



HARTFORD AREA SAS® USERS GROUP

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Fourth Quarter, November 2008

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The HASUG Flash is available for reading on the World Wide Web at
<http://www.hasug.org>

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Chairperson's Notes (Janet Stuelpner, SAS Institute)

Coming up is our last meeting of the year. We have had some excellent speakers this year on a variety of topics from simple to complex. I would like to thank all of our speakers for taking the time to visit Connecticut (for those who came from out of state) and share their expertise and information with us. I would also like to thank our sponsoring hosts. Without them, we wouldn't be able to continue our meetings and bring you the fine speakers who enjoy coming up to our user group. Both new host sites and old have been great in providing space and refreshments for our group.

Our next meeting is going to be held at Foxwoods Casino in Ledyard, CT. Our meetings start promptly at 9:00am. This is just a reminder to leave a bit of extra time to get from your car to the Acapulco Room where the meeting is going to be held. Although I have never been up there, I have been told that it will take at least 10 minutes to walk from the parking area to the meeting room. Remember to register for the meeting so that we can plan appropriately.

The fall is the season when not only do the leaves turn beautiful colors and fall off the trees, but a time when all of the regional SAS User group meetings are held. No matter which one you attend, the information is interesting, current and always informative. If you have never been to NESUG you should consider attending next year. The meetings are smaller than SAS Global Forum and give you the opportunity to speak with colleagues about your experiences and learn more about the ways in which others use the SAS

software. As a testing ground, you might consider speaking at our local user group. We are always looking for people to speak about all kinds of topics. It is a great opportunity to test your presentation in a friendly, small environment. Please contact any of the members of the steering committee to share your ideas.

Our Google Groups list continues to grow. This is a reminder for you. If you want to get emails with messages and announcements from HASUG, you must join the HASUG Google Groups. The directions are located on the HASUG web site. Click the link and fill in the information. It is easy to become a part of the group. Don't miss anything, sign up today. We do not give out our membership list to anyone, so your information is safe.

August Meeting Highlights

(Karol Katz, Yale University)
(Charles Patridge, Independent Consultant)

The third quarter HASUG meeting was held on August 21 at New Haven Health Systems. The speakers were Cynthia Zender, SAS Institute and Dana Rafiee, Destiny Corporation.

Cynthia Zender's topic was "Creating Complex Reports". Cynthia showed her gallery of different styled reports and gave the audience the opportunity to choose two she would explain in detail because of time constraints.. She explained that all reports have different purposes. A report to "just give me the number" does not need cosmetics, however a nice, easy to read, appearance is very important in a production report which will be sent to key people in the organization.

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Cynthia stated, when designing reports it is better to start with an idea of what the report should look like and work backward to the data.

Steps to consider are:

- Detail or summary
- Data is ready or transformations are needed
- How important is report appearance

The answers will help you decide which procedure and ODS destination to use. Cynthia displayed the code and generated a Summary Sales Report with different ordering, and Demographic report. She explained key points in the syntax and followed with a short question and answer period. I found her presentation very useful and it will help me when preparing my next report.

The Complex Reports paper is located at:

<http://www2.sas.com/proceedings/forum/2008/173-2008.pdf>

The code for all the reports can be retrieved at the following link.

http://support.sas.com/rnd/papers/sgf2008/complex_reports.zip

–Karol Katz

Dana Rafiee did an excellent job with presenting the newest wave of technology coming down the pike for SAS Users. That technology is “*In Database Processing*”.

Instead of submitting a query to SQL via SAS (a number of different ways), and then piping the data back and forth for the query execution (lots of I/O), *In Database Processing* accepts the incoming SAS query and performs the

query within the Database itself. This can use a tremendous amount of the Database’s disk capacity, such as 108 minicomputers and massive parallel processing to take existing queries that run upwards to 11 plus hours and do them in less than 11 MINUTES!!!

Now that is REAL PRODUCTIVITY for the SAS community by any standard. The biggest problem people will face in the future is being able to multi-task as fast as this *In Database Processing* <grin>! Since SAS is partnering with database companies, we can expect this to be the next path the SAS community will be following in the coming years.

“Having started a new position with Insurance Services Office (ISO) and its newly acquired ISO Innovative (IIA) Analytics, I can really appreciate this ability to drastically reduce the execution times of my SAS tasks. ISO is well known in the P&C Insurance Industry for having LOTS of data – I mean LOTS – like hundreds, if not thousands, of terabytes of insurance data going back to its initial startup in the 1970s. So, this is a very hot issue for ISO and IIA, and we will be looking at such technology in the coming months.”

For those of you in the SAS community who are frustrated with having to wait hours for your SAS jobs to finish, you might wish to review Dana’s presentation and what Netezza has to offer for *In Database Processing*. Dana did an excellent job of explaining this technology and making it understandable as to why it works so well and fast.

–Charles Patridge

CALENDAR OF EVENTS

Future General Meetings and Conferences:

Feb 19, 2009
HASUG Meeting
The Hartford, Simsbury, CT
March 22-25, 2009
SAS Global Forum, Washington, DC
May 21, 2009
HASUG Meeting
Wellpoint, North Haven, CT
May 31-June 3, 2009
PharmaSUG, Portland, OR

HASUG Steering Committee Meetings:

Nov 20, 2008
Immediately after HASUG meeting
Dec 18, 2008
Conference call, 11:30-12:30
Feb 19, 2009
Immediately after HASUG meeting
March 19, 2009
Conference call, 11:30-12:30
May 21, 2009
Immediately after HASUG meeting
June 18, 2009
Conference call 11:30-12:30

NEXT HASUG MEETING ANNOUNCEMENT

Our next meeting is on:
Thursday November 20, 2008
from 9:00 am to noon
at
Foxwoods Resort Casino Acapulco A
39 Norwich-Westerly Road
Ledyard, CT 06339

Please allow extra time to travel, at least 10 minutes, to get from parking to the meeting room.

Our topics and Speakers are:

“Tips and Tricks for Creating the Reports Your Clients Need to See” Mike Molter, INC Research

Advanced reporting tools such as PROC REPORT have progressed by leaps and bounds in terms of options available to programmers for creating tables. Add to that the always-improving Output Delivery System (ODS) and it seems the sky is the limit for creating ready-for-delivery output straight from SAS. Just when we start believing this, reality exposes limitations. Templates, or shells of tables, including titles, footnotes, column headers, content, right down to the formatting, are designed to maximize readability, and to present the data in a way that allows the reader to make well-informed decisions – and without regard to programming challenges. Unfortunately for programmers, such tables can’t always be generated with the basic tools everyone talks about. In this presentation we will journey into some of the lesser known areas of PROC REPORT and ODS by looking at sample tables and identifying features that seem innocent on the surface, but require some innovation when the time comes to program them. Our journey will take us into PROC REPORT features such as ACROSS variables. We’ll go behind the scenes to see how a report is constructed, and ultimately, to the lesser known temporary variable. We’ll also get into certain ODS features such as styles, in-line formatting, and the use of destination-specific markup. At the end of our journey we will have solved the challenges presented in the samples.

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Along the way, we will have discovered some of the documentation hiding places of these and many other PROC REPORT and ODS facts.

Mike Molter is a SAS programmer for INC Research and makes his home in Cary NC. With a Bachelors and Masters degree in mathematics from Western Michigan University, he began learning SAS in 1999 in the healthcare industry before moving to clinical trials in 2003. Mike's programming interests include ODS, PROC REPORT, and tool building through the macro facility and PROC TEMPLATE. Personal interests include science and history, cycling, triathlon, and the Detroit Red Wings.

**“Proc Template – A Place to Start”
Janet Stuelpner, SAS Institute, Inc.**

A template is a form, mold or pattern used as a guide to making something. The Template Procedure gives you the ability to customize your output. It allows you to change the appearance of a table or listing. You can modify the table or style definition or even create a new tagset. There are a whole bunch of templates that exist which you can use. However, if these are not appropriate for your data or you just want a new way to present the data, you can create your own. This presentation will try to demystify the process. It will take you from the template choices you have, through showing you how to start creating your own.

Janet Stuelpner has provided programming support in the areas of clinical trials, outcomes research, and the financial industry. Janet has been a

participant in many user groups on all levels as a speaker and section chair. She is currently the chairperson for the Hartford Area SAS Users Group (HASUG). Janet most recently joined SAS Institute as a Solutions Architect in the Health and Life Sciences Solutions Group.

Continuing With Education...
(Peter Prause, The Hartford)

The SAS Institute Regional Training Center in Glastonbury, CT is offering the following courses. Course information for these courses and many other non-local courses is available on the Internet at the support.sas.com web site. To register for a course or to get more information, phone SAS Institute at 1-800-333-7660.

- SAS Programming 1: Essentials
Nov 12 – 14
- Querying and Reporting Using SAS
Enterprise Guide
Dec 4 – 5
- SAS Programming 2: Data
Manipulation Techniques
Dec 10 – 12
- SAS SQL 1: Essentials
Dec 18 - 19
- SAS Programming 1: Essentials
Jan 28 – 30
- SAS Programming 2: Data
Manipulation Techniques
Feb 23 – 25
- SAS Programming 1: Essentials
Mar 25 – 27
- SAS Report Writing 1: Using
Procedures and ODS
Mar 31 – Apr 2
- SAS Programming 3: Advanced
Techniques and Efficiencies
Apr 6 – 8

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SAS Macro Language 1: Essentials
Apr 30 – May 1
SAS Programming 1: Essentials
May 13 – 15
SAS Macro Language 2: Developing
Macro Applications
May 18 – 19
Querying and Reporting Using SAS
Enterprise Guide
Jun 4 – 5
SAS Programming 2: Data
Manipulation Techniques
Jun 10 – 12
SAS SQL 1: Essentials
Jun 25 – 26

When time and distance are an issue, SAS Institute offers Live Web classes and self-paced e-learning to help you get the training you need while accommodating your busy schedule. Call for more details.

Destiny Corporation is offering Instructor Assisted Virtual SAS® training courses in their Rocky Hill, CT office. A live instructor, in person, will support and answer all questions. The attendees are provided the supporting Online Virtual Course and materials. The Online Course is valid for 1 year from course dates.

Please visit the Destiny Corporation website for more training dates. To register for a course or to get more information, please contact Destiny on 1-800-7-TRAINING or www.destinycorp.com.

Course Schedule

All courses are offered on Dec 8 – 10, 2008

2-day courses:

Introduction to Programming
Programming III: Advanced Techniques
Output Delivery System (ODS) Basics
Version 9 Changes and Enhancements
Enterprise Guide Querying and Reporting
SQL Processing with SAS® Software

3-day courses:

Programming I SAS® Essentials
Programming II: Data Manipulation Using the Data Step
Report Writing: A Programming Approach
Macros in SAS® Software

Kirk's Korner

Quick & Simple Tips

(Kirk Paul Lafler, Software Intelligence Corporation)

Tip: PROC SQL Join Algorithms and the _METHOD Option

When it comes to performing PROC SQL joins, users supply the list of tables for joining along with the join conditions, and the PROC SQL optimizer has the task of determining which of the available join algorithms to use for performing the join operation. There are three basic algorithms used in joining:

Nested Loop Join – When an equality condition is not specified, a read of the complete contents of the right table is processed for each row in the left table.

Merge Join – When the tables specified are already in the desired sort order, resources will not need to be extended to rearranging the tables.

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Hash Join – When an equality relationship exists, the smaller of the tables is able to fit in memory, no sort operations are required, and each table is read only once.

Under Version 8.2 or later, PROC SQL supports a powerful “undocumented” option called `_METHOD`. Although undocumented features like the `_METHOD` option should be used with caution, SAS users may find this option to provide far greater value than risk. In fact, the `_METHOD` option is worth exploring because of the benefits associated with gaining a better understanding associated with what happens during specific PROC SQL processes, including joins.

The various codes and their corresponding descriptions associated with the `_METHOD` option appear in the table below.

`_METHOD` Option Codes and Descriptions

Code	Description
SQXCRTA	Create table as Select.
SQXSLCT	Select statement or clause.
SQXJSL	Step loop join (Cartesian).
SQXJM	Merge join operation.
SQXJNDX	Index join operation.
SQXJHSH	Hash join operation.
SQXSORT	Sort operation.

SQXSRC	Source rows from table.
SQXFIL	Rows filtration.
SQXSUMG	Summary stats (aggregates) with GROUP BY clause.
SQXSUMN	Summary stats with no GROUP BY clause.

The following PROC SQL code example, and corresponding SAS Log, illustrates the results from running the `_METHOD` option with a simple two-way equi-join. The `_METHOD` option displays information that can help users better understand, as well as tune and debug their join queries. The SAS Log illustrates that the two-source tables are MOVIES and ACTORS, and the join algorithm used by the PROC SQL optimizer is a hash join. Because a hash join utilizes available real memory to perform the join, it is often faster than a merge or index-join operation because of the speed of real memory as well as no sort operation on the source tables being required.

PROC SQL Code:

```
PROC SQL _METHOD;
  SELECT MOVIES.TITLE, RATING,
  ACTOR_LEADING
  FROM MOVIES,
  ACTORS
  WHERE MOVIES.TITLE =
  ACTORS.TITLE;
QUIT;
```

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SAS Log Results:

NOTE: SQL execution methods chosen are:

```
sqxslct
  sqxjhsh
    sqxsrc( MOVIES )
    sqxsrc( ACTORS )
```

CONTACT INFORMATION

If you would like more information or have any questions about this tip, please contact Kirk Paul Lafler at Software Intelligence Corporation, World Headquarters, P.O. Box 1390, Spring Valley, California 91979-1390, or at KirkLafler@cs.com. Kirk's company provides many SAS services, from programming through training, to clients around the world. He is the author of four books including "*PROC SQL: Beyond the Basics Using SAS*" by SAS Institute.

HASUG EMAIL DISTRIBUTION LIST

This service is provided free of charge to all who wish to subscribe to the email notification process. In order to sign up for this service, you need to point your browser to the HASUG web site, <http://www.hasug.org>, and click the hyperlink, "Join HASUG Email List".

Your name and email address are not displayed nor given out to any party, including members of the HASUG steering committee. Only the list administrators have access to subscription information. Only List administrators will be able to send out

email messages to the HASUG members. If you should change your email address under which you subscribed, you will need to unsubscribe with your old email address, and then re-subscribe using your new email address. Typically, a notice is sent approximately 3 weeks before meetings, as well as a couple of days beforehand to remind people of the date, time, and location.

To subscribe to the HASUG list you will need to follow the following steps:

1. From the HASUG website pick "Join HASUG Email List". Enter your email address and click on the SUBSCRIBE button. You will receive an email from oreply@googlegroups.com.
2. Open the email and click on the confirmation URL in the email.
3. There are no questions to answer. Just click on "Apply to this Group" .
4. You will receive an email saying you have been added to the distribution list.

You must complete steps 1-3 to be added to the list.

THE HASUG RECRUITING POLICY

HASUG's primary mission is to provide a forum for SAS professionals to meet and share experiences. HASUG also recognizes that searching for new employment opportunities is a normal activity when professionals meet. Since we depend on our respective employers to support HASUG by providing time for members to attend, prepare presentations, and provide meeting facilities, we do not wish to jeopardize those relationships we have all nurtured.

Therefore, when attending any of our quarterly meetings, we request that all parties engaged in recruiting activities be "professional and discreet", and suggest that such activities be carried outside and after our meetings. Those seeking or offering positions may display materials at a location designated by HASUG at each quarterly meeting. The materials may include resumes, job openings, contract opportunities, business cards, etc. None of the materials may include salary information. All such materials left after the meeting will be discarded. Violators of this policy may be asked to leave the meeting.

THE HASUG SPONSORSHIP POLICY

All parties are encouraged and welcome to attend our quarterly HASUG meetings scheduled during the months of February, May, August, and November of each year. Usually these meetings are scheduled the 3rd Thursday from 9:00 am to noon at various locations throughout Connecticut. Past locations have included Hartford, Meriden, Middletown, Norwalk, Glastonbury, Stamford and New Haven. We are always looking for new hosts within the state of Connecticut. If you feel your organization can host a meeting of up to 70 or so people, please contact one of the Steering committee members.

HASUG Steering Committee

<u>Name</u>	<u>Organization</u>	<u>Telephone</u>	<u>E-Mail</u>
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DIRECTIONS to Foxwoods Resort Casino

**39 Norwich-Westerly Road
Ledyard, CT 06339**

Meeting Room : Acapulco A

Acapulco A is in FOXWOODS (not MGM GRAND) on the mezzanine level, Grand Pequot Tower. Ask for directions at the information booths.

From Southwest CT

Take I-95 North to Exit 92 in Connecticut.

Turn left onto Route 2 West.

Foxwoods is eight miles on Route 2.

From Boston

Take I-95 South to Exit 92 in Connecticut.

Go straight at the stoplight.

At the next stoplight, turn right onto Route 2 West.

Foxwoods is eight miles on Route 2.

From Hartford

Take I-84 East to Exit 55 Route 2 East.

You will find the resort nine miles past Norwich.

