

Setting Up Project-Specific SAS/Windows® Environments

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Abstract

Most users modify the autoexec.sas file in their 'My SAS Files' directory and this suits them just fine. For awhile. As a SAS® user, chances are your employer will begin assigning you multiple projects simultaneously. If the source data for your projects are in different directories, different formats, or even different servers with different authorizations, it could soon become quite confusing as to what is where. Setting up a different SAS/Windows environment for each project may be the answer.

Introduction

In addition to the AUTOEXEC.SAS file most SAS users are familiar with, there is another environment configuration file that is executed only when a new SAS session is started—SASV9.CFG. Unlike AUTOEXEC.SAS, however, it initializes some environment variables and options that can be set **only** at session start-up. These are the variables and options that govern your SAS/Windows GUI interface. The presence of SASV9.CFG is so important for the proper running of SAS/Windows that most users are not allowed to modify it. You can, however, modify your own copy which you previously saved in one of your project directories. It is the settings and values assigned in your version of SASV9.CFG that allow you to customize your environment.

Not a New Topic

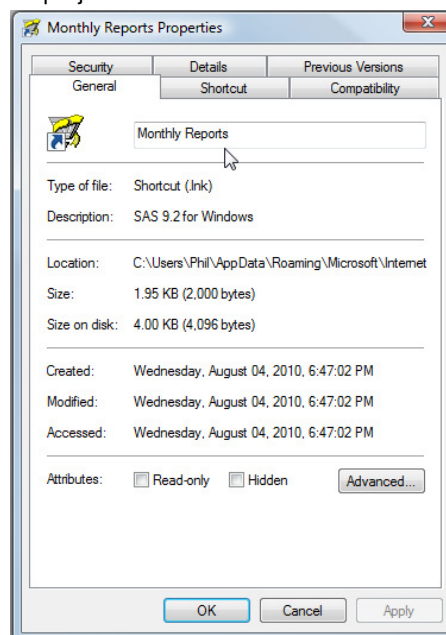
Quite a few people have written and presented on the topic of the SAS/Windows environment previously. And, quite frankly, they have written and presented many of the same items I had planned on writing and presenting.. As 'I do not want to do what has already been done' (and really should not), I will try to liberally site what others have done and try to build upon it.

The SASV9.CFG File

As stated in the introduction, the SASV9.CFG file is what governs the information presented to the SAS user through the SAS/Windows interface. Wei Cheng's SUGI 28 paper, [Build a SAS Development Environment under Windows](#), is an excellent initial resource. The paper clearly illustrates how to setup a customized shortcut and describes the variables and settings a SAS user can specify in the *Target* string to customize their environment. Perhaps the most important of these settings is '-config' as it is the quoted drive, path, and 'SASV9.CFG' that needs to specify the user's edited copy of the file. Another important setting is '-AWSTITLE'. This setting is used to specify the title string displayed in the SAS/Windows' application frame. The generic display on my version of SAS/Windows is merely 'SAS'. Using something along the lines of '-AWSTITLE "Alpha Project Environment"' would certainly remove any doubt of what a user was working on before lunch. The '-SASINITIALFOLDER' is great for making sure the default folder for a user's SAS session is also the default folder for a user's project.

What I most wanted to build on to this paper is to make sure the *name* of the shortcut quickly and easily identifies which project a user will be set up for when that shortcut is used to start a SAS session: especially when there can be a half-dozen or more from which to choose.

The name of the shortcut is on the 'General' tab of the shortcut's 'Properties' dialog box.



SASV9.CFG Details

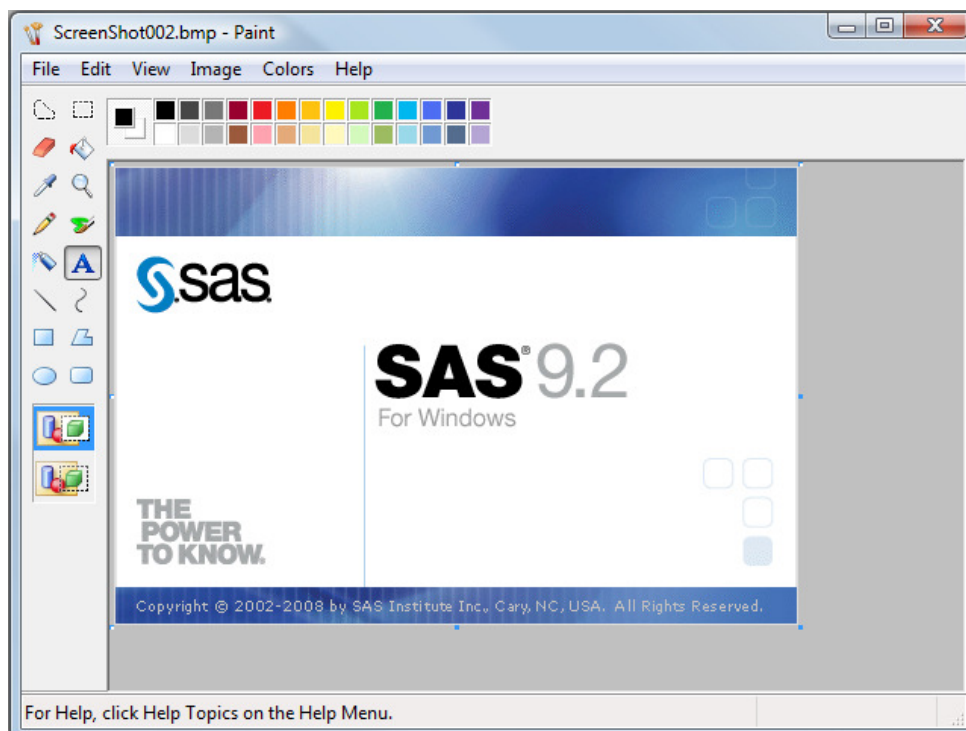
George J. Hurley's SAS Global Forum 2007 paper, [Customizing Your SAS Initialization](#), is a great overview of what a user is able to do when customizing an environment.

The paper mentions '-NOSPLASH' to suppress the display of SAS' splash screen. For me, however, having a customized splash screen is a great double-check that you are working in the desired custom environment. Splash screens are, fortunately, quite easy to make—all you really need is a screen-capture utility and an image-editor utility; there are quite a few good shareware versions of screen-capture utilities available on the internet, and an image editor comes with every version of Windows®.

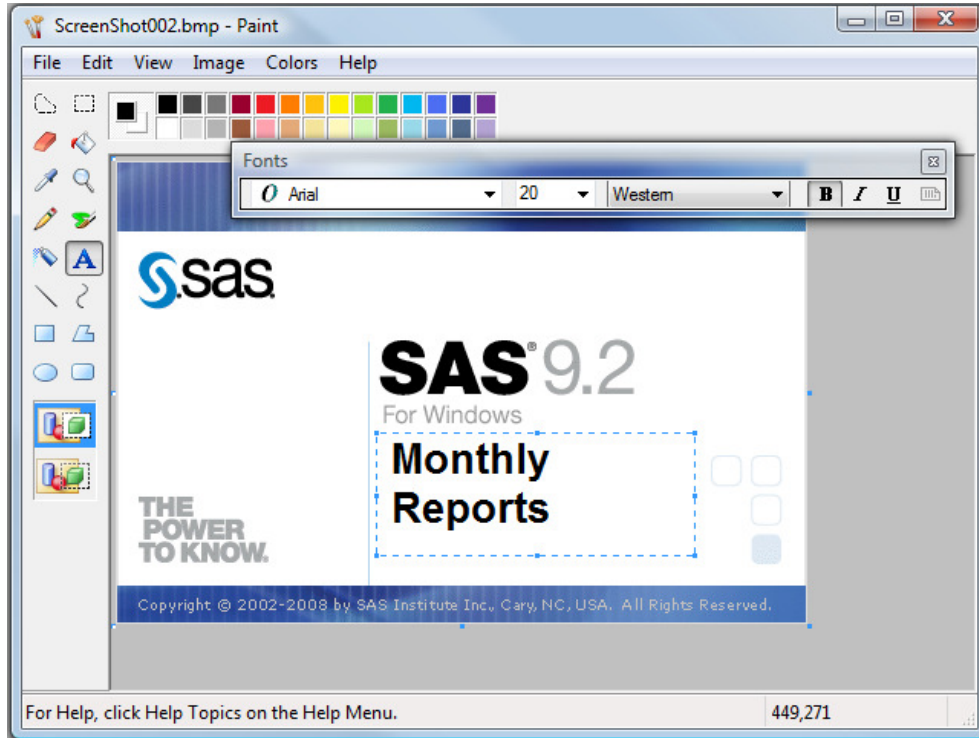
Once you have a screen capture utility installed, go ahead and start a SAS session and capture SAS' splash screen:



Once captured the splash screen image can be imported into any handy image application. I do not do any image development, so Paint is all I really need:



I use a text box to add my project name to the splash screen image:...



...and save it as a .bmp file in one of my project directories. Once saved, I specify it as my project's splash screen with the `-splashloc` environment option in the custom SASV9.CFG file. When I use the customized shortcut, The splash screen looks like this:



SASV9.CFG Usage

Peter Crawford's SAS Global Forum 2007 paper, [EASY SAS Customisation](#), is also an excellent place to start looking at what exactly can be done with not only the SASV9.CFG file but also with Windows environment variables.

Clark Thatcher's SAS Global Forum 2010 paper, [Make Your SAS Code Environmentally Aware](#), also demonstrates integrating SAS with the local environment through both environment variables and code.

The options I wish to bring up here are quite simple but, when used together, provide some extremely useful output: -ALTLOG and -ALTPRINT. When both specify the same output file and the listing destination stays on (ODS stuff readily found elsewhere) the output file documents exactly when, how, and what information was generated. The output is rather raw as far as formatting goes, but as documentation for the processing session it is hard to beat, especially given how little it takes:

Environment options set in custom version of SASV9.CFG:

```
-ALTLOG "C:\My Project Directory\My Session Logs\session_yymmddtt.log"
-ALTPRINT "C:\My Project Directory\My Session Logs\session_yymmddtt.log"
```

Submitting the following code:

```
proc contents
  data = sashelp.class
  varnum
;
run ;

proc means
  data = sashelp.class
;
var
  _NUMERIC_
;
run ;
```

Generates:

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NOTE: SAS (r) Proprietary Software 9.2 (TS2M0)

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NOTE: This session is executing on the W32_VSPRO platform.

NOTE: SAS initialization used:

```
real time      3.66 seconds
cpu time       2.19 seconds
```

```
1  proc contents
2    data = sashelp.class
3    varnum
4    ;
5  run ;
```

The SAS System

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The CONTENTS Procedure

| Data Set Name | SASHELP.CLASS | Observations | 19 |
|---------------|---------------|--------------|----|
| Member Type | DATA | Variables | 5 |

```

Engine          V9
Created         Monday, December 22, 2008 01:44:42 PM
Last Modified   Monday, December 22, 2008 01:44:42 PM
Protection
Data Set Type
Label          Student Data
Data Representation WINDOWS_32
Encoding       us-ascii  ASCII (ANSI)
Indexes        0
Observation Length 40
Deleted Observations 0
Compressed     NO
Sorted        NO

```

Engine/Host Dependent Information

```

Data Set Page Size      4096
Number of Data Set Pages 1
First Data Page        1
Max Obs per Page       101
Obs in First Data Page 19
Number of Data Set Repairs 0
Filename               C:\Program
                      Files\SAS\SASFoundation\9.2(32-bit)\core\sashelp\class.sas7bdat
Release Created        9.0202M0
Host Created           XP_PRO

```

Variables in Creation Order

| # | Variable | Type | Len |
|---|----------|------|-----|
| 1 | Name | Char | 8 |
| 2 | Sex | Char | 1 |
| 3 | Age | Num | 8 |
| 4 | Height | Num | 8 |
| 5 | Weight | Num | 8 |

NOTE: PROCEDURE CONTENTS used (Total process time):

```

real time      0.92 seconds
cpu time       0.17 seconds

```

```

6
7  proc means
8    data = sashelp.class
9  ;
10 var
11   _NUMERIC_
12 ;
13 run ;

```

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The MEANS Procedure

| Variable | N | Mean | Std Dev | Minimum | Maximum |
|----------|----|-------------|------------|------------|-------------|
| Age | 19 | 13.3157895 | 1.4926722 | 11.0000000 | 16.0000000 |
| Height | 19 | 62.3368421 | 5.1270752 | 51.3000000 | 72.0000000 |
| Weight | 19 | 100.0263158 | 22.7739335 | 50.5000000 | 150.0000000 |

NOTE: There were 19 observations read from the data set SASHELP.CLASS.

NOTE: PROCEDURE MEANS used (Total process time):

```

real time      0.46 seconds

```

cpu time 0.06 seconds

NOTE: SAS Institute Inc., SAS Campus Drive, Cary, NC USA 27513-2414

NOTE: The SAS System used:

real time 4:31.06
cpu time 5.66 seconds

As I said, not the best looking output, but I never mistake what code in the log window generated which information in the output window.

Conclusion

Hopefully this has been a good overview of how easy yet effective and useful creating a custom environment can be. I had hoped to communicate more ideas, but others beat me to it, but it's all good. When all of these ideas and approaches are merged, the sum of the whole can definitely be greater than the sum of the parts. And we have not even looked at what could be done in a shared environment! (do I hear sequel?)

Acknowledgements

I would like to thank Debra Kloska at the Institute for Social Research for asking how she could get both the log and listing output in one file. I knew -ALTLOG and -ALTPRINT were out there. The fact they are for use in SASV9.CFG led me to exploring what else in the SAS/Windows environment could be customized. I have been exploring ever since.

References

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