

The SESUG Informant



Welcome to the Athens of the South, and – **SESUG 2004!**



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Special points of interest:

- Get your files from Point A to Point B: a new SAS Book By User (BBU) shows you how!
- SESUG steams into Nashville in October
- Kirk Lafler talks about increasing I/O and CPU efficiency

Hope your boot-scoot boogie boots are shined, and your mind is primed, as SESUG '04 rolls proudly into Music City USA!

Almost two years in the making, co-chairs Imelda “Mel” Go (Operations) and Neil Howard (Academics) have worked tirelessly to bring SESUG '04 to the home of country music, Nashville, Tennessee. And the program shows all the effort that has been put in! SESUG has always taken pride in the academic opportunities we offer, from our Pre-Conference Workshops to the speakers at the Closing Session.

We hope you were able to take advantage of the Pre-Conference Workshops offered this year. The SESUG crew worked hard to get a diverse and enlightening group of speakers to provide half- and full-day workshops.

“Official” conference activities start off with our Opening Session, Sunday evening, Halloween night. But the only spirits that are invited are good ones, as we showcase the events of the next few days, featuring our keynote speaker from SAS Institute. Of course, at SESUG there are always a few smiles and a few surprises, so don't miss out on the Opening! Afterwards, we always greet old

friends and meet new ones at a reception; but you may have to look twice. After all, it is Halloween night, and the goblins are out... is that ghost a featured speaker? Is that werewolf a member of the EC? Or maybe just a friendly vampire who dropped by for a bite? Our thanks to our friends at SGI, who are co-sponsoring our Halloween party.

Monday morning, the learning begins anew, as the presenters take center stage for the next two days for over 100 presentations and hands-on classes. SAS Institute is presenting several papers and demos, both in the lecture halls, and in the traditional SAS Demo Room. SAS has also cordially invited everyone to a mixer Monday evening in the Demo Room, a Breakthrough Tour Event, co-sponsored by SAS and Intel. So stop by, have a snack, and maybe just ask that question about CONNECT, SHARE, or SQL that's been bothering you...

It wouldn't be Nashville without country music and line dancing. Our co-chairs would never neglect the rich heritage around us. So, come to the Monday Night Party co-sponsored by SGI, which features the Nashville Party Authority DJ, and join in for some line-dance instruction.

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Words From the Prez



"In the blink of an eye, the Labor Day weekend is left behind, we're right at the start of football (and hurricane) season; and SESUG '04 is right around the corner."

Where the heck did the summer go?

Seems like yesterday that I joined in with a group of SESUG colleagues, as well as interested SAS parties from around the globe, in the wonderland of education that was SUGI 29 in Montreal. In the blink of an eye, the Labor Day weekend is left behind, we're right at the start of football (and hurricane) season; and SESUG '04 is right around the corner.

Imelda Go and Neil Howard have been busy the past twenty months or so, doing the thousand and one tasks necessary to put together a software conference like SESUG. Planning the events, arranging for speakers, recruiting the all-volunteer staff; they've left no stone unturned in order to bring the best of what they have and what they can find to Nashville, only seven weeks away as I write this. (No, I am NOT saying they had to look under a rock to find some of us... *grin*)

And of course, the SESUG bandwagon never stops rolling. Marje Fecht of Prowerk Consulting and Gary McQuown of Data and Analytic Solutions are already hard at work, laying the groundwork and recruiting for SESUG '06 in Atlanta. Our next co-chairs, Deb Cassidy of Cardinal Health and Jenine Eason of AutoTrader.com, will be on hand at '04, giving everyone the first glance at SESUG '05, planned for the Tidewater area of Virginia. And yes, we're already working on '07, '08, '09...

SESUG is a wonderful place to be. I may have missed the summer, somehow—but I wouldn't miss the planning, preparation, and participation in SESUG for all the saltwater taffy in Florida.

See you in Nashville!

- Dan Bruns

(Continued from page 1)

Speaking of uniquely American; Tuesday November 2nd is Election Day! Please, we all encourage you to vote for the candidate of your choice, both in your home state, and here at SESUG! We'll have a ballot for you here, so you can vote your choice in a totally unofficial SESUG Presidential Election! The results will be announced at the Closing Session, and we'll find out a few hours later if as SESUG goes, so goes the nation!

SESUG is experimenting with something new in the format this year, Featured Speakers after lunch on Tuesday. These are a few speakers who present topics we feel will be of the general interest, and who are well-known to the SAS community. We hope that you'll find something of interest.



Then, our traditional Closing Session; surprises, giveaways, and a preview of SESUG '05 from Jenine

Eason and Deb Cassidy. They'll outline their plans for the Tidewater area of Virginia, and hopefully whet your appetite for the educational opportunity that SESUG works so hard to provide.

There's so much more to see and do while at SESUG. We'll provide you information on how to get to the local scenic and cultural attractions; there will be a luncheon opportunity to meet the presenters; a display of the Posters; good food, and good times. Most important, we'll have the opportunity to share ideas and learn from some of the greatest SAS minds of the region, as we exchange what we've learned with one another.

The SESUG conference is an annual event; this year's celebration of knowledge is not to be missed. See you in Nashville!

- ges

A Review - Michele M. Burlew's Reading External Data Files Using SAS®: Examples Handbook

Dictionaries are great tools for obtaining the pronunciation and definition of a word, provided you know what word you're looking for and have a pretty good idea of the proper spelling. Similarly, SAS manuals are fantastic for getting the syntax for commands, and you can often find an example to get you started.

But a dictionary is a horrible tool if you only have a definition and are trying to match it up with a word. And SAS manuals were not designed to help you find the proper set of commands if all you have is a problem statement and a deadline.

If your problem is that you have external data that you would like to bring into SAS for further processing, then an alternate to the manual is now available to help. SAS Books By Users offers Reading External Data Files Using SAS®: Examples Handbook by Michele M. Burlew. Michele has assembled a number of examples of bringing data from various external sources into SAS. Her book is laid out in 6 chapters – most of them begin with a table showing which types of problems are addressed in the chapter, and which examples in that chapter are applicable to the problem.

Each example in the book is laid out in a consistent format: stating the *Goal* and the *Strategy*, listing the *Features* of the example, showing the *External File* being processed, reviewing the actual example *Program*, and others. My favorite feature of the book is that each example program comes with a

running commentary in the left margin, explaining why each statement – sometimes each *option* – is applicable to the problem at hand. I also appreciated that most examples come with a mention of *Related Techniques*, since we all know that there are many ways to resolve any given programming problem.

I thought that this book contained a wealth of information for the new SAS programmer. However, the audience for this book should not be limited to the neophyte SAS programmer. I actually kept two separate columns of notes while going over this book – one containing traditional reviewer notes, and the other listing programming tips that had not occurred to me which I plan to try out over the next few weeks.

The material was slightly marred by a couple of flaws. In some Windows-based examples, she lists the changes needed to run the program under other operating systems, but the file names provided for OS/390 are often invalid on that platform. For example, 'myid.trees.readone(trees2002)' contains a 9 digit member name; the limit is 8 characters. These oversights caused me to pay greater attention to the examples that were specifically targeted to MVS; the OS/390-specific examples *were* all syntactically correct.

I also had problems with the screen images, especially the gray-dominated ones in the Import Wizard chapter – they can be very hard to read. Perhaps it was serendipity that I wrote



Andrew T. Kuligowski has been a computer professional for almost 25 years. He has been programming with the SAS System throughout his career. Andy joined Nielsen Media Research in 1986, after spending 5 years in the petrochemical industry. He consults, lectures, and teaches about SAS usage, and serves on the Executive Council for the SouthEast SAS Users Group.

"My favorite feature of the book is that each example program comes with a running commentary in the left margin, explaining why each statement – sometimes each *option* – is applicable to the problem at hand. "

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the draft of this review during the pre-game of a Tampa Bay Devil Rays game I was attending – and I found that I could make out the examples quite clearly while sitting directly under the bright lights of Tropicana Field! Since most of us cannot wait until baseball season to research a problem, and find it impractical to bring in extra desk lamps to read a particular chapter of a book, I would instead suggest that greater care be taken in screen reproduction. Alternatively, the author and publisher could replace the current 3 screens per page with 2 larger screens on each page, and increase the page count as needed.

All in all, however, I would recommend this book to any SAS programmer, and would suggest

that it be added to the reading list for all neophyte SAS programmers. Perhaps the greatest compliment I can provide is that this book inspired me to move another of the author's works, Debugging SAS Programs: A Handbook of Tools and Techniques, to the top of my "to be read" pile.

Oh, and grab a thesaurus, too; it might help you resolve that "definition vs. dictionary" issue we mentioned at the beginning of this review.

Reading External Data Files Using SAS®: Examples Handbook by Michele M. Burlaw (ISBN: 1-59047-115-6) was published in October 2002, and is available through SAS's Publications Division for \$39.95. SAS offers a discount for books ordered in the Demo Room at the SESUG conference.

- Andrew Kuligowski

"...this book inspired me to move another of the author's works, Debugging SAS Programs: A Handbook of Tools and Techniques, to the top of my "to be read" pile."

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... THANKS!



For those of you that like to plan ahead, we'd like to announce the **13th annual SESUG** conference to be held in lovely Portsmouth, Virginia **October 23rd - 25th, 2005.**

See you in Portsmouth!



"Hampton Roads, Tidewater, Coastal Virginia, metropolitan Norfolk - all these terms are used to refer to Portsmouth and the many surrounding cities you can explore on your trip to SESUG '05. Plan to arrive by car, plane or boat!"

For questions or comments on SESUG '05, including how to get involved, please contact the conference co-chairs:

Deb Cassidy

Academic Chair

Deb.Cassidy@cardinal.com

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See the SESUG Conference website for contacts and other questions.

www.sesug.org



Quick & Simple Tips



Kirk Paul Lafler is with Software Intelligence Corporation. He is a published author on SAS, a frequent contributor to the SAS Informant, and is has presented and taught workshops at local, regional, and SUGI conferences.

As SAS® Software becomes increasingly more popular, guidelines for its efficient use is critical. Areas deserving special consideration include program execution, I/O, disk space, and programming time. The following are the first two in a series of tips related to the area of performance tuning. This first tip highlights techniques related to gaining better CPU efficiencies by improving the time a SAS Software program takes to decode and execute. The second highlights techniques related to gaining better input/output (I/O) efficiencies by improving the time a SAS Software program takes to perform read and write operations. The following suggestions are not meant as an exhaustive review of all known CPU or I/O efficiency techniques, but as a sampling of proven methods that can provide some measure of efficiency gain.

CPU Performance Tuning Techniques

- 1) Use KEEP or DROP statements or KEEP= or DROP= data set options to retain desired variables.
- 2) Learn proper placement of KEEP= or DROP= data set options for the DATA or SET statement.
- 3) Construct ANDed logic using the most restrictive conditions first.
- 4) Utilize macros for redundant code.
- 5) Use IF-THEN/ELSE statements to process data.
- 6) Use the DATASETS procedure COPY statement to copy datasets with indexes.
- 7) Use the SQL procedure to consolidate the number of steps.
- 8) Turn off the Macro facility when not needed.
- 9) Try to sort data once – Avoid unnecessary sorting - plan its use.
- 10) Collapse large SAS data sets using the SUMMARY procedure.
- 11) Create and use indexes with large datasets.
- 12) Use CLASS statements in procedures when available to combine and group output.
- 13) Use WHERE statements to subset SAS data sets.

I/O Performance Tuning Techniques

- 1) Read only data that is needed when using an INPUT statement.
- 2) Use KEEP / DROP statements or KEEP= / DROP= data set options to retain only desired variables.
- 3) Use a WHERE statement or WHERE= data set option to subset rows of data.
- 4) Use data compression for large data sets using the COMPRESS= data set option.
- 5) Use indexes to optimize the retrieval of data.
- 6) Use the DATASETS procedure COPY statement to copy data sets with indexes.
- 7) Use the SQL procedure to consolidate code.
- 8) Store data in SAS data sets, not external files.
- 9) Perform data subsets as early as possible.



Tip: Exploring Dictionary Tables

SAS users can quickly and conveniently obtain useful information about their SAS session with a number of read-only SAS data views called DICTONARY tables. At any time during a SAS session, DICTONARY tables can be used to capture information related to currently defined libnames, table names, column names and attributes, formats, and much more. DICTONARY tables are accessed using the libref DICTONARY in the FROM clause of a PROC SQL SELECT statement. The name of each DICTONARY table along with its purpose is presented below.

| DICTIONARY table | Purpose |
|--------------------------------|--|
| CATALOGS | Provides information about SAS catalogs. |
| CHECK_CONSTRAINTS | Provides check constraints information. |
| COLUMNS | Provides information about column in tables. |
| CONSTRAINT_COLUMN_USAGE | Provides column integrity constraints information. |
| CONSTRAINT_TABLE_USAGE | Provides information related to tables with integrity constraints |
| DICTIONARIES | Provides information about all the DICTONARY tables. |
| EXTFILES | Provides information related to external files. |
| FORMATS | Provides information related to defined formats and informats. |
| GOPTIONS | Provides information about currently defined SAS/GRAPH software |
| INDEXES | Provides information related to defined indexes. |
| LIBNAMES | Provides information related to defined SAS data libraries. |
| MACROS | Provides information related to any defined macros. |
| MEMBERS | Provides information related to objects currently defined in SAS data libraries. |
| OPTIONS | Provides information related to SAS system options. |
| REFERENTIAL_CONSTRAINTS | Provides information related to tables with referential constraints. |
| STYLES | Provides information related to select ODS styles. |
| TABLE_CONSTRAINTS | Provides information related to tables containing integrity |
| TABLES | Provides information related to currently defined tables. |
| TITLES | Provides information related to currently defined titles and |
| VIEWS | Provides information related to currently defined data views. |

If you would like more information or have any questions about these tips, please contact: Kirk Paul Lafler, Software Intelligence Corporation at KirkLafler@cs.com. Kirk's new book [PROC SQL: Beyond the Basics Using SAS](#), published by SAS Institute Inc., will be available in October 2004 to provide a comprehensive collection of PROC SQL coding examples for intermediate and advanced SAS users. Also look for [Power SAS: A Survival Guide](#), published by Apress, to provide SAS users with the largest and most comprehensive collection of SAS tips and techniques ever offered. Power SAS can be purchased on Amazon.com and BarnesandNoble.com.

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If you would like to be a part of the next Informant, we always welcome articles, perspectives, and new ideas. Contact the editor, Gary E. Schlegelmilch, via e-mail at sesug03@juno.com. Advertising information is also available upon request.

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Editor's Afterwords



It's been a busy summer—and Fall is off to a less than desirable start.

Many of our people needed the respite of summer vacations—because in the past few weeks, storms plagued many of our neighbors all through the southeast. Many counties in Florida are still disaster areas, much of our region was plagued by high winds, flooding, and tornadoes from hurricanes Bonnie through Jeanne. Power outages are still affecting people from Miami to New Jersey.

We're all preparing for the next round of storms—and our eyes are on the more pleasant things, like the conference in October, and then the holidays to follow. But, if you could—take a few moments to drop a couple of dollars in the coffers of your local disaster relief organization. Just as we all help each other at the conference—giving and sharing information, ideas, and solutions—please take this time to help your neighbors who may have suffered in the storms.

Thanks. Be safe, be well—and we look forward to seeing you all in Nashville!



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