

BASUG Quarterly Meeting Announcement

Topic: SAS® Efficiency and Use of Table Lookups

When: Wednesday, March 21, 2007, 8:15 AM – 12:00 noon

Where: PLEASE NOTE NEW VENUE : **Holiday Inn Brookline**, 1200 Beacon Street, Brookline, MA 02446
(Directions below)

How: Individual, **On-Line Registration Required**. No Email!

To register, please visit: <http://www.basug.org/register.php3>

Contact: If you have questions about the meeting contact Lori Goldman (Lori.Goldman@Ingenix.com) or Steve Freitas (sfreitas76@yahoo.com)

Agenda*

- 8:15 - 8:45 Sign in and Refreshments
- 8:45 - 9:00 Meeting Announcements and Introductions
- 9:00 - 9:45 *Look Me Up Baby: The whys and wherefores of Table Lookup*
- 9:45 - 10:00 Break
- 10:00 - 10:20 *Coders Corner*
- 10:20 - 12:00 *The Most Important Efficiency Techniques*

*Times are approximate and subject to change; check the BASUG website (www.basug.org) for updated information.

Abstracts and Bios

Look Me Up Baby: The whys and wherefores of table lookup

By Robert Rosofsky

Health Information Systems Consulting

Given one or more values, obtain another set of values. That is the principle of table lookup, found as a frequently used function in all modern information systems. This presentation will discuss hard-coded methods, merge methods, and methods intrinsic to use of SAS's user-defined FORMATS for enabling table lookup in your systems.

The presentation will cover single and multiple keys to look up values and methods for obtaining single or multiple values from within tables. Both the functional requirements and coding samples will be provided.

The Most Important Efficiency Techniques

By Bob Virgile

How do you begin to make your programs more efficient? This presentation organizes programming tasks into the types of functions we all perform (sorting data, manipulating files, summarizing data, to name a few), and examines programming techniques to speed

up the process. While there are many simple techniques and a few more complex ones, the overall level is geared toward programmers who have been using SAS for around six months.

We will also have a "Coder's Corner," with the topic and speaker to be determined.

Speaker Biographies

Robert Rosofsky

To improve patient care and public health through the effective use of information systems, Robert Rosofsky has been developing and implementing health information systems for over two decades in both the public sector and recently as an independent consultant. He offers services in project management, systems analysis, SAS data management/statistical programming, and SAS training.

Bob Virgile

Bob Virgile is an independent SAS trainer and consultant, with over 20 years of experience designing and teaching SAS classes. He has written two books for SAS Institute, and formerly composed the problem-solving contests for NESUG and SUGI. He is the only person to be formally barred from participating in the NESUG SAS Bowl contest, due to superior SAS knowledge.

BASUG MEMBERSHIP

Keep your BASUG Membership up-to-date! Print out a membership form from our website, and bring it with you to the meeting (along with your check). Please note that we have discontinued Corporate Memberships - we now provide only Individual Membership at \$25 annually. For more information on our membership policy, or to print out a form visit:

<http://www.basug.org/basugj.shtml>

Directions to the
Brookline Holiday Inn
(This is a New Meeting Venue for BASUG)
1200 Beacon Street
(Less than 1/2 mile east of Coolidge Corner)
Brookline, MA 02446
617-277-1200

DRIVING

From Boston: Take I-90 West to Exit 18. Follow Cambridge signs to Storrow Drive, Kenmore Square Exit. Take an immediate right onto Beacon Street, straight ahead for 2 miles.

From South of Boston: Take Route 128 North (I-95) to Exit 24 (Massachusetts Turnpike or I-90). Take I-90 East to Exit 18. When you exit, follow Cambridge signs to Storrow Drive, Kenmore Square Exit. Take an immediate right onto Beacon Street, straight ahead for 2 miles.

From Western Mass: Take I-90 East to Exit 18. When you exit follow Cambridge signs to Storrow Drive, Kenmore Square Exit. Take an immediate right onto Beacon Street, straight ahead for 2 miles.

From New Hampshire: Take I-93 South to Route 128 South (I-95) to Exit 24 (Massachusetts Turnpike or I-90). Take I-90 East to Exit 18. When you exit, follow Cambridge signs to Storrow Drive, Kenmore Square Exit. Take an immediate right onto Beacon Street, straight ahead for 2 miles.

From Rhode Island: Take I-95 North to Route 128 North (I-95) to Exit 24 (Massachusetts Turnpike or I-90). Take I-90 East to Exit 18. When you exit, follow Cambridge signs to Storrow Drive, Kenmore Square Exit. Take an immediate right onto Beacon Street, straight ahead for 2 miles.

Parking

The hotel has a parking garage attached with an entrance off Beacon Street. The rates are \$5 for the first hour and \$1 for each additional hour. There is also an abundance of on-street meter parking.

PUBLIC TRANSPORTATION

See www.mbta.com for detailed T schedule. The T Stop across the street from the motel is the *St Paul Stop* on the C Train on the Green Line.

The hotel's Directions can be found here:

<http://www.ichotelsgroup.com/h/d/hi/1/en/hotel/BKLMA/transportation>

- BASUG CONTACTS

Mailing Address: BASUG, PO Box 253, Boston, MA 02117

To email our Webmaster: basugwm@basug.org

BASUG Quarterly Meeting Announcement

Topic: How the Experts Do It: See how Hash Tables and SAS[®] Indexes can enrich your life

When: Wednesday, June 20, 2007, 8:15 AM – 12:00 PM

Where: **Holiday Inn Brookline**

1200 Beacon Street,

Brookline, MA 02446

(Directions below)

How: Individual, **On-Line Registration Required**. No Email!

To register, please visit: <http://www.basug.org/register.php3>

Contact: If you have questions about the meeting contact Asli Memisoglu (asli_memisoglu@comcast.net) or Bob Virgile (rvirgile@comcast.net)

*Agenda**

- 8:15 - 8:45 Sign in and Refreshments
- 8:45 - 9:00 Meeting Announcements and Introductions
- 9:00 - 9:15 Hashing and Indexing-Why, When and Which?
- 9:15 - 10:15 The Basics of Using SAS[®] Indexes – By Michael Raithel
- 10:15 - 10:35 Break
- 10:35 - 11:00 Demo of the new SASCommunity and other new stuff
- 11:00 - 12:00 How Do I Love Hash Tables? Let Me Count The Ways! - By Judy Loren

*Times are approximate and subject to change; check the BASUG website (www.basug.org) for updated information.

How the Experts Do It: See How Hash Tables and SAS Indexes can enrich your life

Merging, joining, table-look-ups. Ever have to do this with your data? Not sure what Hash Tables are, or why you'd want to use them? Never used SAS Indexes before? Please join us at our June Quarterly meeting to learn about these two methods – and the pros and cons of each. We are delighted to have Judy Loren and Michael Raithel – both seasoned SAS users and speakers, who will guide us through the details of these powerful tools.

Abstracts and Bios

How Do I Love Hash Tables? Let Me Count The Ways!

By Judy Loren

Independent Consultant, Portland, ME

I love hash tables. You will, too, after you see what they can do. This paper will start with the classic 2 table join. Nothing new, you say? But this version does it in one step without sorting. And, it's the fastest method around. Next, you will see the use of hash tables to join multiple datasets on different keys in one pass, again with no sorting. How about unlimited recursive chained lookups (like when you need to update an ID through as many incarnations as it may have had)? Hash tables solve that one, too. And before you catch your breath, you'll see how to create n datasets from one (or more), where n is determined (at runtime) by the number of values encountered in a variable. No muss, no fuss. One step (well, OK, this one does require a prior sort) and you're done. We'll wind up with an outer join, just to show that hash tables can do that, too. Take a look at what they can deliver, and you'll be counting the ways you love hash tables before the year is out.

The Basics of Using SAS® Indexes

By Michael Raithel

If there was a SAS performance tool that could drastically reduce your program's I/O's and response time, and lower its CPU time, would you use it? Well, this type of performance tool exists; it is called "SAS Indexes." SAS Indexes can dramatically improve the performance of programs that access small subsets of observations from large SAS data sets. However, many SAS programmers never bother to learn about them or to use them. This is your opportunity to add this performance tool to your SAS programming repertoire. This paper discusses how to create simple and composite SAS indexes, how to determine which variables make good index key variables, when creating and using indexes is appropriate, what centiles are, and how to generate index usage messages. It illustrates how indexes can improve processing when subsetting and/or updating a large SAS data set and when an index can optimize a BY statement. After reading this paper, you will have the basic information that you need to create and use SAS Indexes to improve the performance of your SAS applications.

Speaker Biographies

Judy Loren

Judy Loren is a Senior Analyst at Health Dialog Analytic Solutions, which partners with insurance payers to improve member health and healthcare. Her current project involves designing and implementing measures of provider effectiveness and efficiency. An avowed SAS bigot, Judy is proud to follow in her grandmother's footsteps--the one who converted the State of Maine payroll to a computer-based system back when programming meant hard-wiring boards.

Michael Raithel

Michael A. Raithel has worked with Information Systems in the commercial and government

sectors since 1980. An internationally recognized expert in the use of SAS software in mainframe environments, he is the author of over twenty SAS technical papers and is a popular lecturer at SUGI and at regional SAS conferences. Michael has been a section chair at SUGI, SESUG, and NESUG, and he co-chaired NESUG in 1995. He has been a mainframe computer performance analyst for Marriott International and for the U.S. Customs Service, as well as an independent consultant specializing in mainframe and Unix performance issues. He now works as a Senior Systems Analyst for Westat. Michael has written three books on SAS software; the most current one being *The Complete Guide to SAS Indexes*. A copy of his first SAS book, *Tuning SAS Applications in the MVS Environment*, resides in the Smithsonian Institution of American History's Permanent Research Collection of Information Technology.

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The hotel's Directions can be found here:

<http://www.ichotelsgroup.com/h/d/hi/1/en/hotel/BKLMA/transportation>

Alternate T directions From D (Riverside) line:

- Exit T at Longwood.
- Facing Longwood Towers, turn right onto Chapel St.
- Proceed to the corner of Chapel St. and Colchester St. (about 30 feet)
- Turn sharply left onto Colchester St.
- Turn immediately right onto Hawes St.
- Proceed up Hawes St. to end
- Cross Beacon St. to opposite side
- Proceed left (west) on Beacon St.
- Hotel will be about 0.2 miles up on the right.

Other Alternative From D (Riverside) line:

- Exit T at Longwood.
- Facing Longwood Towers, turn left onto Chapel St.
- Turn right onto Longwood St.
- Turn right onto Kent St.
- Proceed two blocks to Beacon St.
- Cross Beacon St. and proceed west
- Hotel will be about 0.1 mile on the right.

Either way, the walk is only about .3 miles long (if that).

#66 Bus Line (Harvard Square to Dudley Square via Harvard Ave.)

- Arriving from either Boston or Cambridge
- Exit at corner of Harvard St. and Beacon St.
- Proceed down hill on Beacon St. (about 2 blocks east towards Boston)
- Arrive at St. Paul St.
- Hotel is on the corner on the "outbound" side.

NOTE: If you're not walking down a hill, then you're walking towards Cleveland Circle in the wrong direction!

http://www.mbta.com/schedules_and_maps/bus/routes/?route=66

- BASUG CONTACTS

Mailing Address: BASUG, PO Box 253, Boston, MA 02117

To email our Webmaster: basugwm@basug.org

BASUG Training Announcement

Wednesday July 18 and Thursday July 19, 2007

This announcement describes FOUR separate training workshops, offered over TWO days.

Come to any one, two, three, or four workshops.

Pre-registration and payment required!

Day 1: Wednesday, July 18th

Morning class: SAS 101: SAS Basics

Afternoon class: SAS 102: Functions

Day 2: Thursday, July 19th

Morning class: Introduction to SQL

Afternoon class: Advanced Topics in SQL

Where: Holiday Inn, Brookline (directions below)

Instructor: All workshops are taught by Ben Cochran

Price: See below

Contacts:

- Bruno Berszoner (Bruno_Berszoner@tufts-health.com)
- Eric Hamann (ehamann@wyeth.com)

**INDIVIDUAL, ON-LINE PRE-REGISTRATION
REQUIRED. NO EMAIL.**

NO EMAIL, PLEASE!

See details below.

These workshops are open to BASUG members only. If you are not currently a

member, you may join BASUG at the same time you register for a workshop. See details below.

~ Price ~

Price for single class:

- \$125 for any single ½ day class **if paid by check, post-marked by Monday, July 9, 2007**
- \$175 **at the door**
- \$25 **additional** if you're not currently a BASUG member: membership fee is \$25 for 2007

Price for each additional class:

- \$100 for each additional ½ day class **if paid by check, post-marked by Monday, July 9, 2007**
 - \$175 at the door
-

~ Details for Day 1, Wednesday July 18th ~

Morning Session

Topic: SAS 101: SAS Basics

Instructor: Ben Cochran

When:

- 8:00 – 8:30 Registration and continental breakfast
- 8:30 – 12:00 Class

How: See details below for registration instructions

Course description:

This is a foundation course that focuses on the Base SAS System and how to write programs that accomplish basic data processing tasks. Topics include: Basic SAS Concepts (such as running SAS interactively, program flow and syntax rules), SAS Dates, Accessing Data, Processing Data, Storing Data, and Analyzing Data. The course also covers Generating Basic Reports, which is an in-depth look at the PROC PRINT and PROC SORT statements. These let the user generate list reports and sort the dataset. The course finishes with a brief introduction to ODS.

Pre-requisite: None

Intended audience: Beginning SAS Users

Course materials: Provided in class

- 12:00 – 1:00 Lunch on your own
 - 1:00 – 1:30 Registration for afternoon session
-

Afternoon Session

Topic: SAS 102: SAS Functions

Instructor: Ben Cochran

When:

- 1:30 – 5:00

How: See details below for registration instructions

Course description:

This course focuses solely on the DATA Step and sheds much light on the power and functionality of the many Functions in the SAS System. It has been updated to include the new SAS9 functions. The course contents are:

Introduction to Data Manipulation

- The Structure of SAS Data Sets
- Processing Data with the SAS System.

SAS Functions

- Introduction to Functions
- Manipulating Numeric Data
- Manipulating Character Data
- Data Conversion
- Other Very Useful Functions

Pre-requisite: SAS 101 or equivalent experience with SAS.

Intended audience: Beginning and Intermediate SAS Users.

Course materials: Provided in class.

~ Details for Day 2, Thursday July 19th ~

Morning Session

Topic: Introduction to SQL

Instructor: Ben Cochran

When:

- 8:00 – 8:30 Registration and continental breakfast
- 8:30 – 12:00 Class

How: See details below for registration instructions

Course description:

This course is intended for both those who are brand new to the SAS System and those who have been using the SAS System for a few years but want to learn about programming with the SQL procedure. Students who take this course will acquire a deeper understanding of the SAS System and especially the SQL procedure. This understanding will help the student to write more efficient programs as well as utilize more features of the SQL procedure. The course contents are:

Introduction to PROC SQL

- Terminology
- Course Data

Retrieving Data from ONE Table

- Overview of the SELECT statement
- Selecting Columns from a Table
- Creating New Columns
- Sorting Data
- Retrieving Rows
- Grouping Data

Retrieving Data from SEVERAL Tables

- Introduction to Joins
- Combining Queries with SET Operators
- Creating Tables

Examining Business Applications

Pre-requisite: SAS 101 or equivalent experience with SAS

Intended audience: Beginning and Intermediate SAS Users

Course materials: Provided in class

- 12:00 – 1:00 Lunch on your own
 - 1:00 – 1:30 Registration for afternoon session
-

Afternoon Session

Topic: Advanced Topics in SQL

Instructor: Ben Cochran

When:

- 1:30-5:00

How: See details below for registration instructions

Course description:

The Advanced SQL Topics course extends the introductory course by covering indexes and views, subqueries, advanced techniques in the PROC SQL statement (such as debugging, using macros, and ODS) and accessing non-SAS data.

Advanced Data Selection Techniques

- Overview of PROC SQL
- Using Subqueries
- Using Correlated Subqueries

Creating Indexes and Views

- Introduction to Indexes
- Creating and Deleting Indexes
- Creating and Using SQL Views

Programming with PROC SQL

- Using Options to Debug Queries
- Improving Query Performance
- Using the Macro Facility with PROC SQL

Accessing NON-SAS Data (DBMS)

- The Environment
- Six Steps to Building a Data Mart
- Accessing Oracle Tables
- Accessing DB2 Tables
- Accessing Oracle Tables
- SAS V8 Enhancements to SAS/ACCESS

Advanced Operations Using PROC SQL

- Maintaining Tables
- Using Dictionary Tables
- Comparing Tables
- Counting Duplicate Rows in a Table

Using ODS with PROC SQL

Pre-requisite: Introduction to SQL course or equivalent

Intended audience: Intermediate SAS Users

Course materials: Provided in class

~ About the Instructor ~

Ben Cochran, formerly an instructor with the SAS Institute for 11 years, is certified to teach over a dozen SAS courses. He is now an independent consultant and trainer who is also a SAS Institute Alliance Partner. Before joining SAS Institute, Inc. in 1985, Ben initially honed his teaching skills in the academic arena as a college professor for nine years.

Ben has also authored and presented several papers at SAS Users Group International Conferences (now SAS Global Forum) and at regional meetings, including: Using SAS/EIS to Front-End and Exploit Your Data Warehouse (Chicago, 1996), Getting Started with the Multidimensional Report Object (SESUG, Jacksonville 1997), Getting Started with the SAS/MDDDB Server (SESUG, Norfolk, 1998), Customizing SAS/EIS Applications Using the SAS/MDDDB Server and User Written Methods (Miami Beach, 1999), Using the Passthrough Facility in PROC SQL to Access Sybase Tables (Indianapolis, 2000). In addition, Ben has taught SAS courses and presented present papers at PharmaSUG (Pharmaceutical SAS Users Group), Southern SAS Users Group, SESUG (South East SAS Users Group), NESUG (Northeast SAS Users Group), and MWSUG (MidWest SAS Users Group).

~ Registration Instructions and Refund Policy ~

Please read this entire section!

To register for one or more classes, you must follow these steps.

1. Preregister

Go online to pre-register by clicking the following link: <http://www.basug.org/register.php3>

**INDIVIDUAL, ON-LINE PRE-REGISTRATION
REQUIRED.**

NO EMAIL, PLEASE!

All registrants will receive an immediate email confirmation of their pre-registration. Within 72 hours, you will then receive another e-mail with a customized invoice for the training based on your membership status.

Seats are limited, so register early! Seating is guaranteed only for pre-paid registrants.

2. Mail Invoice

Complete the invoice form and mail it along with your check payable to BASUG by Monday July 9th to:

BASUG
PO Box 253
Boston, MA 02117

3. Pay Dues

Note that these classes are open to BASUG members only, meaning your 2007 dues must be paid up in order to attend! If you are not currently a member, your invoice will include the 2007 BASUG membership dues.

If you have any questions about your BASUG membership status, please contact our Membership Coordinator (Robert Rosofsky) at: Robert.Rosofsky@verizon.net

4. Mail-in Deadline

Please do not mail any checks after July 9th . If you miss the mail-in deadline, bring your completed invoice form and a check made payable to BASUG to cover the at-the-door tuition rate (of \$175 per class) plus any membership fees due as specified in your invoice form.

Full payment is due by the day of the class. There will be NO EXCEPTIONS to this. No credit cards, no cash please!

5. Refund Policy

If you need to cancel, you will receive a full refund if you notify both Bruno Berszoner <Bruno_Berszoner@tufts-health.com> and Eric Hamann <ehamann@wyeth.com> by Wednesday, July 11th. No refunds will be provided after July 11th, 2007.

~ DIRECTIONS TO THE TRAINING ~

Directions to the Brookline Holiday Inn can be found at <http://www.basug.org/directions.html>.

~ MEMBERSHIP ~

Want to become a member without signing up for a workshop? Click here:
<http://www.basug.org/basugj.shtml>

~ BASUG GENERAL INFORMATION ~

Mailing Address:

BASUG
PO Box 253
Boston, MA 02117

Website: <http://www.basug.org/>

E-mail Webmaster: basugwm@basug.org

Subscribe to e-mail list: Subscribers receive automatic e-mail notification of upcoming meetings, courses, and conferences of interest to local SAS users.

To subscribe to the BASUG message list, send a message to majordomo@basug.org, and in the BODY of the message specify:

subscribe basugnews

Unsubscribe: To unsubscribe to the BASUG message list, send a message to majordomo@basug.org, and in the BODY of the message specify:

unsubscribe basugnews

BASUG Quarterly Meeting Announcement

Topic: Statistics: New ways to analyze and look at your data

When: Friday, September 21, 2007, 8:15 AM– 12:00 PM noon

Where: Holiday Inn Brookline
1200 Beacon Street
Brookline, MA 02446
617-277-1200
(Directions below)

How: INDIVIDUAL, ON-LINE REGISTRATION REQUIRED. NO EMAIL!

To register for this meeting, please visit: <http://www.basug.org/register.php3>

Contact: If you have questions, please contact the meeting organizers by email:
sept_meeting@basug.org.

Agenda:*

- | | |
|---------------|---|
| 8:15 - 8:45 | Sign in and Refreshments |
| 8:45 - 9:00 | Meeting Announcements and Introductions |
| 9:00 –10:15 | <i>Modern methods for longitudinal data analysis: Are developments in statistical software finally catching up?</i>
<i>By Garrett Fitzmaurice , Sc.D., Harvard Medical and School of Public Health</i> |
| 10:15 – 10:30 | Break |
| 10:30 – 11:45 | <i>Creating statistical graphics in SAS 9.2: What every statistical user should know</i>
<i>By Robert N. Rodriguez, Ph.D., SAS Institute</i> |
| 11:45 – 12:00 | Final questions and closure |

**These times are approximate and subject to change; check the BASUG website (www.basug.org) for updated information.*

Abstracts and Bio

Modern methods for longitudinal data analysis: Are developments in statistical software finally catching up?
by Garrett Fitzmaurice, Sc.D.

In the past 20 years, there have been remarkable developments in methods for longitudinal data analysis. Despite these important advances, the methods have been somewhat slow to move into the mainstream. To bridge the gap between methods development and application, appropriate statistical software is required. In general, the methods available via commercially available software tend to lag behind the recent advances in statistical methods; longitudinal data analysis is not exceptional in this regard. However, the relatively recent introduction of new procedure for analyzing longitudinal and cluster-correlated data has made these methods far more accessible to practitioners. This presentation will provide an overview of methods for the analysis of longitudinal data, including linear mixed effects models, generalized estimating equations (GEE), and generalized linear mixed models (GLMMs), and their implementations using PROC MIXED, PROC GENMOD, and PROC

NLMIXED in SAS.

[Garrett Fitzmaurice](#) is Associate Professor of Psychiatry (Biostatistics) at the Harvard Medical School, Associate Professor in the Department of Biostatistics at the Harvard School of Public Health and Foreign Adjunct Professor of Biostatistics at the Karolinska Institute, Sweden. He is a Fellow of the American Statistical Association and a member of the International Statistical Institute. He has served as Associate Editor for the *Journal of the Royal Statistical Society, Series B* and *Biostatistics*; currently, he is Statistics Editor for the journal *Nutrition* and Associate Editor for *Biometrics*. His research and teaching interests are in methods for analyzing longitudinal and repeated measures data. A major focus of his methodological research has been on the development of statistical methods for analyzing repeated binary data and for handling the problem of attrition in longitudinal studies. Much of his collaborative research has concentrated on applications to mental health research, broadly defined.

Creating statistical graphics in SAS 9.2: What every statistical user should know
by Robert N. Rodriguez

SAS 9.1 introduced an experimental extension to the Output Delivery System (ODS) that enabled over two dozen SAS/STAT and SAS/ETS procedures to create statistical graphics as automatically as they create tables. This new functionality, referred to as “ODS Graphics”, requires minimal procedure syntax, and it provides displays that are commonly needed in data analysis and statistical modeling, including scatter plots, histograms, and box-and-whisker plots. Many ODS features, such as styles and destination statements, apply equally to tables and graphs.

With the production release of ODS Graphics in SAS 9.2, even more statistical procedures are being enabled to create graphics. For example, PROC RSREG produces contour and ridge plots, and PROC LOGISTIC produces effects plots. In addition, new SAS/GRAPH procedures, as well as existing SAS/QC procedures, take advantage of this functionality to produce a variety of graphics. New ODS styles for statistical work are being added, and an interactive graphics editor will be provided for making changes such as modifying titles and annotating points.

This presentation is intended for statistical users. In addition to describing forthcoming functionality in SAS 9.2, it will cover the basics of creating, modifying, and managing statistical graphics with ODS Graphics in SAS 9.1.

[Bob Rodriguez](#) joined SAS in 1983 and is currently a director in SAS R&D with responsibility for the development of statistical software, including SAS/STAT and SAS/QC. He received his Ph.D. in statistics from the University of North Carolina in 1977, and was a staff research scientist at General Motors Research Laboratories from 1977 until 1983. Bob is active in the American Statistical Association, where he serves as vice president.

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Alternate T directions From D (Riverside) line:

- Exit T at Longwood.
- Facing Longwood Towers, turn right onto Chapel St.
- Proceed to the corner of Chapel St. and Colchester St. (about 30 feet)
- Turn sharply left onto Colchester St.
- Turn immediately right onto Hawes St.
- Proceed up Hawes St. to end
- Cross Beacon St. to opposite side
- Proceed left (west) on Beacon St.
- Hotel will be about 0.2 miles up on the right.

Other Alternative From D (Riverside) line:

- Exit T at Longwood.
- Facing Longwood Towers, turn left onto Chapel St.
- Turn right onto Longwood St.
- Turn right onto Kent St.
- Proceed two blocks to Beacon St.
- Cross Beacon St. and proceed west
- Hotel will be about 0.1 mile on the right.

Either way, the walk is only about .3 miles long (if that).

#66 Bus Line (Harvard Square to Dudley Square via Harvard Ave.)

- Arriving from either Boston or Cambridge
- Exit at corner of Harvard St. and Beacon St.
- Proceed down hill on Beacon St. (about 2 blocks east towards Boston)
- Arrive at St. Paul St.
- Hotel is on the corner on the "outbound" side.

NOTE: If you're not walking down a hill, then you're walking towards Cleveland Circle in the wrong direction!

http://www.mbta.com/schedules_and_maps/bus/routes/?route=66

BASUG CONTACTS

BASUG's Mail Address: BASUG PO Box 253 Boston, MA 02117

To email our Webmaster: basugwm@basug.org

BASUG Quarterly Meeting Announcement

Topic: SAS® and Microsoft® Office: Making the Most of a Reluctant Alliance

When: Thursday, December 6, 2007, 8:15 AM – 11:45 AM

Where: **Holiday Inn Brookline**
1200 Beacon Street,
Brookline, MA 02446
(Directions below)

How: Individual, **On-Line Registration Required.** No Email!

To register, please visit: <http://www.basug.org/register.php3>

Contact: If you have questions about the meeting contact Asli Memisoglu
(asli_memisoglu@comcast.net)

Agenda*

8:15 - 8:45	Sign in and Refreshments
8:45 - 9:00	Announcements
9:00 - 10:00	So, Your Data are in Excel! Why? by Ed Heaton, Westat
10:00 - 10:20	Coder's Corner: Excel® and SAS® : When Dates Go Bad by James Zeitler, Harvard Business School
10:20 - 10:40	Break
10:40 - 11:20	Proc Tabulate and ODS RTF: The Perfect Fit for Complex Tables by Louise Hadden, Abt Associates Inc.
11:20 - 11:40	Smooth Writing with In-line Formatting by Louise Hadden, Abt Associates Inc.
11:40 - 11:45	Closing remarks & announcements

*Times are approximate and subject to change; check the BASUG website (www.basug.org) for updated information.

Abstracts and Bios

So, Your Data are in Excel! Why?

by Ed Heaton
Westat, Rockville, MD

You say your customer sent you the data in an Excel workbook. Well then, I guess you'll have to work with it. This paper will discuss some of the quirks you will find when your data are stored in an Excel workbook. It will cover such things as:

- Naming conventions,
- Character length issues,
- Date, time, and datetime values,
- Mixed data types,

- Sorting, and caching.

We will demonstrate - through the Display Manager - SAS code and techniques to make your life with Excel more predictable and your work less prone to error. We will use the Excel engine that is available in SAS 9.1.3 when you license SAS/ACCESS for PC Files.

When Dates Go Bad

by James Zeitler

Harvard Business School, Boston, MA

Both SAS® and Excel® determine dates as a number of days since an initial date, so each stores dates as integers. And, most of the time, when data are transferred between Excel and SAS, through the SAS IMPORT and EXPORT wizards, for example, the conversion between SAS dates and Excel dates is seamless. But sometimes something untoward happens.

PROC TABULATE and ODS RTF: The Perfect Fit for Complex Tables

by Louise Hadden

Abt Associates Inc., Cambridge, MA

With the great advances in output design SAS and ODS offers the SAS programmer, the bar has definitely been raised in terms of producing presentation quality SAS output. Analysts frequently design table formats in packages such as Microsoft Word and Excel, and request that the SAS programmer fit SAS output to their specifications.

This paper will present a challenge and solution, using PROC TABULATE and the RTF destination to fit SAS output into a pre-designed template. As the title indicates, a technique to rotate column headers without having to post-process in Microsoft Word will be demonstrated, using PC SAS Version 8.2 and PC SAS Version 9.1, as well as UNIX SAS Version 8.2.

Smooth Writing with In-Line Formatting

by Louise Hadden

Abt Associates Inc., Cambridge, MA

PROC TEMPLATE and ODS provide SAS programmers with the tools to create customized reports and tables that can be used multiple times, for multiple projects. For ad hoc reporting or the exploratory or design phase of creating custom reports and tables, SAS provides us with an easy option: in-line formatting. There is a greater range of in-line formatting available in SAS 9.2, but the technique is still useful today in SAS versions 8.2 and 9.1, in a variety of procedures and output destinations. Several examples of in-line formatting will be presented, including formatting titles, footnotes and specific cells, bolding specified lines, shading specified lines, and publishing with a custom font.

Speaker Biographies

Ed Heaton

Ed Heaton has been programming in SAS since 1988 – professionally since 1993. He has presented papers at the SAS Global Forum and in-house, local, and regional SAS Users Groups since 2000. Ed was the academic chair of SESUG 2007. As a senior systems analyst at Westat, Ed teaches SAS in formal classes, aids other SAS programmers through

the SAS Help desk, writes papers for the Westat intranet, and develops corporate applications. Ed is also the administrator for SAS Enterprise BI Server at Westat.

Louise Hadden

Louise Hadden has been using SAS since the earth was a primordial soup. She still has her original, single volume SAS manual, albeit worn to pieces. She is particularly interested in producing camera-ready and web-ready output directly from SAS, using ODS, BASE SAS, SAS/GRAPH and SAS/STAT.

James Zeitler

For the past six years James Zeitler has served as Research Database Analyst for Baker Research Services at the Harvard Business School. A large part of his job is to provide statistical programming support for research in business-related disciplines conducted by faculty and doctoral students. Prior to his role at the Harvard Business School he served a similar role at Bentley College for over fifteen years. Mr. Zeitler is a veteran user and has used SAS for well over twenty years.

BASUG Membership

Keep your BASUG Membership up-to-date! Print out a membership form from our website, and bring it with you to the meeting (along with your check). Please note that we have discontinued Corporate Memberships - we now provide only Individual Membership at \$25 annually. For more information on our membership policy, or to print out a form visit:

<http://www.basug.org/basugj.shtml>

Directions

Brookline Holiday Inn

1200 Beacon Street

(Less than 1/2 mile east of Coolidge Corner)

Brookline, MA 02446

617-277-1200

DRIVING

From Boston: Take I-90 West to Exit 18. Follow Cambridge signs to Storrow Drive, Kenmore Square Exit. Take an immediate right onto Beacon Street, straight ahead for 2 miles.

From South of Boston: Take Route 128 North (I-95) to Exit 24 (Massachusetts Turnpike or I-90). Take I-90 East to Exit 18. When you exit, follow Cambridge signs to Storrow Drive, Kenmore Square Exit. Take an immediate right onto Beacon Street, straight ahead for 2 miles.

From Western Mass: Take I-90 East to Exit 18. When you exit follow Cambridge signs to Storrow Drive, Kenmore Square Exit. Take an immediate right onto Beacon Street, straight ahead for 2 miles.

Alternate Directions from the West: Take Exit 20 East off Route 128 towards Boston/Brookline onto Route 9. (Route 9 is Boylston St. once you get to Brookline.) At the

corner of Boylston/Washington Streets in Brookline Village (Dunkin Donuts and fire station on your right) take a left onto Washington St. Stay on the right after your turn and take the right fork continuing up Harvard Street past the Village and take a right at the next light onto School St., which runs into St. Paul St. at the corner of Aspinwall Ave. Continue on St. Paul, crossing Beacon Street, and the hotel will be on your right.

From New Hampshire: Take I-93 South to Route 128 South (I-95) to Exit 24 (Massachusetts Turnpike or I-90). Take I-90 East to Exit 18. When you exit, follow Cambridge signs to Storrow Drive, Kenmore Square Exit. Take an immediate right onto Beacon Street, straight ahead for 2 miles.

From Rhode Island: Take I-95 North to Route 128 North (I-95) to Exit 24 (Massachusetts Turnpike or I-90). Take I-90 East to Exit 18. When you exit, follow Cambridge signs to Storrow Drive, Kenmore Square Exit. Take an immediate right onto Beacon Street, straight ahead for 2 miles.

Parking

The hotel has a parking garage attached with an entrance off Beacon Street. The rates are \$5 for the first hour and \$1 for each additional hour. There is also an abundance of on-street meter parking.

PUBLIC TRANSPORTATION

See <http://www.mbtta.com/> for detailed T schedule. The T Stop across the street from the motel is the *St Paul Stop* on the C Train on the Green Line.

The hotel's Directions can be found here:

<http://www.ichotelsgroup.com/h/d/hi/1/en/hotel/BKLMA/transportation>

BASUG CONTACTS

Mailing Address: BASUG, PO Box 253, Boston, MA 02117

To email our Webmaster: basugwm@basug.org

Introduction to Macros!

BASUG Half-Day Training Session

Topic: Macro Language Overview

Instructor: Bob Virgile
Robert Virgile Associates, Inc.

Bob Virgile is one of our most popular BASUG instructors. He has been developing and teaching SAS courses since 1983. He formerly created the problem-solving contests for SUGI and NESUG, has presented dozens of papers, and has written two books for SAS Institute. He is the only person to be officially barred from the NESUG SAS Bowl competition due to superior SAS knowledge.

When: Thursday, December 6, 2007, 1:00-5:00

Price: \$125 (if paid by check postmarked by Tuesday, November 27, 2007)
\$150 (paid at-the-door)
See details below

Summary: You know SAS but you're envious of your colleagues who know macros. Don't be intimidated. This course is intended to get you to easily climb that mountain of greater SAS programming skills. It will cover a broad range of macro topics, including both enough to get started and exposure to more complex topics you will encounter along the way.

Audience: This course is intended for SAS programmer/analysts looking to extend their skills by utilizing SAS macro language. You must have familiarity with the DATA and PROC steps and be interested in learning how to reduce repetitive code and work towards more dynamic, data-driven coding practices.

Benefits: Students will learn about:

- Creating and using macro variables
- Creating macros to generate SAS code
- An overview of more advanced features

Contact: If you have questions about the course contact: Sally Skinner (sally.skinner@tufts.edu) or Robert Rosofsky (Robert.Rosofsky@verizon.net)

Registration: ***Pre-registration is required. Please see detailed information below.***

Course Topics

Overview: Types of Uses for Macro Language

Assigning and Resolving Values for Macro Variables

CALL SYMPUT to Interface with the Data Step

Defining and Invoking Macros

Macro Programming Statements

Brief explanations of more complex topics:

- Timing of SAS Language vs. Macro Language
- Interactive Macro Windows
- Macro Quoting
- Macro Functions
- Libraries of Macros

Registration and Payment Instructions for the Course

Please read this entire section carefully!

1. You **must pre-register** for this training, by going to this site:

<http://www.basug.org/register.php3>

INDIVIDUAL, ON-LINE PRE-REGISTRATION IS REQUIRED FOR TRAINING. NO EMAIL!

All registrants will receive an immediate email confirmation of their pre-registration. Within 72 hours you will then receive another e-mail, with a customized invoice for the training, based on your membership status.

Seats are limited, so register early! Seating is guaranteed only for **pre-paid** registrants.

2. Complete the invoice form and mail it along with your check, postmarked by Tuesday, November 27, 2007 to our Treasurer at:

**BASUG
PO Box 253
Boston, MA 02117**

3. Note that this class is open to BASUG members only. This means that your 2007 \$25 individual membership dues must be paid up in order to attend! If you are not currently a member, your invoice will include the \$25 fee for 2007 BASUG membership dues.

If you have any questions about your BASUG membership status, please contact our Membership Coordinator (Robert Rosofsky) at: Robert.Rosofsky@Verizon.net

4. **Please do not mail any checks after Tuesday, November 27, 2007.** If you miss the mail-in deadline, bring your completed invoice form and a check made payable to BASUG to cover the at-the-door tuition rate of \$150, plus any \$25 membership fees due, as specified in your invoice form. For walk-ins, we will only be able to accommodate people on a first-come, first-served basis until seats are filled.

Full payment is due by the day of the class. There will be NO EXCEPTIONS. As a small voluntary organization, we cannot accept credit cards at this time. We also will not handle cash, so checks only please.

- 5 **REFUND POLICY:** To receive a full refund, notify either of the meeting coordinators (see "Contact" above) by 5PM on November 27, 2005. ***After November 27, we will refund your payment only if we can fill your seat with attendees at the door.***

MEMBERSHIP

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<http://www.basug.org/basugj.shtml>

DIRECTIONS TO THE TRAINING

Directions to the Brookline Holiday Inn can be found at <http://www.basug.org/directions.html>.

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