers in my list of top 10 "Best" papers can be accessed as PDF documents by simply clicking on the hyperlink associated with the paper name. So, without further delay, here's the list of my personal favorite papers at SGF 2013.

10. [The SAS® Output Delivery System: Boldly Take Your Web Pages Where They Have Never Gone Before!](#) by Chevell Parker
9. [A First Look at the ODS Destination for PowerPoint](#) by Tim Hunter
8. [Fast Dashboards Anywhere with SAS® Visual Analytics](#) by Rick Styll
7. [SAS-Oracle Options and Efficiency: What You Don't Know Can Hurt You](#) by John E. Bentley
6. [Managing and Monitoring Statistical Models](#) by Nate Derby
6. [Quick Hits - My Favorite SAS® Tricks](#) by Marje Fecht
6. [Using SAS® To Assess Individuals' Best Performance In Multiple Dimensions](#) by Aude Pujula and David Maradiaga
5. [Exploring Time Series Data Properties in SAS®](#) by David Maradiaga, Aude Pujula, and Hector Zapata
4. [Opinion Mining and Geo-Positioning of Textual Feedback from Professional Drivers](#) by Mantosh Kumar Sarkar and Goutam Chakraborty
3. [SAS® Enterprise Guide®: It is More than a Gift from Outer Space](#) by Tricia Aanderud
2. [Sharpening Your Skills in Reshaping data: PROC TRANSPOSE vs. Array Processing](#) by Arthur X. Li
1. [PROC DATASETS: The Swiss Army Knife of SAS® Procedures](#) by Michael A. Raithel

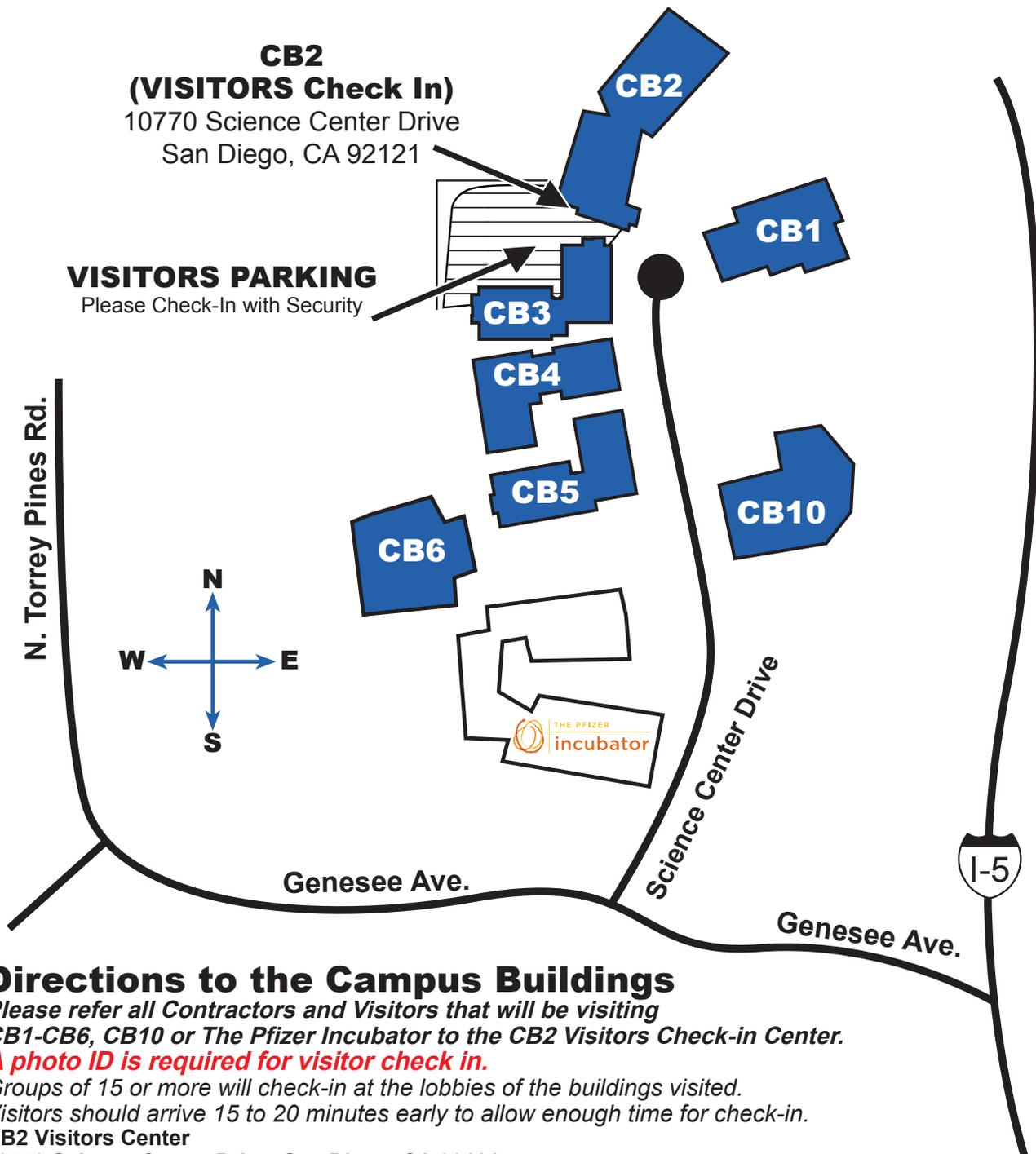
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We would like to thank [Pfizer](#) for having once again generously provided our meeting room. This month, SANDS is sponsoring our meeting dinner and activities. It is our sponsors who make it possible for us to hold our meetings free of charge, so 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](#).

Map to Pfizer La Jolla Campus



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

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