



HARTFORD AREA SAS® USERS GROUP

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<p>The HASUG Flash is available for reading on the World Wide Web at http://www.hasug.org SAS is a registered trademark of SAS Institute Inc. Cary, North Carolina</p>

**Note From The Chairperson
Michael "Mad Doggy" Davis
Bassett Consulting Services, Inc.**

As regular HASUG Flash readers know, HASUG will celebrate its 20th anniversary this fall. When I look at our Steering Committee roster and those members who have rotated off the committee, my heart fills with fondness and appreciation for those members that have served HASUG for many years. The service of some HASUG members goes back to the 1980s, the decade in which HASUG was founded. The efforts of these and other Steering Committee members have enriched the skills and lives of at least a few thousand SAS users.

However, it brings me equal pleasure to note the Steering Committee continues to attract new members. Rachel Alt-Simmons, who hails from Hartford Life in Simsbury, has arranged for her company to provide the facilities for our November meeting during which we will celebrate our 20th anniversary. Jonas Bilenas, who is with J.P. Morgan Chase Bank in New York City (but lives in Connecticut), has volunteered to make a presentation at our February 2004 meeting.

As with Jonas Bilenas, James Blaha works in New York (Pace University) but also calls Connecticut home. James joined the Steering Committee about a year ago. He made a wonderful presentation on Enterprise Guide at the November 2002 HASUG meeting. James has also secured the use of the Pace LISTSERV program to distribute e-mail messages and announcements among the Steering Committee and ultimately, to our HASUG members.

James has graciously volunteered to serve as the next HASUG Chairperson. He will assume the role after our August meeting. His enthusiasm should make HASUG even more vibrant and meaningful. When you see James the next time, please be sure to thank him for rising to this leadership role and offer to help in any way that you can.

One of the reasons why I attend HASUG meetings is to see where other local SAS programmers worked. This curiosity also explains why I chose to become a SAS consultant back in 1994. One place that I always wanted to visit was the

Bayer campus in West Haven. Thanks to our host, Paul Bailey, Bayer will host the August HASUG meeting. I hope to see you there.

AUGUST Meeting Announcement

The third quarter HASUG meeting for 2003 is to be held on **Thursday, August 21, 2003, 9:00 a.m. to 11:30 a.m. at Bayer Pharmaceuticals Corporation, Building B25 Auditorium, 400 Morgan Lane, West Haven, Connecticut.** Refreshments will be available at 8:30 a.m.

Please pre-register for this meeting by completing the short pre-registration form http://www.hasug.org/next_mtg.htm. Please see the map below located on the last page of this Flash. Also note that while the building is on Morgan Lane, the entrance to the Bayer campus is via Frontage Street, off Marsh Hill Road.

When you reach the Visitor's Center (security guard house), you will be directed where to park. Bayer will provide a shuttle bus to the **B25 Building** where the meeting is to be hosted. If you have any questions, contact Linda Wells at 203-812-2460 or by e-mail at linda.wells.b@bayer.com. If you have an urgent question and cannot reach Linda, call one of the Steering Committee (member list also located near end of this Flash).

The first presentation will be on **Version 9 Changes and Enhancements** by **Dana Rafiee, Destiny Corporation**. The abstract for Dana's presentation is:

"This presentation provides an early peek at the next release of SAS Version 9. Topics include: Data & Catalog Migration, Functions & Options, Object DOT Syntax, Multi-threaded Architecture, Scalable Performance Data Architecture, Macro Enhancements and ODS Enhancements."

Dana Rafiee, an IT Principal, Senior Systems Designer and Senior SAS Instructor, is a recognized authority on the SAS System. He has over 15 years experience training individuals on all aspects of SAS Software. He also consults in the areas of applications development and design in 4th Generation Languages, Operating Systems, Networking and Communications.

The second presentation will be ***Statistics & Regression: Easier than SAS®*** by Vincent Maffei, Anthem Blue Cross and Blue Shield and Michael Davis, Bassett Consulting Services, Inc. The abstract for this presentation follows:

In this paper the basics of estimation and hypothesis testing are covered without the associated probability theory and mathematical derivations of formulas. Basic concepts are explained logically and graphically. Without the mathematical wizardry, the simple underlying thread is exposed."

With this basic understanding, the analysts will know the methodology to use to generate estimates with valid error margins, and to set up tests of hypothesis (i.e. unsubstantiated claims about performance, effectiveness, cost savings) using either univariate statistics or regression analysis."

Vincent Maffei has been the Health Economist for Anthem Blue Cross & Blue Shield for 15 years, and a former college Professor who taught statistics and econometrics for 14 years. At Blue Cross Vinny applies the inferential statistics and regression analysis that he once taught, using SAS® and other statistical tools. Vinny is a past president of the Economic Association of Southern Connecticut and a SAS® user since 1987.

Michael Davis is Vice President of Bassett Consulting Services, Inc., a SAS Alliance Affiliate Member(tm). An independent consultant since 1994, he previously worked for Blue Cross & Blue Shield of Connecticut and the Connecticut Hospital Association. A SAS user since 1985, Michael specializes in developing custom web-enabled and full-screen decision support systems using SAS/IntrNet(c), SAS/AF(c) FRAME, and other SAS(c) products, including SAS/Warehouse Administrator(c). He chairs the Hartford Area SAS User Group and is a frequent presenter at NE-SUG and SUGI. Michael is active in the Independent Computer Consultants Association.

May Highlights By Peter Prause

The May meeting of HASUG was held on May 15, 2003 at the Hartford, in Hartford, CT. The first presentation was *Longitudinal Data Techniques: Looking Across Observations*, presented by Ronald P. Cody, R. W. Johnson Medical School. Using sample medical files with Doctor and Patient information, Ron discussed a number of techniques for manipulating data where records within a file are not consistent in the variables they carry. Ron covered the use of RETAIN statements, FIRST. and LAST. variables, the LAG function, and use of multiple SET statements in a data step. He also covered the use of various PROCs to summarize medical data. While the presentation followed a medical theme (except for Ron's vacation pictures that were interspersed!), it was easy to see how the techniques used could be applied to a broad variety of data from any type of enterprise. The slides of Ron's talk are available on the hasug.org web site.

The second presentation was *The Hartford's Insurance Premium Cash Flow Model*, presented by Charles Patridge, Hartford Financial Services. Chuck gave an overview of the many factors to be considered in doing a cash flow model. While covering this topic from an insurance perspective, the ideas are common to any organization with a billing and collection function. The key idea was to establish accurate historical information that could be used to project future cash flow. In particular, this involved working with output from multiple billing systems which provided policy holders with a number of different payment plans, and creating payment patterns that involved not just premiums, but other items such as commissions, surcharges, and doubtful accounts.

Besides the presentations with their interesting Q & A's from the audience, there were annual elections for the Steering Committee. See the list of Steering Committee Members published elsewhere in this newsletter. Finally, there were a few lucky attendees who benefited from the raffle, including the winner of one of Ron Cody's books.

The Hartford Transition Center

David Morton of The Hartford recently forwarded the following information to the HASUG:

"I understand that you may have some opportunities for folks that have certain skill sets. I would like to encourage you to consider placing job postings located on The Hartford's CTRC job lead web site.

This site can be used by any employer or agency to access the employees that were recently impacted by The Hartford's downsizing. For more information go to:

<http://204.60.129.162/ejobs/fair/>

Thanks, best regards,
David

G. David Morton III, SPHR CCP
Director
Corporate Human Resources
55 Farmington Avenue, Suite 601
860-547-2372 - office
860-520-1706 - fax
dmorton@thehartford.com"

[Editor's Note:] The HASUG's normal policy, over the years is to maintain this newsletter and website advertisement and recruitment-free.

However, since The Hartford has generously sponsored the HASUG organization over many years, the HASUG Steering Committee is willing to assist The Hartford and its impacted employees by posting this announcement to the FLASH.

Consultants' Special Interest Group (SCONSIG)

The SAS Consultants' Special Interest Group (SCONSIG) operates and maintains a web site located at www.sconsig.com. The site lists employment opportunities, contracts, vitas, resumes, and companies seeking SAS professional talent. It is updated weekly. You are encouraged to visit that web site or to contact Charles Patridge at:

Charles_S_Patridge@prodigy.net

for further information.

Future Calendar of Events 2003

General Meetings and Conferences:

August 21, Bayer Corporation, W. Haven, CT
September 7-10, NESUG 2003 Washington, DC
November 14, Hartford Life, Simsbury, CT

HASUG Steering Committee Meetings:

August 21 Immediately following HASUG mtg.
September 11 Conference call, 11:30-12:30
Nov.14 Immediately following HASUG mtg.
December 11 Conference call, 11:30-12:30

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.

For other recruiting opportunities, please see the SAS CONSIG article elsewhere in this newsletter or visit www.sconsig.com.

HASUG Distribution List

This service is provided free of charge to all subscribers who wish to join the email notification process. In order to sign up for this service you need only point your browser to the HASUG web site, www.hasug.org and click on the icon "sign up for our mailing list". The icon is located below the list of newsletters..

When you sign up to be a member in the HASUG.ORG web site, you will see you have two choices to select which list to join (HASUG Email or SCONSIG). You are able to join either or both Email Lists at the same time by MARKING the check boxes to the left of each list.

Select your interests

HASUG Email

SCONSIG

Both SCONSIG and HASUG share the cost to make this feature available to its respective members, and both lists are separate and independent from each other.

It is your decision to enter as much personal information as you wish to provide. **The only piece of data that is TRULY needed is your correct email address.** Any information you enter will not be displayed nor given out to any party, including the members of the steering committee. The only people who have direct access to the information are the HASUG and SCONSIG list administrators, Michael Davis and Charles Patridge.

The List automatically checks for valid email addresses and if any should become invalid, your membership is cancelled without notice as your email address is no longer valid, hence no way to contact you. If you should change the email address under which you subscribed, please sign up again with your new email address.

Typically an email notice is sent approximately 3 weeks before our next scheduled meeting, as well as a couple of days beforehand to remind people of the date, time and topics to be presented.

Editorial and Production Staff

Editor	Janet Stuelpner
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Continuing With Education... Peter Prause, The Hartford

The SAS Institute Regional Training Center in Glastonbury, CT is offering these courses through December, 2003. Course information for these courses and many other non-local courses is available on the Internet at SAS web site: www.sas.com To register for a course or to get more information, phone SAS Institute at 1-800-333-7660.

SAS Macro Language	Aug 12-13
SAS Macro Language: Advanced Topics	Aug 14
Querying and Reporting Using SAS Enterprise Guide	Aug 20- 21
SAS Programming III: Advanced Techniques	Sept 3- 4
Optimizing SAS Programs	Sept 17-18
SAS Programming I: Essentials	Sept 23- 25
SAS Programming II: Manipulat- ing Data with the DATA Step	Oct 7-9
Introduction to Programming Con- cepts Using SAS Software	Oct 15-16
SAS Report Writing: A Program- ming Approach	Oct 29-30
SAS Programming I: Essentials	Nov 12-14
SAS Macro Language	Nov 19- 20
SAS Programming II: Manipulat- ing Data with the DATA Step	Dec 3- 5
SQL Processing with the SAS System	Dec 17-18

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Local SAS training is available at Destiny Corporation, of Wethersfield, CT. Below is a list of their scheduled classes through December, 2003. You can call Destiny at 1-800-787-2464 or 860-721-1684. To send an email: info@destinycorp.com. You can visit their web site at www.destinycorp.com.

Programming I: SAS Essentials	Aug 11-13
Enterprise Guide Software Introduction	In- Sept 15
Version 9.1 Changes and Enhancements	Oct 13- 14
Programming I: SAS Essentials	Nov 3- 5
Programming II: Data Manipulation Using the Data Step	Nov 10 -12
Version 9.1 Changes and Enhancements	Dec 1- 2

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.

Hyperlinks of Interest

SAS Users often ask, "How can I find any recent SUGI papers that deal with a particular subject?" Lex Jansen has put up the following link that lets one search the online SUGI proceeds using the Google search engine:

<http://www.lexjansen.com/sugi/>

Similarly, to search the SAS-L archives, one can use the following two links:

<http://www.axomsoftware.com/sas-l.php>

<http://groups.google.com/groups?hl=en&lr=&ie=UTF-8&group=comp.soft-sys.sas>

The SAS Consultants Special Interest Group's web site URL is

<http://www.sconsig.com>

Read Past SUGI Proceedings Online at: (link supplied by Curtis Smith):

<http://support.sas.com/usergroups/sugi/proceedings/index.html>

Information about the North East SAS Users Group (NESUG), including information about the 2003 conference in Washington can be found at:

<http://www.nesug.org>

SAS OnlineDoc is available from SAS on the World-Wide Web. To register to view SAS Version 8 OnlineDoc on the web, register at the following URL: <http://www.sas.com/v8doc>. To register to view SAS Version 9 Online Doc on the web, register at the following URL:

<http://www.sas.com/v9doc>.

Some of the papers and other handouts distributed at recent HASUG meetings can be found at the following two web sites:

<http://www.hasug.org>
<http://www.bassettconsulting.com>

Book Review

Title: Maps Made Easy Using SAS

Author: Mike Zdeb

List Price: \$24.95

ISBN: 1-59047-093-1

**Review by Michael "Mad Doggy" Davis
Bassett Consulting Services, Inc.**

Perhaps one of the most powerful yet overlooked features of the SAS System is the ability to display information as map, using the GMAP procedure. The ability to use the GMAP first presumes that SAS/GRAPH is available at your site. To the uninitiated, using SAS to create a map may appear to be a daunting task. Fortunately, one of the great SAS masters of using SAS to create maps has authored a book to fill this need.

In the first chapter, the author dives into the key preparation for generating a map with the GMAP procedure. This is the creation of map data sets to control the polygonal boundaries and response data sets to display the phenomena to be graphed. Then the author quickly introduces the various styles of maps that can be created with the GMAP procedure. The first chapter closes with an introduction to other SAS/GRAPH procedures used with map data sets (GREMOVE, GPROJECT, and GREDUCE).

Chapter 2 starts by covering how to handle appearance of graphical text. It then moves to how to control the fill patterns and legends. Chapter 3 introduces some variations on choropleth maps. These include outline maps, how to combine and clip map areas, and creating maps with dual ID variables and map areas. This chapter also shows how to draw maps to scale and creating an inset using the GREPLAY procedure.

The annotate facility has been the bane of many a SAS/GRAPH map creator. Chapter 4 is devoted to this pesky facility, used to add labels and symbols to maps. This chapter also covers how to control the polygon outlines and how to add circles of known radius. The last chapter, Chapter 5, describes how to get SAS/GRAPH ready for printing or for distribution as a web page. This chapter includes a discussion on how to create maps with drill-down and pop-up

information.

There is an appendix, which provides additional information about the data and GOPTIONS used in the examples. There is also information about how to create a gauge font and how to find the centroid ("visual center") of map areas.

Although I am familiar with using SAS to create maps, I learned some new, useful information. Chapter 1 had a clear explanation of how to use the GREDUCE procedure. Chapter 2 has as good an introduction as to how to use fonts in the SAS/GRAPH as one is likely to find elsewhere. The example of how to create maps with two ID variables and map areas should prove useful to many readers. Adding circles to indicate a radius is a neat feature for which I can foresee many applications. Last, the information in Chapter 5 on how to create drill-down maps and use the JAVAMETA and ACTIVEX device drivers is extremely valuable.

However, the target audience for this book is SAS users unfamiliar with the GMAP procedure. I think that this book does a good job of reaching out to this audience. The code examples, the author's explanations, and the output they produce are woven together in a highly readable fashion.

I only have two small criticisms of this book. For some applications, map boundary files to draw polygons down to the Zip Code and other small areas are often required. A discussion of where to obtain those boundary files from governmental sources and commercial vendors would be valuable guidance to many prospective map users. Also, the GMAP procedure can be used to draw non-geographic map objects, such as building layouts and cartoons. While not a major use of the GMAP procedure, some acknowledgement of this potential use might be appropriate.

Until the SAS Books By Users program published this book, the only introduction that I could offer to someone new to mapping with SAS/GRAPH was a conference paper that I authored several years ago. Now, I will tell them to invest their funds to purchase this excellent book.

**Live Web Classes:
Where Do They Fit In?**

Michael "Mad Doggy" Davis
Bassett Consulting Services, Inc.

At SUGI 28, I learned that in addition to instructor-based training offered at SAS training centers and at customer sites, SAS now offers Live Web Classes. These classes are not the self-paced e-Learning web courses also offered by SAS. They are instructor-led training courses that are offered at specific times. Similar to e-Learning web courses, one "attends" the course in their home or office.

Recently, SAS offered me the opportunity to attend two Live Web classes. The courses I attended were the "Customizing Output from the REPORT Procedure with ODS" and "Customizing Output from the TABULATE Procedure with ODS", each about 3 hours long. Since clients and user group friends often ask me about training alternatives, I thought I would share some elements of the experience. Rather than supplying details about the specific content of each course, I thought that I would instead focus on how this method of instruction works and contrast the experience with traditional instructor-based training.

A few days before the course starts, SAS sends out an e-mail reminder. The reminder has the information needed to dial into the audio portion of the course, which is essentially a telephone conference call. The video portion of the course is delivered via PlaceWare web conferencing. This application allows one to see the PowerPoint course slides or the instructor's SAS session in a web browser as long as a fast Internet connection (128 kbps or better) is available. Lastly, one needs access to the software that is being taught in order to undertake the workshop exercises.

The e mail reminder also provides a web link to a zip archive file containing the course materials. These include the course notes and workshop exercises as Adobe Acrobat documents. The zip archive also contains data sets and programs used with the course exercises. Receiving the course materials in this way is an advantage in that if you keep them with your personal computer files, you will avoid finding that you

have forgotten them at your home or at the office. You could back them up to a CD-ROM.

The trade-off is that unlike other forms of instructor-based training, the student is responsible for printing working copies for use during the course. SAS only suggests that students print the workbook before the start of class. However, it may be good idea to have a printed copy of the course notes available for reference during the class.

What are some of the other advantages of this course format? If you take this course at home, you can attend in your pajamas and slippers. I enjoyed taking the course on my own laptop instead of needing to deduce how to use a workshop computer. While attending the course, I had access to e-mail, other software, and convenient printing. Other than an occasional interruption from my wife or the hounds, I was not disturbed during the course. In an open office situation, one might want to reserve a conference room for privacy. That would allow one to use a speakerphone, which is more comfortable than a headset.

A pair of instructors teaches the course. While one is teaching the course, the other is available to answer questions submitted via the chat window. One can address questions to the whole class via telephone. What I disliked about this arrangement is that there is no way to know who is attending the course with you or to have a side conversation with them. One of the instructors also told me that jokes do not seem to work well when teaching via the web.

What are the economics of Live Web classes? They cost the same as other forms of SAS public instruction (\$200 per half-day of instruction). The real cost savings is the reduction of expenses associated with downtime, transportation, and hotels. When one considers that corporations currently value average employee time at least \$25/hour, the reduction of lost time may be the biggest economic benefit of Live Web classes.

Another feature of Live Web classes is that the content is designed for delivery in half-day sessions. Given my sometimes limited attention span, I appreciate this feature. My experience

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(Live Web Classes, continued from page 8)

with clients indicates that having to only give up a half-day at a time is a popular feature when balancing training with regular duties.

It may be speculation on my part but there may be another advantage to Live Web training. A popular course might be offered monthly but rotated to different training centers around the country. So one has the choice of traveling to a distant training center or waiting for the course to arrive at a training center near their location. Worse, if too few people sign up, then the course may be cancelled. If one waits for the course to be offered nearby, they may be forced to attend it before or after one needs to apply the lessons.

However, if the course were taught every month as Live Web training, it would be easier to synchronize the need for instruction with the availability of instructor training. So if you have a need for a concentrated SAS learning experience and have ready access to the SAS software on your computer, you might look into the Live Web classes as an alternative to other forms of instructor-based training.

Tips and Techniques from SCONSIG

Disclaimer:

"Each tip included here addresses a problem, and presents a use of one or more SAS concepts. Use it to stimulate your thinking and help you on your way to solving your own problem. Some tips may or may not work in your environment or with your version of the SAS Software, and you should use these tips with this in mind. Neither HASUG nor contributing Author(s) should be held responsible for any direct and/or indirect damage to you or your applications from using these free tips."

SAS, SAS/ACCESS, SAS/CONNECT, SAS/FSP, SAS/GRAPH, SAS/IntrNet, and SAS/STAT are registered trademarks of SAS Institute Inc., Cary, North Carolina

TIPS IN BLUE ARE IN THIS NEWSLETTER, ALL TIPS CAN BE LOCATED ON WWW.SCONSIG.COM

An Introduction to Exporting SAS/GRAPH Output to Microsoft Office

This SAS Technical Support document includes in-depth information about the different graphics formats and destinations you can use to export Release 8.2 SAS/GRAPH output to Microsoft Office 97, 2000 and XP. General topics are discussed, and each available format is examined individually. Several examples show how to generate the output.

Read more at <http://ftp.sas.com/techsup/download/technote/ts674/ts674.html>

SAS Q&A: Why do some of my values get truncated when I read in a delimited file?

In Versions 7 and 8 of the SAS System, by default the Import Wizard, the IMPORT procedure and the External File Interface (EFI) scan 20 records to determine variable attributes. If you have a value that is longer than those found in the first 20 records of your file, that value will be truncated. Follow these steps from SAS Technical Support to change the default behavior.

Read more at http://www.sas.com/service/techsup/faq/data_step/readwrit1819.html

SN-007347 - How to programmatically open a file in a new Enhanced Editor

<http://www.sas.com/service/techsup/unotes/SN/007/007347.html>

Tipped Off: Bookmarks in Your PDF File

With ODS HTML output, you can generate a table of contents to help you locate the results you're looking for in a lengthy report. With ODS PDF output, you also get a table of contents. The PDF format supports the creation of bookmarks, which are displayed in a window to the left of the main PDF file. By clicking on a bookmark, you can jump directly to the correct output page. This little ditty from Lauren Haworth's book, "Output Delivery System: The Basics," demonstrates how easy it is. (.pdf)

Read more at http://www.sas.com/service/doc/pdf/58087_pg80.pdf

SAS Bits & Bytes: Practicing Good Data Hygiene

Manually entering or editing data without using audit checks is certain to introduce data errors. In

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(Tips & Techniques, continued from page 9)

this Bits & Bytes column, Melinda Thielbar discusses adding integrity constraints that allow you to set rules about what values are entered in a field and what conditions an observation must meet to be added to a data set.

Read more at <http://www.sas.com.com/service/techtips/bitsandbytes/datahygiene.html>

SAS/IntrNet Software: A Roadmap

SAS/IntrNet software lets you quickly and easily build dynamic Web application and distribute them worldwide. This white paper provides an overview of SAS/IntrNet with guidelines for choosing the best combination of components for your applications. Access this paper from our White Paper download area. (.pdf)

Read more at <http://www.sas.com/apps/whitepapers/whitepaper.jsp>

Is there a way to create a separate macro variable for each value of a string?

<http://www.sas.com/service/techsup/faq/macro/macro1812.html>

Quick Tip: Building Drill-Down SAS Applications

By Kirk Paul Lafler & Charles Edwin Shipp

<http://www.sas.com/service/techtips/quicktips/drilldown.html>

SN-006806 - How to submit multiple SAS programs, in batch or interactively by SAS Institute

<http://www.sas.com/service/techsup/unotes/SN/006/006806.html>

Tipped Off: Selecting Output for Multiple Procedures

If you are running a series of models or tables, keeping the output from all your procedures can become an unwieldy task. This brief selection from Lauren Haworth's popular book, "Output Delivery System: The Basics," shows how to use SELECT or EXCLUDE

within ODS to build concise summary reports from your output results. (.pdf)

Read more at http://www.sas.com/service/doc/pdf/58087_pg128.pdf

Quick Tip: Calculating Age in Years and Days

We recently ran a tip titled, "Two New SAS Data Functions for Version 8" that explained how to find the number of years between two dates using the "YRDIF" function. The following tip from Venky Chakravarthy, a frequent contributor to the SAS-L listserv, builds on that idea and explains how to calculate the number of years and days between any two dates using the "DATDIF" function.

Read more at http://www.sas.com/service/techtips/quicktips/age_0302.html

Reading Delimited Text Files into SAS

Delimited files are raw data files that use characters such as commas, vertical pipes and semi-colons to separate data values. This note from SAS Technical Support explains some of the newer options available for reading these files into SAS, as well as demonstrating the use of older options that are still helpful.

Read more at <http://ftp.sas.com/techsup/download/technote/ts673.html>

SAS Q&A: How Can I Determine if a Variable is Present Within a Data Set?

There are several DATA step functions that can be used in conjunction with the %SYSFUNC macro function to determine if a variable exists in a SAS dataset.

Read more at <http://www.sas.com/service/techsup/faq/macro/macro1806.html>

SN006964 How to print line numbers with your SAS program

<http://www.sas.com/service/techsup/unotes/>

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(Tips & Techniques, continued from page 10)
SN/006/006964.html

SN000721 How to run SAS V7 and V8 with DMS mode (V6 style) in the windows environment

<http://www.sas.com/service/techsup/unotes/SN/000/000721.html>

David Ward posted this most excellent method to generate .csv files from a SAS dataset:

```
dm "dexport library.dataset 'c:path-to-my-file. csv' replace";
```

SAS Version 8 Technical Note: Short filename extensions versus long filename extensions

<http://www.sas.com/service/techsup/unotes/SN/002/002555.html>

How do I make the SAS Explorer window look like the Windows Explorer window?

Read SI's technical note on how to do this
<http://www.sas.com/service/techsup/unotes/SN/006/006939.html>

Submitting multiple SAS programs, in batch or interactively

see SAS Technical Notes to see an example on how to do this using the %include statement.
<http://www.sas.com/service/techsup/unotes/SN/006/006806.html>

TIP00325 - Example of using ODS MARKUP and TAGSET (release 8.2 is required) by Victor Bos

TIP00326 - How to convert a Vsam file to a SAS dataset by Michael A. Raithel

TIP00327 - How to replace a string in a file using SAS code by Don Stanley

TIP00328 - Equally and unequally spaced Orthogonal polynomial contrasts using PROC

REG of SAS/STAT by Winston Groenewald

TIP00329 - Issues and comments about moving SAS production code from V6 to V8 by Quentin McMullen, Arthur Tabachneck, F.J. Kelley, Venky, Dennis Diskin, Charles Patridge

TIP00330 - Significant Digits, Numeric 101 by SAS Institute

TIP00331 - Scan function and delimiter issues by Paul Dorfman and Peter Crawford

TIP00332 - Scanning and Counting Words in a String by Ian Whitlock and Charles Patridge

TIP00333 - Proc Access (Full Screen Product) - Convert V6.12 Oracle Views to V8.2 Oracle Views with minimum effort in OpenVMS environment by Charles Patridge

/ TIP 00331 **/**

Scan function and delimiter issues

I have a character variable that contains values like: "CASH ORD".

When I print the variable, there seems to be a space between the two words. However, when I use the scan function to separate the cell into its components I get the following values.

```
scan(var,1)= CASH ORD (I expected to get only CASH)
scan(var,2)= blank (I expected to get ORD).
```

So, it seems that the delimiter embedded in CASH ORD is not a space like it seems to be. It is also not any of the delimiters that are the default of the scan function.

My question is how to separate these values. If I use the scan function, how do I find out which delimiter is embedded there?

Solution #1:

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how about using compress to remove from VAR, the letters and numbers you would expect/allow in words,

```
%let alpha = qwer-  
tyuiopasdfghjklzxcvbnm;  
%let expect =&alpha%upcase(&alpha)  
1234567890;
```

*** extend as necessary with non-alpha- numerics that you would accept in words possibly hyphen, quotes and "_";

```
delims = compress( var,  
"&expect" );
```

leaving only characters to be treated as delimiters. If no tab characters or other unwanted punctuation are present you will only have blank as delimiters.

```
word1 = scan( var, 1, delims );  
word2 = scan( var, 2, delims );
```

Be careful if you need to adapt the delims variable into a macro environment. Special character codes are used for macro quoting. You don't need any confusion between your unprintable characters between words, and macro quotes.

Solution #2:

By Paul Dorfman

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If you are in ASCII, the bytes showing as clear invisibles are (in hex) 00, 30, 32, 1e, 20, and a0. It is easy to check by running this:

```
data _null_ ;  
do j = 0 to 255 ;  
  b = byte(j) ;  
  put b +1 b $hex2. ;  
end ;  
run ;
```

If you are under EBCDIC, the clear invisibles are 00, 40, 41, FF, so the delimiter string should be '004041ff'x. Suppose it is the ASCII, therefore, just use '001e203032a0'x as a delimiter.

Let us check it out:

```
1 data _null_ ;  
2 retain dlm '001e203032a0'x ;  
3 do mid =  
'00'x, '1e'x, '20'x, '30'x, '32'x, 'a0'  
x ;4 s = 'cash' || mid ||  
'ord' ;  
5 one = scan (s, 1, dlm) ;  
6 two = scan (s, 2, dlm) ;  
7 put one= two= ;  
8 end ;  
9 run ;
```

```
one=cash two=ord  
one=cash two=ord  
one=cash two=ord  
one=cash two=ord  
one=cash two=ord
```

/** end of tip 00331 **/

/** TIP 00332 **/

I'm scanning some text with the following program:

```
data events (keep=plaintiff confer-  
ence trial pretrial);  
set iq.alsevents;  
  
do i=1 to 10;  
word=lowercase(scan(evnttext,i) ;  
select (word);  
when ('plaintiff') plaintiff=sum  
(plaintiff,1);  
when ('conference') conference=sum  
(conference,1);  
when ('trial') trial=sum(trial,1);  
when ('pretrial') pretrial=sum  
(pretrial,1);  
otherwise;  
end;end;  
run;
```

Can anyone suggest how I can look for variations of words? For example, I need to look for plaintiff, pltf, pla., pltf's and pretrial and pre-trial. Also, is there a way to keep pretrial or pre-trial from being counted as trial too?

Is there an easy way to count up the number of unique keywords. I know how to do a count but

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I want to see how many different keywords had a number of 1 or more for each of the events. So, if eventtext 1 had plaintiff=1, conference=2, trial=1, and pretrial=0 the number of keyword hits would be 3. Likewise, is there a way to count zero hits (in the above example that would be 1)?

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I think this will answer your multiple questions but check out Count to make sure.

```
data elsevnts;
  length evnttext $100. ;
  evnttext = 'plaintiff is guilty';
output;
  evnttext = 'pltf is excused and
pretrial is cancelled.' ;
output;
  evnttext = 'pla. is innocent and
does not need trial' ; output;
  evnttext = "pltf's argument is
false." ; output;
  evnttext = 'pre-trial is set for
another date'; output;
  evnttext = 'pretrial is denied,
fire his lawyer.' ; output;
  evnttext = 'trial lawyer is Chuck
Patridge' ; output; run;
```

```
data events (keep=plaintiff confrnce
trial pretrial count);
set elsevnts;
length word $ 100. ;
do i = 1 to 100;
  word = lowercase(scan(evnttext,i,'
') ); /*** use only blanks as de-
limiters ***/
  if word eq ' ' then goto nomore;
  if word in ('plaintiff',
'pltf', 'pla.', "pltf's" ) then
plaintiff + 1;
  if word in ('pre-trial',
'pretrial' ) then
pretrial + 1;
  if word in
('trial'
) then trial + 1;
  if word in
('conference'
) then confrnce + 1;
end;
```

nomore:

```
count = sum(of plaintiff confrnce
trial pretrial);
run;
```

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Here is a revision to your program that I think answers all of your questions. I explicitly put in the default list of separators with "-" removed so that "pre-trial" would be treated as a word. This may mess other things up. For example, "conference-room C" will no longer be counted under CONFERENCE.

```
data events (keep=plaintiff
conference trial pretrial);
set iq.elsevents;

do i=1 to 10;
  word=lowercase(scan
(evnttext,i," .<(&!*$*);^/,%
|");
  select (word);
    when ('plaintiff',
'pltf', 'pla.', "pltf's")
      plaintiff=sum
(plaintiff,1);
    when ('conference')
      conference=sum(conference,1);
    when ('pretrial', 'pre-
trial') pretrial=sum
(pretrial,1);
    when ('trial')
      trial=sum(trial,1);
    otherwise;
  end;
end;
distinctcnt = sum
(plaintiff>0,conference>0,
pretrial>0,trial>0) ;
nohitcnt = sum(plaintiff=0,
conference=0,pretrial=0,
trial=0) run;
```

You may want to add

```
plaintiff = 0 ;
conference = 0 ;
pretrial = 0 ;
trial = 0 ;
```

before the DO-loop.
/*** end of tip 00332 ***/

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**Directions to:
Bayer Pharmaceuticals Corporation
400 Morgan Lane
West Haven, Connecticut**

Driving From New York (I-95 North):

- Take Exit 41 (Marsh Hill Road Exit).
- At end of exit you will find a traffic light and directly across the street is the entrance to Bayer Pharmaceuticals Corporation on Frontage Road.
- Follow to the end, staying to the right (do not re-enter I-95!) until you reach the Visitor's Center.

Driving From New Haven (I-95 South):

- Take Exit 41 (Marsh Hill Road Exit).
- At the end of the exit ramp turn left at the traffic light onto Marsh Hill Road.
- Go over on the bridge over I-95. Look for the Bayer Pharmaceuticals Corporation sign on the left..
- Turn left at the traffic light onto Frontage Road..
- Follow to the end, staying to the right (do not re-enter I-95!) until you reach the Visitor's Center.

