ABSTRACT
Every SAS programmer started her/his career reading thousands of lines from SAS documentation. But even if these documents are very well done, they explain "only" how to use a PROC.

If you have a specific business problem, you may have to choose between different procedures with their advantages and their disadvantages (e.g. should I use PROC PRINT or PROC REPORT?).

Depending the complexity of the task, you may also have questions on the durability of the solution you have chosen (e.g. should I start using ODS TAGSET or not?).

After day and days of work, your final question may be: am I the only trying to do this task using this procedure (e.g. predict the winner of the World Cup using PROC FORECAST)?

This presentation will make a non-exhaustive list of the different media (websites, mail lists, news groups, events, etc.) where you may find information, presentations, tips & tricks and sometimes friends. At the end, you will have in your hands a way to find an answer to every question you have about ………SAS

INTRODUCTION
In every company using SAS for more than 5 years, you will find, in a dark corner, a dusty cabinet containing some old SAS v6 paper documentation. For years, these books have been like a bible for many of us: the only source of knowledge.!! Thanks to the internet, having these books constantly on your desk is no longer required.

However the Internet has not changed the fact that find the information you want is not so easy. It may be harder than ever as SAS has become a complete Business Intelligence tool providing hundreds of PROCs, options and add-on.

Due to these increasing capabilities, you have now several ways to perform the same task. The documentation will give some information about how to use PROC XXXX but not necessarily when to use it.

This presentation will make a non-exhaustive list of the different media (websites, mail lists, news groups, events, etc.) where you may find information, presentations, tips & tricks and sometimes friends. At the end, you will have in your hands a way to find an answer to every question you have about SAS

SAS ONLINE DOC
Since version 8, SAS provides Online Documentation.

In version 8, this tool covers all 8.0 functionalities and some from 8.1. SAS has since released a What’s new 8.1 and What’s new 8.2 which are separate documents.

So be careful because if you want information about RTF, you will have to search in all them.

With SAS 9, SAS updates the full documentation at each release.

The documentation is organized by modules and provides a search tool.
Most companies have installed these documentations on their intranet. If not or if you are away from your office, you can find them on the internet following these links:

- **SAS 8**  
  [http://v8doc.sas.com/sashtml/](http://v8doc.sas.com/sashtml/)
- **SAS9**  
  [http://support.sas.com/ondlinedoc/913/docMainpage.jsp](http://support.sas.com/ondlinedoc/913/docMainpage.jsp)

**HOW TO KNOW IF YOU DO HAVE THE NEEDED MODULE**

Sometimes looking for how to perform a specific task, you will find what seems to be the perfect PROC. However this PROC could be attached to a specific module of SAS you may have …or not. To check which modules are available you may use the following syntax:

```
  Program Editot Log
  001  proc setinit;
  002  run;
```

Original site validation data  
Site name: ‘MY SAS’.  
Site number: 007.  
Grace Period: 62 days (ending 10SEP2007).  
Warning Period: 31 days (ending 03OCT2007).  
System birthday: 10JUL1998.  
Operating System: MY PC.  
Product expiration dates:
  ----Base Product 10JUL2007  
  ----SAS/STAT 10JUL2007  
  ----SAS/GRAPH 10JUL2007  
  ----SAS/CONNECT 10JUL2007

**IF THERE IS AN OPTION THEN THERE IS A GOOD REASON TO USE IT**

Sometimes reading the documentation, you may think : “What the hell are all these options used for”. Most of time default settings work very well. Sometimes they don’t. And as a SAS guru once said “If there is an option then there is a good reason to use it”.

You may find thousands of SAS presentations (we will see in a few lines where to find them) about programmers holy crusade for finding the right option. If you want a good example please have a look at the author’s last year conference presentation “You don’t need second sight to use the LIBNAME ORACLE”. In this presentation you will find good examples about how an option can change WHERE CLAUSE behavior and how this can seriously affect your results.

**SAS DOCUMENTATION AND INFORMATION PROVIDED BY SAS INSTITUTE ON THE WEB**

Of course the SAS Institute provides lot of information on their worldwide website. The entrance for technical information is the Customer Support center [http://support.sas.com/](http://support.sas.com/).

We have already seen that you can find SAS documentation but through this portal will find “full” access to SAS Notes and issues, FAQ, Publication, Communities, White Papers, etc.

We would need hours to review them all so this paper will only focus on two of them. But you should definitely take some time to explore it and maybe find the gold nugget you are looking for!
TECHNICAL SUPPORT RESOURCES

The Technical Support Resources (http://support.sas.com/techsup/intro.html) provide you the opportunity to search SAS in-house issues database.

You will have access to most of the issues sent by user all around the world. Using this site, you may save the time of a call to SAS support.

However you should choose carefully the keywords to define your search. As example, just enter “ODS RTF” and you will receive more than 1500 results. Do not hesitate to use the Advance Search tool to define more precise queries.

If applicable, provide the error code or the error/warning message provided by your SAS session.

You may found the answer you are looking for or not. Sometimes you will also find what can be the most frustrating answers : “fixed in the next version”.

SAS COMMUNITIES

To my opinion the SAS communities (http://support.sas.com/rnd/intro.html) is the most interesting site provided.

It will give you information about how to implement SAS tools in various domains but also about what is going to be implemented in a near future.

Some of us have discovered ODS XML & TAGSETS or new ODS RTF options months before their release, preventing us from spending hours developing the same thing.

Sometimes some of these tools can be downloaded and used on your current version of SAS. Most of the time these are experimental features, so be careful.

The SAS Base community is one of the most interesting one as it is discussed about the “central engine” of SAS. But statisticians may found some new statistics PROC in the Statistics and Operations Research Community and SAS/Graph addicts must absolutely have a look to the Data Visualization Community to know how to create living graphs with the hottest new device.

You should also be aware that each local branch of SAS has its own website where you can find some exclusive FAQs or documents in your native language which can help you. So have a look

SAS DOCUMENTATION AND INFORMATION PROVIDED BY FRIENDLY SAS USERS

SAS Institute claims than more than 40000 sites are using SAS worldwide. That means a lot of users. Some of them, unhappy of the level information they found in the documentation and who wanted to share and exchange about their experiences, have started some in-house user groups which became local users groups which became national, international or industry user groups.
SAS WORLDWIDE EVENTS
Most famous ones are SAS Global Forum (former SUGI) and SAS Forum International (former SEUGI). These events, owned by SAS Institute, are the good place to be if you want to have a living overview of what SAS offers even if sometime these events are too much marketing oriented.

However SUGI presentations are always very interesting especially those which are run for several years giving you the opportunity to follow the progress on the author on a specific topic. One of the best examples is maybe Vincent Del Gobbo’s presentations about the creation of Excel spreadsheet from SAS. For more than 3 years, through his SUGI presentations, Vincent have allowing us to produce ready to use excel files.

More information about these 2 events and proceedings of previous conferences can be found at the following addresses:

http://support.sas.com/events/sasglobalforum/index.html
http://support.sas.com/events/sasforuminternational2006/home.html

PHARMASUG & PHUSE
PharmaSUG and PhUSE (Pharmaceuticla Users Software Exchange) are the two mains conferences dedicated to SAS in Pharmaceutical Industry. Both held respectively in US and in Europe.

http://www.pharmasug.org
http://phuse.info/

More than 200 presentations are made every year on various subjects such as Data Management, Statistics, Development but also about Career Development or Regulatory.

Proceedings of these conferences are available on Lex Jansen’s website (http://lexjansen.com) with also SUGI and NESUG proceedings.

OTHERS LOCAL GROUPS
Others local groups are really active and propose annual or half-yearly events with proceedings available on-line. You can found their details at the following address http://support.sas.com/usergroups/ww.html or at your SAS local branch website. And if you do not find one in you area, then create it. The author and the PhUSE committee will be pleased to help you.

These events are not only a source of documentation. They are places where you can discuss, share and sometimes solves some of your issues. If you want to have the better return of investment then: MAKE A PRESENTATION.

Presentations are not only long monolog about this fantastic application developed during 3 years by 30 high-ranked programmers. It can be also a few slides about how you have tried to perform a specific task, which issues you have encountered and how you have solved them. Be sure that you will find friendly people, experienced and less experienced, in the room that have the same issues than you and who will come at the end of your speech to talk about alternative solutions they have found.
THE ULTIMATE TOOL TO SOLVE YOUR PROBLEM: THE SAS-L LIST

Once again thanks to the Internet, you do not have to wait for the next year conference for sharing SAS issues with other programmers. It can be done through the SAS-L list.

The SAS-L list is a free mail where you can submit your issue. SAS programmers from all around the world will answer you.

You can subscribe using the following link:  
http://listserv.uga.edu/archives/sas-l.html

The list is mainly focused on SAS\Base and SAS\Graph but you may find tips and tricks on other modules.

Do not hesitate to explore the archives before send a request. Here a few rules that you may follow if you want to have answers:

- do not ask generic question (eg: how to use ODS RTF)
- provide the codes you are working on
- if possible and relevant, provide an example of data you are working on
- from time to time, answer other people’s questions if you can

CONCLUSION

These links, I do hope, will help you to find some answers to your questions. I am quite sure that I have missed some very complete and interesting websites. If you found one, please, let me know and let know others around you.

With the increasing development of instant communication technologies (such as BLOG, WIKI, etc.), it is easy very to share this knowledge about SAS. So please, when you have more experience, try to remember your early days as a SAS programmer and how happy you were to find someone to help you. Join an existing users group, mail list or create your own media to communicate. The Knowledge has a value only if it is shared with others.

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