

You Want that Program to Run on the PC in New
Jersey and the Unix in Basel, without Modification??
Paper TT06

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While you are waiting, some trivia
The world's first stamp issued was the British
Penny Black on Wednesday 6th May 1840.

Introduction

- "That program you wrote for New York last week, can you make it run on the system in Basel? And by the way, New Jersey were impressed with it and wondered if you could adapt it to go on their system -- remember they are still on 8.2."
- It would be easy to take the original version made for New York and adapt it for each site, ending up with three different versions.
- But what if we could just adapt the one version for use on all three sites?

Our Program

```
01 data River_US (label='Rivers in US >1000 miles in Length');
02   attrib name length=$40 label='River Name'
03     distance length=8 label='Distance (miles)';
04   length name $40 distance 8; input Name $ & distance @@;
05 cards;
06 Mississippi 2340 Columbia 1240 Colorado 1450
07 St. Lawrence 1900 Colorado 1450 Missouri 2540 Ohio 1310
08 Rio Grande 1900 Brazos 1280 Snake 1040 Atchafalaya 1420
09 Yukon 1980 Red 1290 Arkansas 1460
10 ;
11 libname derived "E:\TAUI\DERIVED";
12 ** Remove Duplicates and put in dataset _DUPRECS;
13 proc sort data=River_US out=derived.River_US
14     noduprec dupout=_duprecs;
15   by descending distance;
16 ** Output Listings;
17 title1 "Duplicate Recs Found and Removed in RIVER_US Data";
18 proc print data=_DUPRECS label;
19   var name distance; format distance comma8.; run;
20 title1 "Longest Rivers in US Over 1,000 miles, By Distance";
21 proc print data=derived.River_US label;
22   var name distance; format distance comma8.; run;
```

Getting at What SAS knows ...

- Find out what the operating system is
- SAS version being run in that environment
- SAS already knows quite a bit about your operating environment during SAS initialization
- Some of this information can be located in the SAS View VMACRO that can be found in the SAS Help library
- These macro variables are automatically set up during SAS initialization and cannot be changed by the users
- For the purposes of this paper the four macro variables will be looked at are:
 - SYSSCP
 - SYSSCPL
 - SYSSITE
 - SYSVER

SYSSCP(L), SYSSITE and SYSVER

- The SYSSCP and SYSSCPL are linked and contain an identifier for your operating environment.
- For UNIX and Windows:

Platform	SYSSCP Value	SYSSCPL Value
R64 or AIX64 or AIX on POWER	AIX 64	AIX
Windows XP Pro	WIN	XP_PRO

- Refer to the SAS documentation for a more detailed list of SYSSCP and SYSSCPL values based on SAS version and Operating System
- SYSSITE is the value that SAS has assigned to your site license
- SYSVER is the SAS version of the SAS software that you are running on your site

LIBNAME

- Is dependent on operating system and on SAS site requirements – directory structure is dependent on SAS site
- In our example New York has the directory "E:\TAUI\DERIVED" while Basel has the structure "//CharingCross/Production/Projects/Tau/Derived". New Jersey uses the same directory as New York.

```
%if &syssite=9999US %then %do;  
  libname derived "E:\TAUI\DERIVED";  
%end;  
%else %if &syssite=9999EU %then %do;  
  libname derived  
    "//CharingCross/Production/Projects/Tau/Derived";  
%end;  
%else %do;  
  %put %str(ERR) OR: SYSSITE &syssite is not recognized.;  
  %put Consult your site administrator for assistance.;  
  %put Program will now terminate.;  
  endsas;  
  run;  
%end;
```

- If the SYSSITE value is not recognized then the program will put a message to the SAS LOG and terminate -- makes the code very site specific.

SORT PROCEDURE

- The DUPOUT option in the SORT procedure -- this was not available until SAS version 9.1 but New Jersey is running SAS version 8.2.
- The SYSVER option is useful for this situation

```
** Remove Duplicates and put in dataset _DUPRECS;
%if (&sysver >= 9.1) %then %do;
  ** If SAS version 9.1 or higher;
  proc sort data=River_US out=derived.River_US
    noduprec dupout=_duprecs; by descending distance;
  run;
%end;
%else %do;
  ** If SAS version before 9.1;
  proc sort data=River_US;
    by descending distance name;
  data derived.River_US _duprecs;
    by descending distance name;
    if first.name then output derived.River_US;
    else output _duprecs;
  run;
%end;
```

If UNIX, use SORT options

- To finish off the code we have to cater for the case where if the operating system was Unix based then any sorting of data was to use the host sort when the size of the dataset was greater than 50M
- Use the SYSSCPL global macro variable – can also use SYSSCP

```
%if &sysscpl=AIX %then %do;  
  options sortpgm=host sortcut=50M;  
%end;
```

Conclusion

- A brief introduction to four SAS automatic variables resulted in the original program created for New York being able to be adapted for use on all three sites without having three separate programs being written.
- It is also possible to use these same techniques shown here when using two or more operating environments and/or SAS versions within the one site, or when upgrading from one SAS version to another.

Questions and Contact Information

Questions?

Contact Information

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