



# PhilaSUG newsletter



## Winter 2002 Meeting Announcement

### PhilaSUG Winter 2002 Meeting Tuesday, March 12, 2002

The Philadelphia Area SAS Users Group Winter Meeting will be on Tuesday, March 12, 2002 at 1:00 PM, and will be hosted by the Philadelphia University at their campus in the East Falls section of Philadelphia, School House Lane & Henry Avenue. A map, detailed driving and parking instructions are available later in the newsletter.

Registration will begin at 12:15 PM and the meeting will commence at 1 PM. Please try to arrive early to register. This is the first meeting of 2002 so all who attend must register and pay dues. Dues for the year are \$20. There are no other fees for attending PhilaSUG meetings. We will accept cash, but a check is preferred. If you are a student and present a current matriculation card, fees will be waived. Registration can be made a lot easier if you attach a business card to a check or \$20 bill as there is less writing to do and it is more legible. Please do not mail in your registration fee before hand as this creates unnecessary paper work. Receipts will be available at registration time.



### PLEASE READ THIS!!!!

#### Snow Cancellation

In the event of inclement weather we will send out a flash announcement over PhilaSUG-L. Have you subscribed (see page 5)? Check Cancellations.com around 10 AM on the day of the meeting for any last minute cancellation notices.

### Agenda

- |        |      |   |
|--------|------|---|
| 12:15  | 1:00 | Registration  |
| 1:00 - | 1:10 | President's opening remarks   |
| 1:10 - | 1:40 | <i>Using ODS and the Macro Facility to Construct Color Charts and Scales for SAS® Software Applications</i><br>Perry Watts, Independent Consultant        |
| 1:40 - | 2:00 | <i>Animated Power Merges: Key Merges and the _IORC_ Variable</i><br>Russ Lavery, Independent Consultant   |
| 2:00 - | 2:20 | Break, refreshments   |
| 2:20 - | 2:50 | <i>Choice of Development Tool for the User Interface of a Client-Server Application in a SAS® Environment</i><br>Barry Cohen, Planning Data Systems, Inc. |
| 2:50 - | 3:20 | <i>Turning an Interactive PC SAS® Session into a Batch Processor</i><br>Frederick Cieri, Planning Data Systems  |
| 3:20 - | 3:40 | Break, refreshments   |
| 3:40 - | 3:50 | Open Forum  |
| 3:50 - | 4:20 | <i>Data Step Debugger</i><br>Russ Lavery, Independent Consultant  |
| 4:30   |      | Meeting adjourns & Dinner!!!!   |

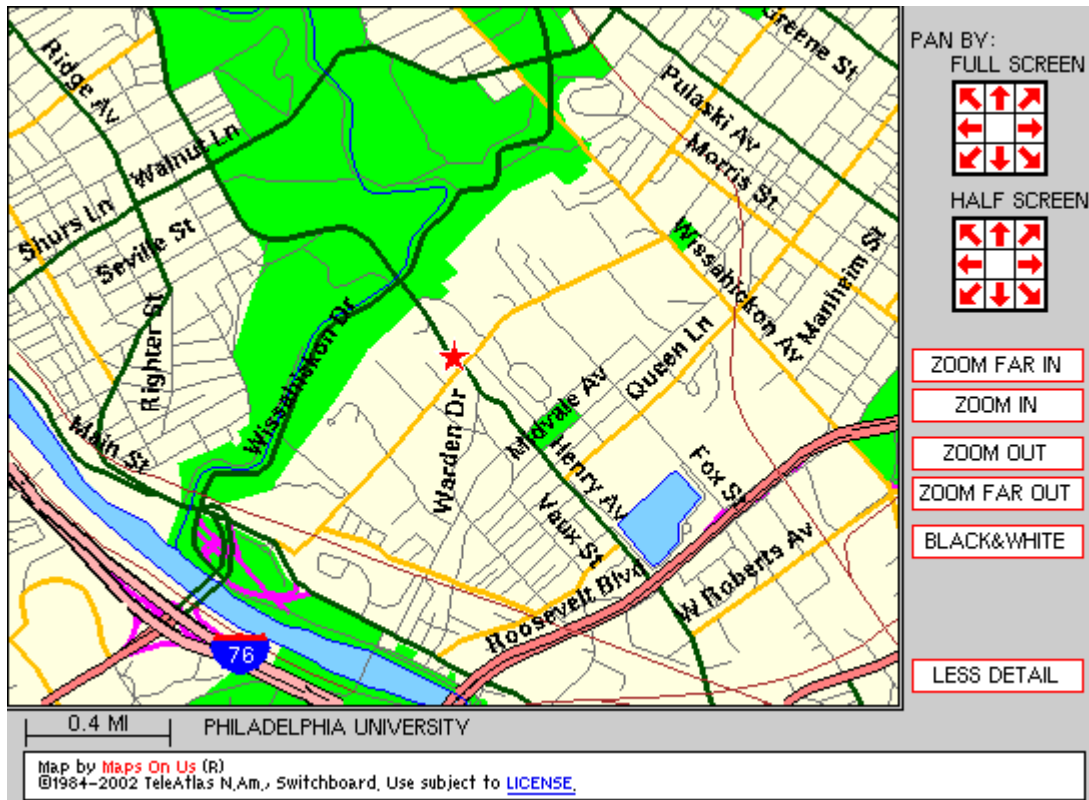
Light refreshments will be served during breaks.

Abstracts are found later in this newsletter.

The presenters and the PhilaSUG Executive Committee will adjourn for dinner at a nearby restaurant when the meeting concludes. You are invited to join us. The location will be announced at the meeting.

# Directions to Philadelphia University

Philadelphia University  
4201 Henry Avenue & School House Lane  
Philadelphia, PA 19144  
215-951-2700



## GETTING TO THE MAIN CAMPUS

### BY CAR FROM:

#### Center City Philadelphia, Southern New Jersey, Central and Western Pa:

Take the Schuylkill Expressway (I-76) to the Lincoln Drive exit. Follow Lincoln Drive to Gypsy Lane (first right, (old Victorian Hotel, yellow), Police Station). Gypsy Lane (steep hill up) will end at School House Lane. Turn left on School House Lane to Henry Avenue (first traffic light).

#### Delaware County:

Take City Line Avenue (Route 1 North) to Lincoln Drive. Follow above directions from Center City, Philadelphia.

#### Washington, Baltimore and Wilmington

Take I-95 North to I-76 West. Follow above directions from Center City, Philadelphia.

#### Northeast Extension - Pennsylvania Turnpike

Exit Turnpike at Norristown, Plymouth Meeting (Exit #25). Go right after the exit and head east on Germantown Pike to first traffic light. Make a right onto Chemical Road. Go through three lights and at your fourth light, make a left at the five point intersection onto Ridge Pike. Make a left and take Ridge Pike to the Henry Avenue cutoff (bear left). (You'll be on Ridge Pike for approximately 3.5 miles.) Take Henry Avenue about 6 miles to School House Lane.

#### Parking

While PhilaSUG participants will be able to park anywhere on campus, it is suggested we use the Ravenhill Parking lot, the largest parking lot on campus and a three minute walk to Tuttleman. That lot is directly behind the Ravenhill Mansion, then walk up School House Lane to Vaux Street. Make a right on Vaux, The Tuttleman Center will be on your left. Signs will be posted to the Tuttleman Center from various points on campus. A detailed campus map is on the web site.



Many of our members might remember our Spring '99 meeting host as the Philadelphia College of Textiles & Science. To better reflect the institution's breadth and depth and its successful growth, the College applied for and was granted university status by the Commonwealth of Pennsylvania in 1999. And, in a historic move, the Board of Trustees voted to change the College's name to Philadelphia University, the first private university to be named exclusively after the City of Philadelphia. The name Philadelphia University became effective on July 13, 1999.

Philadelphia University is a successful new model in higher education. They are an accredited, private, coed university offering undergraduate and graduate degrees in over 40 areas of study - all within a framework of career development.

Since the late 19th century, they've been preparing professionals for a constantly changing economy. Back then, in the late 1890s, their graduates excelled in textile engineering, design, materials management and manufacturing. Today, Philadelphia U's alumni are global leaders in architecture, fashion, design, business, health professions, textiles, materials technology and science.

Recent research areas include artificial intelligence, molecular modeling, exploration of key enzyme systems in seeds and animal tissues, mathematical modeling and memory processes.

Their current 3,400 students have a choice of over 40 degree programs, 20 laboratories and studios, a world-class library and unique hands-on professional learning opportunities. Five million dollars were recently plowed into technology on campus for high-speed access to cyberspace. And, they just broke ground for a new high-tech classroom building to open fall 2001. In addition, students enjoy a traditional campus life with loads of features.

They are located fifteen minutes northwest of Center City Philadelphia, adjacent to Fairmount Park the largest urban park system in the nation on a beautiful, park-like campus. Of course, if you prefer the fast lane, they're five minutes from Philadelphia's major East/West expressway. To learn more about our host visit them online at <http://www.philau.edu/>.

## Thank You to our Host

The PhilaSUG Executive Committee wishes to thank Dr. Judy McKee, Dean of the Graduate School and Continuing Education at Philadelphia University for arranging this meeting space. We also thank Roy Millsap of Philadelphia University for his help in this event.



## President's Message

### PhilaSUG Winter '02 Meeting

Greetings to all members of the SAS community in the Philadelphia area. It's time for our Winter 2002 meeting, and Philadelphia University is hosting us for the second time. The first time, they were still called Philadelphia College of Textiles and Science. Theirs is a pretty campus, and we will be meeting in their new building, The Tuttleman Center. This contemporary building features a 200-seat, tiered auditorium, which I am sure we will enjoy very much. It was interesting that the weekend after we arranged for Philadelphia U as our host, and learned of the Tuttleman Center, I saw an article featuring the building in the Sunday Inquirer. Sounds very nice.



I especially like our program this time, because most of the topics concern aspects of SAS processing that we collectively are less familiar with than others, but could find quite useful if we knew them. So here is our chance. Perry Watts is going to speak about the use of color as a means for enhancing reports and summarizing data that are displayed as HTML files in a web browser. Perry feels that increased access to HTML files in SAS environments has made this issue topical. She also will describe how, with ODS and the SAS Macro facility, it is now possible to construct color chart and scales for SAS/GRAPH applications. Heretofore, the programmer had to rely upon text descriptions of the colors found in the SAS documentation.

Russ Lavery will speak about a method for merging SAS data sets that is both powerful and not well known: key merges and the `_IORC_` variable. Russ feels that a key merge is a powerful tool and a great advantage for SAS programmers who process large data sets. Following Russ, I will speak about the choice of a development tool for building the client-side user interface for client-server applications in SAS environments. This tool choice has forever been a question for SAS-based application developers because the interface to server-based SAS data and applications does not have to be developed with a SAS tool. And the choice has not been easy to make because it comes with important trade-offs. I try to shed some light on this choice, taking into account the older SAS product - SAS/AF, the newer SAS product -- AppDev Studio (with webAF, SAS/IntrNet, SAS/IT), and the non-SAS tool class with Visual Basic as a prime example.

Fred Cieri will speak about batch processing for SAS programs in the PC environment. Fred feels that there has always been a valuable place for SAS batch processing. But he feels that it is not nearly as well understood in the PC world as it is in the UNIX and mainframe worlds. He is going to explain how it is done on a PC, and how a SAS macro can be used to harvest the power of the PC batch processing facility. And finally, Russ Lavery will come back to speak to us about the Data Step Debugger. An automated debugging is valuable tool, whatever your program language. Yet, Russ feels that a substantial

number of Base SAS programmers do not know of the Data Step Debugger or how to use it. If you are in this group, here's your chance to learn how. And, as usual, we will also feature a great set of poster at the meeting. I refer you to the poster abstracts elsewhere in the newsletter.

One more thought: What is one of the most often asked questions at a user group meeting? "Are there any handouts?" Please take note of a convenient feature at the [www.PhilaSUG.org](http://www.PhilaSUG.org) web site. There you will find links to recent papers and handouts from PhilaSUG meeting presentations. We thank and appreciate the presenters for allowing us to share this information. And note that for this meeting, (as mentioned elsewhere in this newsletter), due to the extensive use of color in Perry's paper, it will only be available on our web site, and not in hard copy.

I hope you can attend this PhilaSUG meeting and hear and see the excellent information to be presented, as well as the information that surfaces more informally at the breaks and at dinner afterwards. As usual, any PhilaSUG member is welcome to join the presenters and Executive Committee members at dinner nearby after the meeting. Try it some time. It is a great way to integrate yourself further into the local SAS community.

I hope to see you and speak with you at the meeting.

Barry R. Cohen  
President, PhilaSUG

If you have questions about PhilaSUG, desire to become active on the Executive Committee, or wish to submit any articles, abstracts, etc. please E-mail us at <mailto:Executive.Committee@PhilaSUG.org>



## Host Sites Wanted

We continuously seek host sites for future PhilaSUG meetings. There is not a lot of work involved, and it is a great way to put your company on the local SAS map. We need your help with this. If your company would like to host a meeting, within reasonable geographic proximity to Philadelphia, PhilaSUG would be grateful if you would contact Barry Cohen (610) 649-8701 or E-mail [President@PhilaSUG.org](mailto:President@PhilaSUG.org)

## Presenters Wanted

You are invited to be a Presenter - PhilaSUG constantly seeks individuals who wish to participate actively in our meetings by presenting various SAS topics in the form of delivered papers or posters. This is a great way to share your knowledge with others, to brush up your presentation prior to delivery at NESUG or SUGI or some other major conference, and to gain confidence as a speaker. Short technical SAS related articles are also desired for inclusion in the Newsletter. If this is of interest to you, please use the online abstract submission form found on our web site. Presentations can be from a few minutes to 50 minutes. If you wish to participate in the PhilaSUG Spring 2002 Meeting, please submit an abstract and bio by April 20, 2002. Your abstract must include the desired length of presentation and specification of audio/visual needs.

## E-mail Announcements

PhilaSUG-L is a low volume, announcement-only e-mail notification service provided free of charge to all members who wish to subscribe. In order to sign up for this service, you need only send a blank e-mail message to: [PhilaSUG-L-subscribe@onelist.com](mailto:PhilaSUG-L-subscribe@onelist.com). Note that you can subscribe as many times with as many different e-mail addresses as you wish to have the e-mail sent to; e.g., home and office.



## Future Meetings and Events

PhilaSUG Winter 2002 Meeting March 12 Philadelphia U

SUGI 27 April 14-17 Orlando, FL

PharmaSUG May5-8 Salt Lake City, UT

PhilaSUG Spring Meeting 2002 June 18 Merck & Co., Inc.

NESUG 15 Sept. 29 – Oct. 2 Buffalo, NY

PhilaSUG Fall Meeting 2002, date TBD, host Fleet Financial

PhilaSUG Winter Meeting 2003, March 6, WYETH Pharmaceuticals in Collegeville

## PhilaSUG Web Site

Our site on the World Wide Web always contains the latest information concerning upcoming meetings, SAS training and seminars, links to SAS related hot topics, and local SAS job opportunities.



Visit us regularly at: <http://www.PhilaSUG.org>

## PhilaSUG Executive Committee

Barry Cohen, President	(610) 649-8701
Robert Schechter, WebMaster	(610) 695-1437
Max Cherny	
Ray Haupt	(215) 438-8175
Ellen Brookstein	(610) 975-3836
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Diane Foose	(610) 917-7168
Robert Nicol	(215) 775-5813
Terek Peterson	(610) 917-5303
Caryn Reape	(215) 328-2216
Anne Marie Smith	(215) 654-1394
Perry Watts	(610) 834-5084

The PhilaSUG Executive Committee meets on an occasional basis, about six times per year. We invite you to become a member. It's a fun and effective way to broaden your SAS horizons.

## Paper Abstracts

### **Using ODS and the Macro Facility to Construct Color Charts and Scales for SAS® Software Applications**

*Perry Watts, Independent Consultant*

Highly accessible HTML files have increased the importance and use of color as means for enhancing reports and summarizing data. The reference manual for SAS/GRAPH® software contains an entire chapter devoted exclusively to color. In fact, the chapter lists 292 predefined SAS colors by their NAME, RGB (red/green/blue) and HLS (hue/light/saturation) codes. Nevertheless, the list is hampered by the absence the colors themselves. VPAPB for "very pale purplish blue" continues to remain in the eye of the beholder.

With ODS it is now possible to construct a fully annotated color chart from the list of predefined SAS colors found in SAS OnlineDoc. Actual colors are displayed in an HTML format along with their NAME, RGB, and HLS codes.

A color scale new to SAS software and developed from the color chart is also described in the paper. The color scale uses a decimal conversion macro in a looping structure to display one hue in varying degrees of luminescence. The paper provides illustrations, instructions for construction, and applications of both the color chart and the color scale. These visual aids should promote the effective use of color as a vehicle for communicating information.

A copy of the paper rendered in full color has been placed on PhilaSUG's Web Site. From the home page on <http://PhilaSUG.org>, click on "Archive of Past Newsletters and Presented Papers" and scroll down to the Papers Section. Additional applications not described in the paper will also be presented at the meeting.

*Perry Watts specializes in SAS/GRAPH software using it to portray statistical models and to develop quality graphics for publication. She also works with macros, and enjoys PROC SQL programming assignments. Perry has a master's degree in Information Systems from Drexel University, and her first BBU book in the Art Carpenter series entitled "Multiple-Plot Displays: Simplified with Macros" is scheduled for publication in 2002. Perry has presented papers at SUGI, NESUG, and PhilaSUG meetings. She is a member of the PhilaSUG Executive Committee.*

### **Animated Power merges: Key merges and the \_IORC\_ variable**

*Russ Lavery, Independent Consultant*

The key merge is a powerful tool for SAS programmers who have to access large data sets. The key merge can be used as a subsetting tool, or as replacement for an if. It can be used to perform the equivalent of a BY merge without sorting the data sets – a great advantage for processors of large data sets. Part one of this presentation animates the details of key merge processing. Part two shows the common key merge. Part three shows a little known improvement on the key merge.

*Russ Lavery, independent contractor and member of the PhilaSUG executive committee, has used SAS for fifteen years. His experience includes using SAS for marketing, planning and operational projects in several industries. His specialty is using statistics and SAS to solve business problems. SAS Macros Revisited: An Animated System Road Map*

### **Choice of Development Tool for the User Interface of a Client-Server Application in a SAS® Environment**

*Barry Coben, Planning Data Systems, Inc.*

Application developers in SAS environments regularly face the question about what tool to use to build the client-based user interface of their client-server applications. These are environments where (1) the data is in server-based SAS data sets, (2) the primary processing is done with server-based SAS Software applications that cover file management, analysis, and reporting, and (3) the user interface, or front-end, is client-based and is used primarily to direct and control the processing and to present results. Although the server-based back-end is all SAS-based, the front-end user interface can be, but does not have to be, written with SAS Software. The choice of a front-end tool has never been simple because of trade-offs involved. But this tool choice has over time become even less clear because (1) non-SAS front-end tools have eclipsed the primary SAS tool (SAS/AF) in popularity, (2) SAS has stopped growing the SAS/AF tool, and (3) SAS has developed a new tool, AppDev Studio. AppDev Studio is primarily used to build the client and server sides of Web-

enabled SAS applications, but it can actually build a front-end to any server-based SAS application and set of data.

This paper evaluates SAS/AF, SAS AppDev Studio, and the non-SAS tool class, (with Visual Basic as a prime example), against a series of relevant performance factors. Information is provided to structure and contribute to the decision about which front-end development tool to use.

*Barry Coben is a systems development consultant and President of Planning Data Systems, Inc, with over 20 years experience, much involving SAS Software. Mr. Coben has provided services to a variety of industries, including a focus in the pharmaceutical industry. He is a co-founder and President of PhilaSUG, the Philadelphia SAS Users Group. Mr. Coben is an accomplished author and invited speaker at SAS and other conferences, and occasionally chairs SAS user group conference sections.*

### **Turning an Interactive PC SAS® Session into a Batch Processor**

*Frederick Cieri, Planning Data Systems, Inc.*

Why do most users run PC SAS® in interactive mode and SAS® on UNIX in batch mode? One reason may be that UNIX has a readily available system to launch and create batch files with shell scripts. It is possible to create batch buttons in PC SAS®, but it is cumbersome and not readily adaptable for usage on multiple projects. Using the `pc_batch.sas` macro, this paper outlines how to create a MS-DOS batch file using an interactive PC SAS® session under the WINNT operating system to launch SAS® programs. There are four parts to the `pc_batch.sas` program: interface, fool proof or edit checks, BAT(batch) file basics, and submission methods.

*Frederic Cieri has six years as a Clinical SAS programmer for the Pharmaceutical industry with work experience at Merck, Aventis, and Sanofi. Currently working for PDS Inc. as a contractor at Merck.MS Statistics Temple University, Philadelphia PA*

### **Data Step Debugger**

*Russ Lavery, Independent Consultant*

The Data Step Debugger (DSD) is shipped with every copy of base SAS but is rarely used. Running the DSD adds two windows to the normal SAS environment. These two new windows allow the programmer to step through his/her program – one line at a time – and watch the Program Data

vector (PDV) change. This ability to examine the PDV, as observations are being processed is a valuable debugging tool.



## **Poster Abstracts**

### **SAS® Macros as File Management Utility Programs**

*Christopher Rook and Shi-Tao Yeh*

This paper provides several SAS macros for file management and file conversion tasks.

The SAS products used in this paper are SAS BASE, with SAS system installed on UNIX and PC platforms.

*Christopher Rook is a consultant with EDP Contract Services. He has a Master's Degree in Statistics from SUNY, Buffalo and has been using SAS software for 7 years.*

*Shi-Tao Yeh is a principal programmer at GlaxoSmithKline. Shi-Tao has a Ph.D. degree from University of Pennsylvania and has been using SAS software for twenty-five years. He has presented papers at SUGI, SEUGI, NESUG, PharmaSUG and local PhilaSUG meetings and won several awards.*

## **An Automated Reporting Macro to Create Cell Index**

*Shi-Tao Yeh*

When generating tables from SAS PROC TABULATE or PROC REPORT to summarize data, sometimes it is necessary to produce a cell index as part of the data display. A cell index is simply a data listing that reports the summarized count of each cell shown in the table.

This paper discusses an automated SAS reporting macro to generate a cell index with minimal SAS macro arguments. The design goal for this program is to provide an efficient, flexible and easy-to-use macro

## **Using ODS and the Macro Facility to Construct Color Charts and Scales for SAS(r) Software Applications**

*Perry Watts, Independent Consultant*

Highly accessible HTML files have increased the importance and use of color as means for enhancing reports and summarizing data. The reference manual for SAS/GRAPH(r) software contains an entire chapter devoted exclusively to color. In fact, the chapter lists 292 predefined SAS colors by their NAME, RGB (red/green/blue) and HLS (hue/light/saturation) codes. Nevertheless, the list is hampered by the absence the colors themselves. VPAPB for "very pale purplish blue" continues to remain in the eye of the beholder.

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## **Stupid Data Tricks - Techniques for Getting Your Output to Behave**

*John Cohen, AstraZeneca Pharmaceuticals*

Much like our pets, our data often have their own agenda. Values that perform flawlessly during data manipulation may turn on us unexpectedly when we go to output final product. And those codes, which can make storage and retrieval easier and more efficient, may be incomprehensible to our end users. We will present here a collection of techniques including formats, functions, the SAS® macro language, and programs-which-write-programs to help you to train your data to sit, roll over, and even play dead.

*John is a Senior Systems Designer/Developer providing data processing, quantitative, and business analytical support to the Marketing and Sales Departments at AstraZeneca Pharmaceuticals. He started using SAS back when the name stood for something and is active in SAS user groups at a number of levels.*







# PhilaSUG

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