BASUG.org
BOSTON AREA SAS® USERS GROUP

SAS Blowout Event! Co-hosted by BASUG and SAS Institute Inc.

Friday, September 25th, 2015

Three events – come to any or all! Morning Training, Afternoon Quarterly Meeting, Evening Mixer

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SAS Comes to Boston!!

*Most of us cannot travel to the SAS Campus in Cary NC, so we have arranged (again) for some of the **experts at SAS Institute** to come to us - for an entire day!*

*In the morning you can take a training class on one of the most useful and versatile SAS reporting procedures: PROC REPORT. The class will be led by **Jane Eslinger**, one of the people who solves your problems when you call Tech Support. She has designed an overview of the procedure that focuses on the aspects of PROC REPORT that users find most valuable.*

*In the afternoon, Jane will be back to give us a deep dive on the most powerful feature of PROC REPORT: the COMPUTE block. She will be joined by **Diane Olson** and **Chevell Parker** who will divulge developers secrets to PROC COPY and APPEND, and using ODS to enhance reports. All three presentations are on foundation components of Base SAS that you use every day.*

*The day concludes with a **mixer** where you can mingle with the SAS staff and your BASUG colleagues.*

We hope you can join us for this exciting and SAS-packed day!

When	Friday, September 25, 2015
Where	Microsoft New England Research & Development Center (NERD) [1] Conference Center, First and Eleventh Floors One Memorial Drive, Cambridge MA 857-453-6000
Directions	Please visit the meeting site directions page (http://microsoftnewengland.com/About)
What	Three events - come to any or all!
How to Register	Pre-registration is required. Sorry, NO WALK-INs. Register Now! (http://www.basug.org/index.php?p=eventreg)
Agenda	Note: Our normal schedule is reversed Training is in the MORNING; the regular meeting is in the AFTERNOON; and lunch is at 12:30.

Overall Agenda for SAS Blowout Event

Time	Activity
9:30AM	Breakfast and Registration for Training
10:00AM	**MORNING Training** Topic: An in-depth look at PROC REPORT Instructor: Jane Eslinger, SAS Institute Inc.
12:30PM	Networking Lunch and Registration for Afternoon Meeting
1:30PM	**AFTERNOON Quarterly Meeting**
5:00PM	**EVENING Mixer** Come and network with your fellow SAS buddies, mingle with the presenters, and enjoy wine, beer, and light refreshments. We'll be up on the 11th floor – a great space with a great view

BASUG Training Details

Between the morning training and afternoon meeting, we will provide an informal light buffet lunch for all attendees. We hope you can join us for this opportunity to network and socialize with fellow SAS users.

Course Title	"An In-Depth look at PROC REPORT"
Instructor	Jane Eslinger, SAS Institute Inc.
Summary	This training session will explore one of the most powerful reporting procedures in SAS: PROC REPORT. It will focus on the procedure's most used capabilities: header creation, border control, calculating percentages, and creating multiple summary rows. In addition, the session will go over the differences between PROC REPORT and PROC TABULATE and when you might want to use one over the other.
When	Friday, September 25, 2015 9:30AM - Registration & Breakfast 10:00AM-12:30PM – Class 12:30PM - Networking Lunch
Where	Microsoft New England Research & Development Center (NERD) [1] One Memorial Drive Cambridge MA 857-453-6000
Directions	Please visit the meeting site directions page (http://microsoftnewengland.com/About)

Course Title	"An In-Depth look at PROC REPORT"
Price	$100 -- if paid online by Sept 16th, 2015 $125 -- if paid online by NOON on Sept 24th, 2015 $140 -- at-the-door (check only) (Please see details below)
Audience / Prerequisites	Appropriate for all levels
How to Register	Individual, on-line registration required. No walk-ins. Pre-payment guarantees you a seat and handouts. Register Now! (http://www.basug.org/index.php?p=eventreg)
Contact	If you have questions about the course, please contact the training coordinators (mailto:SeabrookMLM@comcast.net)

Course Description

PROC REPORT is a powerful tool, often-overlooked by programmers. Programmers are rarely asked to produce just one type of output, and attending this training session will expose you to many parts of PROC REPORT and teach you how they are all connected. The skills learned from these examples can be applied when creating any type of output with PROC REPORT. We will also address when another procedure, like PROC TABULATE, would be better to use.

The related paper presentation in the afternoon meeting will focus solely on compute blocks: what to put on the COMPUTE statement, the order the blocks are executed, and how to reference variables. The compute block is the most powerful part of PROC REPORT but it is not the only part of PROC REPORT. The paper presentation does not cover broader topics like headers and table structure or specific tasks like calculating percentages. If you are not familiar with PROC REPORT this training will prepare you for the afternoon presentation on the COMPUTE statement.

If you are familiar with this procedure, the morning training will provide an opportunity to delve deeper into its functionality.

Course Outline

The first topic will be headers. PROC REPORT can and does create many layers of headers. They come from DEFINE statements, ACROSS variables, and the COLUMN statement. In some cases it is not easy to determine where or why a header is created. Neither the documentation nor conference papers cover this specific area. This part of the seminar will look at the layers of the header one by one and connect it to the statement and/or variable that generated it.

Borders are an integral part of the final report because they help draw the readers' attention to specific pieces of information. They also help group related pieces of information. A few conference papers and online samples cover border control, however, it is an elusive skill to master. We will have an in depth discussion on changing borders including the best strategies to get the desired output.

The next topic will be calculating percentages. The PCTN and PCTSUM statistics are available in PROC REPORT, however, in most cases these keywords do not produce the desired percentages. Outputting the desired percentages requires determining the correct denominator, putting the value in a temporary variable, and doing the actual calculation. Often this requires assignment statements in at least two compute blocks. We will walk through all of the necessary steps and the reason for each step.

We will build on the concept of calculating percentages and see how the steps change when an ACROSS variable is involved.
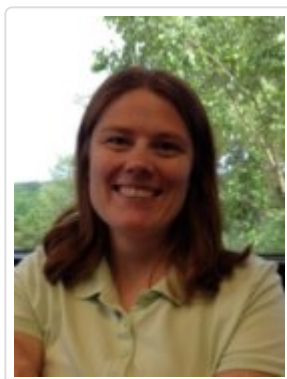
The final PROC REPORT topic is how to create multiple summary rows. Many reports require summary information for a combination of grouping variables and summary information for just certain groups. PROC REPORT is designed to get combinations of groups, you have to trick SAS into getting summary information for just certain groups. We will discuss both why you have to trick PROC REPORT and how to do this.

Looking at how PROC REPORT creates summary rows will lead us into PROC TABULATE. We will contrast the steps and syntax needed for PROC REPORT versus what is needed for PROC TABULATE. We will recreate the same output with PROC TABULATE.

We will also touch on the difference between calculating percentages in PROC TABULATE as opposed to in PROC REPORT and discuss other situations where you might need to choose between TABULATE and REPORT.

Instructor Biography

Jane Eslinger is a Technical Support Analyst at SAS Institute Inc., in Cary, NC. She supports the REPORT procedure, ODS, and other Base SAS procedures. Before she joined SAS, Jane worked as a statistical programmer in the social science and clinical research fields. She is a graduate of NC State University with a Bachelor of Science in Statistics.

Training Registration and Payment Instructions

Please read this ENTIRE section carefully!

1. Pricing	$100 -- if paid online by Sept 16th, 2015 $125 -- if paid online by NOON on Sept 24th, 2015 $140 -- at-the-door (check only) *Pre-registration by noon September 24th is required for all price levels*

2. Register	INDIVIDUAL, ON-LINE REGISTRATION IS REQUIRED You must register for this training (even if you plan to pay by check). To register and purchase tickets for the class please visit the event registration page (http://www.basug.org/index.php?p=eventreg). Please register early! Seating and handouts are guaranteed only for pre-paid registrants.
3. Payment Methods	**Credit Card:** We urge you to pay by credit card, using our online system. Make sure to purchase your ticket by Sept 16th to get the early-bird price. **Check: Do NOT mail a check to us prior to the workshop.** Pre-register online, and bring a check with you for the at-the-door-price. Full payment is due by the day of the class. There will be NO EXCEPTIONS. We never accept cash. We *do* accept credit card payments through our online registration service.
4. Refund Policy	To receive a refund for the training, please send an email to our training coordinators (mailto:SeabrookMLM@comcast.net) by 5PM on Sept 16th. After this date, we will refund your payment (less a $10 processing fee) only if we can fill your seat with other attendees.

BASUG Afternoon Meeting Details

Between the morning training and afternoon meeting, we will provide an informal light buffet lunch for all attendees. We hope you can join us for this opportunity to network and socialize with fellow SAS users.

Topic	**SAS Tricks from the Insiders**
When	Friday, September 25, 2015 12:30PM - 5:00PM *(Note the new time! This is an afternoon meeting)*
Where	Microsoft New England Research & Development Center (NERD) [1] One Memorial Drive Conference Center, First Floor Cambridge MA 857-453-6000
Directions	Please visit the meeting site directions page (http://microsoftnewengland.com/About)
How to Register	Individual, on-line registration required. Sorry, NO WALK-INs. Register Now! (http://www.basug.org/index.php?p=eventreg)
Payment	$10 -- if paid on-line by September 16th, 2015 $15 -- if paid on-line by NOON on September 24th, 2015 $20 -- at the door (checks only) *Pre-registration required for all price levels*

Topic	SAS Tricks from the Insiders
Contact	If you have questions about the meeting, please contact the meeting organizers (mailto:SeabrookMLM@comcast.net)

Agenda for afternoon meeting[*]

Time	Activity
12:30PM	Sign-in and Lunch
1:30PM	Announcements
1:45PM	**"Nitty Gritty Data Set Attributes", "PROC COPY and PROC APPEND: A Developer's Secrets"** , by Diane Olson, SAS Institute Inc.
2:35PM	Break
2:50PM	**"The REPORT Procedure: A Primer for the Compute Block"**, by Jane Eslinger, SAS Institute Inc.
3:40PM	Break
3:55PM	**"Staying Relevant in a Competitive World: Using the SAS® Output Delivery System to Enhance, Customize and Render Reports"**, by Chevell Parker, SAS Institute Inc.
4:45PM	**Q & A with all presenters.** Your chance to pick the brains of SAS insiders
5:00PM	Mixer on the 11th floor

[*] Note: Times (and sequence) are approximate and subject to change. Please re-visit the BASUG website (http://www.basug.org/index.php) for updated information.

Abstracts and Speaker Biographies

"Nitty Gritty Data Set Attributes", by Diane Olson, SAS Institute Inc.

Most programmers are familiar with the directive, "Know your data." But not everyone knows about all the metadata stored in a SAS® data set or understands what to do with this information. This paper covers the majority of these attributes, how to obtain them, why they are important, and what you can do with them. For example, data sets that have been around for a while might have an inordinate number of deleted observations that you are carrying around unnecessarily. Or you might be able to quickly check to determine whether the data set is indexed—and if so, by what variables—to increase your program's performance. Also, engine-dependent data such as owner name and file size is found in PROC CONTENTS output, which is useful for understanding and managing your data. You can also use ODS OUTPUT to use the values of these many attributes programmatically. This paper shows you how.

"PROC COPY and PROC APPEND: A Developer's Secrets", by Diane Olson, SAS Institute Inc.

This presentation gives you the inside tricks about PROC COPY and PROC APPEND that the developer is dying to tell you. Want a clone of your data set (attributes and data) written to the same library? You can! Want to copy your data set using data set options? You can! Need a data set converted to a particular data representation and encoding? You can! Make the most of these basic, necessary procedures by applying the tricks you'll learn.

Diane Olson has been with SAS for a total of twenty-three years and is a principal systems developer in the Input/Output group in the Platform R&D Division. She supports the utility procedures, including PROC APPEND, CONTENTS, COPY, DATASETS, MIGRATE and DELETE. She also supports the new Extended Attributes for data sets.

"The REPORT Procedure: A Primer for the Compute Block", by Jane Eslinger, SAS Institute Inc.

It is well known in the world of SAS® programming that the REPORT procedure is one of the best procedures for creating dynamic reports. However, you might not realize that the compute block is where all of the action takes place! Its flexibility enables you to customize your output.

This paper is a primer for using a compute block. With a compute block, you can easily change values in your output with the proper assignment statement and add text with the LINE statement. With the CALL DEFINE statement, you can adjust style attributes such as color and formatting. Through examples, you learn how to apply these techniques for use with any style of output. Understanding how to use the compute-block functionality empowers you to move from creating a simple report to creating one that is more complex and informative, yet still easy to use.

Jane Eslinger is a Technical Support Analyst at SAS Institute Inc., in Cary, NC. She supports the REPORT procedure, ODS, and other Base SAS procedures. Before she joined SAS, Jane worked as a statistical programmer in the social science and clinical research fields. She is a graduate of NC State University with a Bachelor of Science in Statistics.

"Staying Relevant in a Competitive World: Using the SAS® Output Delivery System to Enhance, Customize and Render Reports", by Chevell Parker, SAS Institute Inc.

Technology is always changing. To succeed in this ever-evolving landscape, organizations must embrace the change and look for ways to use it to their advantage. Even standard business tasks such as creating reports are affected by the rapid pace of technology. Reports are key to organizations and their customers. Therefore, it is imperative that organizations employ current technology to provide data in customized and meaningful reports across a variety of media. The SAS Output Delivery System (ODS) gives you that edge by providing tools that enable you to package, present and deliver report data in more meaningful ways, across the most popular desktop and mobile devices.

To begin, the presentation illustrates how to modify styles in your reports using the ODS CSS style engine, which incorporates the use of cascading style sheets (CSS) and the ODS document object model (DOM). You also learn how you can use SAS ODS to customize and generate reports in the body of email messages. Then the paper discusses methods for enhancing reports and rendering them in desktop and mobile browsers by using the HTML and HTML5 ODS destinations. To conclude, the presentation demonstrates the use of selected SAS ODS destinations and features in practical, real-world applications.

Chevell Parker is a member of the Foundation SAS Group within SAS Technical Support Division at SAS. His main support areas include the Output Delivery System and XML Technologies. Chevell joined SAS in 1993.

Immediately following our afternoon meeting we will host our second annual BASUG mixer! We hope that you can join us for this event.

BASUG Evening Mixer Details

What	Come and enjoy drinks and appetizers with the SAS presenters and your BASUG colleagues. We'll be up on the 11th floor of the Microsoft building, with a stunning view of the Charles River and the Boston skyline. This will be a great chance to meet your fellow SAS users, and schmooze with our speakers in a friendly and informal setting.
When	Friday, September 25, 2015 5:00PM - 7:30PM
Where	Microsoft New England Research & Development Center (NERD) [1] Conference Center, 11th Floor One Memorial Drive, Cambridge MA 857-453-6000
Directions	Please visit the meeting site directions page (http://microsoftnewengland.com/About)
How to Register	Individual, on-line registration required. Sorry, NO WALK-INs. Register Now! (http://www.basug.org/index.php?p=eventreg)
Payment	Tickets include food and 2 drink tickets $5 -- if paid on-line by September 16th, 2015 $10 -- if paid on-line by NOON on September 24th, 2015 $15 -- at the door (checks only)
Contact	If you have questions about the meeting, please contact the event organizers (mailto:SeabrookMLM@comcast.net)

BASUG Contacts

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> Boston MA 02117

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[1] *The Microsoft New England Research & Development Center (NERD) is a research and software innovation campus located in the heart of Cambridge, Massachusetts. The NERD vertical campus spans two buildings with its primary presence and conference center located at One Memorial Drive and a recently renovated and expanded space located at One Cambridge Center. NERD is home to some of Microsoft's most strategic teams including Microsoft Research New England, Microsoft Application Virtualization (App-V),*

SharePoint Workspace, Microsoft Technical Computing, Microsoft Advertising, Microsoft Lync, Microsoft Office 365 and more. NERD has become a hub of activity for the local tech community and has hosted more than 500 events and welcomed more than 40,000 visitors during the past two years.