

SAS® Documentation: My Achy Breaky Back

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ABSTRACT

This paper discusses the ongoing commitment by SAS Institute to address users' concerns about the volume and accessibility of SAS® documentation. In this paper, we showcase current and planned activities to help users of the system find the information they need quickly and easily.

INTRODUCTION

At SAS Institute, we actively seek advice from you, our users. From SUGI and the other users groups to informal conversations with many of you throughout the year, we try to get ideas and suggestions from you about how the SAS System can best meet your needs.

In the Publications Division, the two concerns we hear you express most often are

- the large number of books
- the difficulty of finding information in the books.

In response to these concerns, we continue our commitment to document the SAS System as comprehensively as possible while also providing you with new ways to navigate the wealth of SAS documentation that exists.

COMPREHENSIVE SOFTWARE AND DOCUMENTATION

The SAS System for Information Delivery is a comprehensive software system. It includes multiple products, each of which runs on multiple platforms. In addition, the user community of the SAS System is large and diverse. Users worldwide work in government, industry, finance, academia, and a host of other areas. Diversity among SAS users also comes from the fact that they have varying degrees of expertise with the software products.

To document such a large software system with such a diverse audience requires a large documentation library. The scope and number of books reflect the capabilities of the software. As we add functionality and improvements to the software products, the number of books will grow somewhat in proportion. However, the key to finding what you need is knowing where to look.

WAYS TO NAVIGATE THE DOCUMENTATION

The second most common concern we hear you express about SAS documentation is the difficulty of finding the information you need. We agree; if you do not have pointers, it can be difficult to find the right information.

As users of the SAS System ourselves, we know it can be frustrating to have one simple question about syntax or perhaps a statement option. To find the answer, we have to stop writing code, haul out the heavy books, and begin a documentation journey.

As a result, we offer the following current and planned tools to help you navigate the documentation:

- *A Guide to Selecting Base SAS Software Documentation*
- special purpose books
- online documentation
- custom publishing.

A Guide to Selecting Base SAS Software Documentation

With all of the software documentation that SAS Institute makes available, many of you may sometimes ask "What books do I really need?" You can find the answer to this question and others in a new pamphlet. We believe this pamphlet will benefit you greatly. In fact, we considered this guide so important, that we put it in every SUGI packet distributed at the Publications Booth.

A Guide to Selecting Base SAS Software Documentation is a tool to help you navigate the documentation for base SAS software. Kathryn Council, Vice President of the Publications Division, says, "We wanted to educate users about SAS System documentation. We have found that once users understand how our documentation is structured, selecting the appropriate documentation becomes easier." The guide begins with a question and answer section that covers the following:

- the difference between reference and usage guides
- the set of books we publish for a release
- why and when the terms *language* and *procedures* appear in our books
- special purpose books that focus on special tasks or that provide expanded coverage of a given feature.

And, although the guide acknowledges that SAS Institute will never again be able to document all software features in just one volume, the guide points to particular books that may satisfy your needs in many cases. For example, *SAS Language and Procedures: Introduction, Version 6, First Edition* is a good way for new SAS users to get started quickly. *SAS Language and Procedures: Usage, Version 6, First Edition* is a good task-oriented followup that covers features of the SAS System through progressive disclosure.

The second part of the guide is a chart that lists all of the books about base SAS software starting with Release 6.06. For each book, the chart indicates the type of information and topic areas and provides brief commentary that may help you make selections.

We invite you to give us your opinions on the guide by calling Book Sales or by talking with us personally. Tell us what you find useful and what we should change. We plan to update the guide every six months, and we'll use your input when we do. We are also considering *A Guide to Selecting Base SAS Software Documentation* as a prototype for additional guides we will write to help you navigate the documentation for other SAS products.

Additional copies of the booklet are available by calling (919) 677-8000, extension 7001.

Special Purpose Books

Another way we can help you navigate the documentation is through special purpose books. Special purpose books focus on information that is of interest to a particular audience. Currently, we offer the following:

- Getting Started Series
- SAS Software: *Abridged Reference*
- Books By Users Program.

Books in the Getting Started Series focus on the needs of new users of products in the SAS System. *SAS Software: Abridged Reference* focuses on a subset of the information contained in four other reference manuals. The audience for *SAS Software: Abridged Reference* is intermediate level SAS users. The Books by Users

Program gives authors outside SAS Institute a way of adding to the documentation library. The audience for Books by Users ranges from beginning to expert users of various SAS software products.

Getting Started Series

Question: If you had purchased base SAS software Release 6.06 for the MVS operating system last year, how many pounds of SAS documentation would you have received?

Answer: 106.

Question Behind the Question: Do you really need all that documentation simply to get started using the product?

Answer: No.

Instead, to use the software as quickly as possible, what you really need is a teacher—human, hardcopy, or computer-based—that can help you find and concentrate on only those parts of the system that you actually need to become productive.

Classroom situations with human teachers are an excellent way to receive such targeted, personalized instruction. In fact, in the Education Division of SAS Institute, our instructors can in about a half day show new users of base SAS software how to do the following:

- compose SAS programs with a text editor
- execute the programs
- generate various reports
- debug the SAS programs.

However, not all new users learn to use the SAS System in class. Out of necessity or preference, many SAS users first learn to use the software on the job. Therefore, in Publications one of our goals is to help new users become productive with the software as quickly and easily as possible by providing documentation that is tailor-made for them.

As a result, we began the Getting Started Series of books for new users. Currently, we have the following books in the Getting Started Series:

- *Introducing the SAS System, Version 6, First Edition*
- *SAS Language and Procedures: Introduction, Version 6, First Edition*
- *SAS/GRAPH Software: Introduction, Version 6, First Edition*
- *Getting Started with the SAS System Using SAS/ASSIST Software, Version 6, First Edition*
- *Getting Started with SAS/CALC Spreadsheet Applications, Version 6, First Edition*
- *Getting Started with SAS/EIS Software, Version 6, First Edition*
- *SAS System for Elementary Statistical Analysis*
- *SAS/QC Software: SQC Menu System, Version 6, First Edition*

These books are designed to reduce the amount of documentation new users face when they are first learning to use a SAS software product. The books focus on goals new users are likely to have. Working through the examples in the books helps new users build confidence with the software by showing them how to successfully complete a series of simple tasks that lead to their goals. After getting started, users can refer to more detailed usage and reference documentation to complete more complex tasks.

To determine the effectiveness of the Getting Started Series, we have taken two approaches. First, we have been field testing the current books. Second, we have put together the "Getting Started Survey." The field tests, which are ongoing, take place at new

customer sites and at existing sites that have new SAS System users. Statisticians and cognitive psychologists help us design, administer, and analyze the results of the tests. We will use the results to improve the Getting Started Series.

In addition to the field tests, we have constructed the "Getting Started Survey" to get ideas from you. What do you think about the concept of the Getting Started Series? How well do the current books fill the needs of new users? What other ideas do you have about optimum ways to learn various SAS software products? Copies of the "Getting Started Survey" are available at the Publications Booth.

Based on the results we receive from the field tests and from your responses to the survey, we will enhance the Getting Started Series during the coming months and years. Perhaps we need to change the content or structure of the existing Getting Started books. Perhaps, to meet the needs of various audiences, we need to tailor books in the Getting Started Series to specific industries. For example, we can imagine Getting Started books written for specific industries, such as pharmaceuticals, insurance, and financial services.

While we are imagining, can you imagine this?:

Sometime in the not too distant future you receive a shipment from SAS Institute marked "New Release of Base SAS Software." Inside the smaller-than-a-breadbox box is a tape or diskette and one lightweight, 100 page "Getting Started" book.

Perhaps you can help us get there. Please stop by the Publications Booth and pick up a copy of the "Getting Started Survey." Your input can make a big difference, literally.

SAS Software: Abridged Reference

Not long ago, a user suggested we produce a short reference book that would document the ten percent of the SAS System used most often. Our response in Publications, was, "What a great idea!" We recognized such a book would help lighten the reference load by documenting only those areas most users find essential.

However, then we were faced with the question, "Which parts comprise the ten percent?" In an attempt to answer that question, last year at SUGI 17, we distributed the "Tropical Island Survey," in which we posed the following question:

If you were marooned on a tropical island but you still had to do your job, what ten percent of the SAS language and the SAS macro language would you need most?

The remainder of the survey listed statements, functions, informats, formats, and data set options from base SAS software as well as parts of SAS macro language.

Based on the results of that survey, we launched a project to research and write *SAS Software: Abridged Reference*. This book contains reference information for the following four products:

- base SAS software
- SAS/GRAPH® software
- SAS/AF® software
- SAS/FSP® software.

The reference documentation is a subset of the material in the previous reference books. The writing style and page layout are compact. With the *Abridged Reference*, you have essential reference material from these four products in one compact, easy to use document. For many programming tasks, the *Abridged Reference* provides all the reference documentation you need.

Currently the *Abridged Reference* is being field tested by a group of SAS users. Based on the response to the *SAS Software: Abridged Reference*, we may consider applying the same concept

to the documentation of other products.

A copy of the field test book is on display in the Publications Booth. Please stop by the booth and take a look at this new type of book.

Books by Users Program

If you are interested in books about the SAS System that may focus on applications related to particular fields or that approach SAS software from a user's vantage point, consider the Books By Users (BBU) program. Through this publishing program, SAS Institute produces and distributes high-quality books about the SAS System written by members of the user community.

David Baggett, manager of the Publications Division's Editorial Services Department and the program's Acquisitions Editor, shares his enthusiasm about the program. "The books offered through the Books by Users program document useful applications and represent some of the best ideas in the SAS user community." According to Baggett, the Books by Users program is designed to benefit all users. For users who want to write about the SAS System, the program provides dedicated professional support from the earliest drafts through the publication and marketing stages. For users who want to learn about the SAS System, the program promotes and advertises works that provide the greatest benefit for everyday use with the software, works that "... expand the dimensions of SAS products by providing fresh insights from the perspective of SAS users."

Here is a list of books in the BBU program:

- *Applied Statistics and the SAS Programming Language, Third Edition* by Ronald P. Cody and Jeffrey K. Smith
- *Professional SAS Programmer's Pocket Reference* by Rick Aster
- *Professional SAS Programming Secrets* by Rick Aster and Rhena Seidman
- *Professional SAS User Interfaces* by Rick Aster
- *SAS Applications Programming: A Gentle Introduction* by Frank C. Dilorio
- *SAS Software Solutions: Basic Data Processing* by Thomas Miron
- *SAS System for Elementary Statistical Analysis* by Sandra D. Schlotzhauer and Ramon C. Littell
- *SAS System for Forecasting Time Series, 1986 Edition* by John C. Brocklebank and David A. Dickey
- *SAS System for Linear Models, Third Edition* by Rudolf J. Freund, Ramon C. Littell, and Philip C. Spector
- *SAS System for Regression, Second Edition* by Rudolf J. Freund and Ramon C. Littell
- *SAS System for Statistical Graphics, First Edition* by Michael Friendly

Titles for 1993 include

- *SAS Road Maps* by Laurie Burch and SherriJoyce King
- *SQL Examples Guide* by Kirk Lafler

This year, at SUGI 18, the Books by Users program will hold a BBU Book Fair, where authors will be available to autograph and discuss their books. In addition, BBU authors will be wearing buttons that identify them as part of the program. Stop by to see them.

If you are interested in writing a book about the SAS System, call or write David Baggett at SAS Institute, or look for him at the BBU Book Fair or in the Publications Booth here at SUGI.

New Technologies

As we try to anticipate how future developments in hardware and software will affect documentation, we see two major areas of growth:

- online documentation
- custom publishing.

Online documentation will give users the option of accessing information about SAS software products from their terminals or workstations. Custom publishing will enable groups of users to design their own books based on documentation topics available from SAS Institute.

Online Documentation

Many of you are aware of the viewer for online changes and enhancements the Publications Division is currently demoing at SUGI. This is only the beginning. SAS Institute is committed to providing online reference documentation for all SAS products, effective with Version 7 of SAS software.

What Are Our Plans?

Our commitment to online documentation for Version 7 is for all reference information for all host operating systems. For Version 7, we will maintain the "book" structure of reference material that we put online. The online reference library and the hardcopy library will match. Although you will be able to access specific topics in different ways, online topics will have the same order and organization as topics in the hardcopy library, with no topics deleted or substituted.

Note that we will continue to print and publish a limited number of hardcopy books for those of you who prefer to use hardcopies.

We will deliver the online reference material in the form of a reference library accessed and managed through a SAS application. There will be hypertext linking, both within and among books in the online library. The application (the software and the library) will be packaged separately. We are exploring a variety of media for delivering the online documentation, particularly CD-ROM. Sites whose operating systems do not support CD-ROM may receive the documentation on tape, for example. We will be polling individual sites to find out your preferred delivery methods.

How Will Online Documentation Benefit You?

With online documentation, many of you will ultimately have fewer books on your shelves without having to sacrifice the thoroughness you expect from our documentation. Numerous books from SAS Institute's library could fit on one compact disc. Compare one compact disc to the 106 pounds of books you received in the past as your startup package.

And, for those of you who've had to share relatively few copies of a book with many other people at your site, online delivery should accord you greater access to the documentation, especially as the prices for CD readers continue to fall.

Online documentation has built-in flexibility. You can access the information you need quickly and in a variety of ways (for example, through the online index, through the online table of contents, and with FIND commands). Once you've located the information, you can browse it and print portions of it if you want it in hardcopy. Online delivery will enhance the access within the documentation set. You can filter, or subset, the information, and you can use a bookmark to mark your place. Since books will be online, hypertext linking can connect you quickly to information within a "book" or across multiple "volumes."

Finally, we will provide a mechanism for you to customize your online reference library. We will deliver online documentation with a note facility, thus allowing you to add your own notes, such as site-specific information.

Why Are We Developing an Online Documentation System?

We share your concerns about how to use the large amount of information about the SAS System effectively. With online documentation, SAS Institute intends to help you cope with that large amount of information by

- reducing the number of reference books you must use
- improving your overall access to documentation about the SAS System
- giving you fast access to specific information within a "document"
- offering you the most up-to-date ways of using information about the SAS System.

How Did This Effort Begin?

Research and development to support online technology has been underway for several years. During that time, the Institute has been developing and testing

- an authoring tool
- a document viewer
- a software application that supports the authoring and viewing facilities.

These applications take advantage of new features offered by SAS/PUBLISH™ and SAS/AF software. For several years, the Institute has been developing and testing SAS/PUBLISH software, a publishing system that you can use to build simple or complex documents. With SAS/PUBLISH software, you can produce documents that include graphs and output from SAS products and data from external files. You can also create templates that control the appearance of your document. SAS/PUBLISH software also provides viewing capabilities.

In addition, for the past year, we have been developing and testing the online viewer, which is a SAS/AF application that uses components of SAS/PUBLISH software. This application enables you to browse modular units of information online. The size and content vary by topic; there is no maximum or minimum length. The units of information have been created by an authoring tool and have been stored as catalog entries.

Using the online viewing facility, you can browse a document (some combination of units of information), browse a subset, and print the entire document or a subset. You can choose a subset of topics (create a filter) by selecting values from the following variables: FEATURE, PRODUCT, HOST, RELEASE, and KEYWORD. You can also save filters (specific views of the information) between sessions. This facility also tracks the topics that you have browsed and stores this information in a history window for your viewing.

What Is the Plan of Action for the Online Reference Library?

Our goal for Version 7 is to produce a viewing application that builds on the functionality of the current viewer, using the comments you provide us at this SUGI conference and later to add the functionality you want.

We will continue to document features of the SAS System thoroughly and accurately. However, we intend to produce documentation that is more modular because we expect you to search, find, and browse "chunks" of information as you need it rather than expecting you to read sequentially. Since you will be browsing, and printing, from an online medium, you can also expect to see online features that make it easy for you to navigate the information.

We're actively planning for the online reference documentation now, and many decisions have not yet been made. Here are some questions for which we do not have answers.

- Will users access information from CD ROM readers or will they access information from disk?
- How will the pricing of online documentation be determined?
- How often will documentation updates be issued?

Although we don't have all the answers about online documentation, we believe online documentation may be the answer for many of you. We want your input. Please see the demo of the online viewer at SUGI, and stop by the Publications Booth to talk with us about what you want. Sign up for the database of users who are interested in providing input on our online documentation plans and who want to serve as test sites for test releases. We welcome your opinions now and in the months to come. You can call or write us in Cary, North Carolina, at any time.

Custom Publishing

Custom publishing is the ability to produce books based on the individualized needs of users.

With custom publishing in place, SAS Institute would be able to accept requests from users to bring together in one book information from various sources. The information could cross SAS software product lines and perhaps include source material provided by the user.

Although custom publishing of SAS documentation is not currently available, we will be able to offer this service in the future by bringing together the following technologies:

- on-demand printing capabilities
- a database of SAS documentation topics
- SAS/PUBLISH software.

Once custom publishing is available, users will be able to request books that meet the needs of specialized audiences. For example, with custom publishing, we could accept a request from a university professor to publish a book specifically designed for MBA candidates who are learning about methods for accessing and manipulating time series data.

The professor could select entries from a SAS topics database in order to build a table of contents. The contents of the book could include reference and usage information from existing SAS documentation of base SAS software, SAS/ETS® software, SAS/STAT® software, and SAS/GRAPH software, for example.

In addition, the contents of the book could include information supplied by the professor such as examples or exercises if the information were formatted using SAS/PUBLISH software.

All the information would be formatted and published as a complete volume with its own table of contents and comprehensive index. The book could be redesigned and re-published from year to year or even from one semester to another to match any changes in the class syllabus.

Currently, many questions remain about custom publishing. For example, in the "Custom Published Book Survey" completed last year, the Publications Division asked university professors about their experiences and preferences with custom publishing. Here are some of the questions we asked:

- "What is the smallest subdivision of material you would use?"
- "What would be the most convenient way to view topics?"
- "How long would you expect to wait for a custom published book?"
- "What is the maximum price you would expect your students to pay?"

We still need your input about custom publishing. As this exciting

venture develops during the coming months, we will continue to ask questions about how to best serve you. Please feel free to share any ideas with us.

CONCLUSION

The SAS System is used by more than three million people at thousands of organizations in 120 countries. Still, we at the Institute listen to individual users like you. Many ideas come directly from one-on-one conversations with users at SUGI and at other times during the year.

You can continue to share your ideas with us by

- participating in Birds of a Feather sessions at SUGI
- responding to the SASware Ballot®
- participating in SAS user groups*
- contacting Book Sales and Marketing, Software Sales and Marketing, and the Technical Support Divisions
- writing "Your Turn" response letters.

In Publications, we have heard and are responding to your concerns about SAS documentation. While we continue to provide comprehensive documentation of the SAS System, we also are looking for ways to help you avoid that achy breaky back.

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