

A SAS NEWS FACILITY

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ABSTRACT

A SAS news facility has been implemented which enables SAS consultants to impart information to users in a timely fashion. Users can retrieve any information file, or script, with a simple SAS procedure or any utility, program, or command capable of listing a source partitioned data set member. For retrieval with SAS, a replacement for the default NEWS module and a SAS procedure have been written.

Scripts are easily maintained as members of a single source partitioned data set with standard system utilities and editors. Maintenance activities only involve the scripts and no modifications to programs are necessary. Scripts may be maintained concurrently with production processing activity in a large user environment. Scripts are assigned names suggestive of their content. An INDEX script lists individual scripts and other indices, and serves as the default script for the SAS procedure.

This facility is easy to install, maintain, and use, and permits efficient access to scripts from a variety of environments. The SAS procedure can be installed with minor modification to support Help, Sample, or Usage Notes libraries. Program listings and installation procedures are available upon request.

INTRODUCTION

The need for a consultant-to-user communication system is widely recognized. Earl Nall, SAS Technical Report G102, amply described the common problems of disseminating timely information to the SAS user. Information such as local JCL, available documentation, known system problems, and available local SAS education should all be readily available to the SAS user. In a large, varied user environment such as academia, the turnover of active users is large. While static information such as local job control language and available documentation can be effectively provided by way of mimeographed handouts, dynamic information is most effectively communicated in an on-line manner. Nall's system utilizes a single sequential information file and a re-linkable on-line message module. Although this can be effective in many environments, we have found that in a 24 hour academic

environment with a large amount of on-line information, an alternative solution is better suited. This paper describes that solution and demonstrates the increased ease and efficiency of our SAS news facility.

BACKGROUND

Having installed Nall's system, several inherent problems as well as additional needs for an academic environment were recognized. The use of a sequential data set for the information file results in thick and cumbersome output. Most novice users would not take the time to absorb such output and experienced users may find most of it redundant. Paying customers do not wish to pay for all the output and therefore would not utilize the facility. When viewing output on a VDT, scrolling or paging becomes a problem for large volumes of information. XON/XOFF protocol may not be supported to control this problem.

Due to the dynamic nature of the information, the user may wish to retrieve the information files frequently. Redundant information will be useless. Therefore, selective retrieval of pieces of the information file would be advantageous. For these considerations a partitioned data set (PDS) would be most useful. By maintaining separate topics in each member of a PDS, the user can retrieve the information file of choice without having to list information he has seen before.

In the 24 hour user environment, continued availability of the production library is most important. To change the SAS prologue Notes (controlled by the SASNEWS module) normally requires a recoding of the routine and invocation of the Assembler and linkage editor. In our environment this is not acceptable. There is not a good time to perform system maintenance of this nature. Having the Notes exist as another information file is advantageous. In this way changes may be made without impacting the production library.

OVERVIEW

Major advantages of our SAS news facility include ease and flexibility in maintaining and accessing information files. No modification of the load modules is necessary since they merely read and write PDS members (both Notes and news

files) to the output file. The information scripts reside in a separate library as members of a partitioned data set. This PDS can be maintained by the SAS installation representative with any software capable of updating and creating PDS members. Our use of the SPF editor permits concurrent maintenance with user production processing.

Given that the information and note scripts are maintained in a source level PDS, they may be accessed by the user in any environment capable of processing a PDS. The most commonly used method is via SAS, either batch or TSO processing, with a simple user-written SAS procedure. In TSO the member can be listed via the edit command. In the batch mode any of the system print utilities or a user program could be utilized. Most of our interactive educational processing is done under CALL-MVS where a simple LOAD and LIST is effective.

Default prologue Note scripts can differ depending upon environment. A data definition statement and the SAS procedure and ALLOC command in the SAS CLIST specify the member or members to be printed at initialization with the NEWS option in effect. Our batch implementation specifies three scripts to be printed as part of the prologue Notes on the SAS log: BATCH, FLASH, and INDEX. This is accomplished by concatenating them in the NEWS DD statement of the system procedure. The script known as BATCH consists of three lines describing general usage of the News facility. The script FLASH is maintained as a quick one or two line announcement of such things as time of last update, new scripts, or other messages of immediate importance. The third and last script printed as a part of the prologue Note is one entitled INDEX. This consists of a listing of available informational scripts, date of last update, and general contents. (See Appendix A for a sample output.)

Our TSO implementation specifies another set of scripts for default prologue Notes. A script called TSO is an abbreviated form of the BATCH usage note describing the use of PROC NEWS. FLASH remains the same. The INDEX is not printed with SAS under TSO. In the interactive environment the number of printed lines should be kept to a minimum. The NONews option can always be invoked for those wishing to see none of this facility.

With the simple invocation of PROC NEWS, the script INDEX serves as the default file to be printed on the output. Although our INDEX file only specifies information files, it could specify other

index scripts to succinctly describe a large set of related information scripts. Since the partitioned data set containing the information files is the heart of the News facility, great care must be taken to set up and maintain its structure. We will not attempt to expound upon the contents of the PDS since every local SAS consultant can envision the types of information necessary to impart at his or her installation.

INSTALLATION

Installation of the News facility is as simple as the maintenance. To simplify maintenance of the SAS library, we created a separate library of user-written SAS procedures and graphics drivers. This library is concatenated ahead of the main SAS library on the STEPLIB DD statement. In this manner, installation of a new release of SAS is simplified by not having to identify local modules. Likewise, any maintenance of this local library does not affect the mainstream SAS library.

Three load modules make up our SAS News facility. The module NEWS is a simple parsing module for PROC NEWS. It defines one parameter for the PROC statement: FILE=. NEWS2 is a mixed FORTRAN and Assembler program which processes the news scripts. It establishes the SAS environment, finds the print unit, and traps any abnormal ending caused by a bad member name. The module SASNEWS is an Assembler routine which processes the SAS prologue notes.

In a separate source level PDS reside the news scripts with member names suggestive of their contents. This data set is referenced on a statement of the name NEWS in the SAS PROC and CLIST. These statements also specify the default news member(s).

DISCUSSION

Having met our objectives for a useful communication system, we turned to the user for constructive feedback. The major complaint revolved around the INDEX being printed by default on the SAS log. In the beginning the index was small and unobtrusive. As the volume of information grows, so does the index. The users circumvent this problem with the NONews option, bringing us back to the problem of how to reach the user with timely information. The answer may be to take away the INDEX as a default Note script, limiting the prologue Notes to just a few lines. Leaving the NONews option undocumented may also be effective. The INDEX script can always be obtained with just a simple invocation of PROC NEWS.

Since the source level PDS is the heart of the system, there is no limit to the expandability of this facility. With little imagination, the SAS Sample library and the Usage Notes could be incorporated as source text. This addition may necessitate sub-indices to adequately describe the available information.

In conclusion, this SAS News facility as implemented at the University of Rhode Island, is quite easy to install, maintain, and use and may be accessed from a variety of environments. With this system we can provide up-to-date information needed by the concerned SAS user.

For further information, source code listings, or installation instructions contact:

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APPENDIX A

The following sample output demonstrates the default Note scripts and the usage of PROC NEWS :

```

          S T A T I S T I C A L   A N A L Y S I S   S Y S T E M
                    10:18 TUESDAY, DECEMBER 14, 1982
NOTE: THE JOB LCO104A HAS BEEN RUN UNDER RELEASE 79.6 OF SAS
      AT THE UNIVERSITY OF RHODE ISLAND (00650).
NOTE: FOR ONLINE DOCUMENTATION OF SAS79 TRY 'PROC NEWS;'  

      USAGE: PROC NEWS FILE=FILENAME; (DEFAULT FILENAME IS INDEX)
      FOR CALL USERS: LOAD DSN=UCC.LCO1.SAS.NEWS(FILENAME)
                    LIST
  
```

```

-----
FLASH
---> THE DECEMBER SAS BROWN BAG SEMINAR IS ANNOUNCED.
      A NEW FILE, 'SAMPLE', DESCRIBES SAS SAMPLE PROGRAMS.
-----
  
```

FILENAME	LAST UPDATE	GENERAL CONTENTS
*****	*****	*****
BACKUPS	02 SEP 1982	USE SAS TO MAKE SAS DATA SET BACKUPS
HANDOUTS	03 NOV 1982	A LIST OF FREE HANDOUTS AVAILABLE
INDEX	18 AUG 1982	YOU'RE LOOKING AT IT
MAILLIST	18 JUN 1982	GET ON THE SAS INSTITUTE'S MAIL LIST
MANUALS	03 NOV 1982	SAS MANUALS AND THEIR AVAILABILITY
NONNEWS	01 APR 1982	GETTING RID OF THE SAS LOG NEWS NOTE
SAMPLE	16 NOV 1982	RUNNING SAS SAMPLE PROGRAMS
SAS796	15 JUN 1982	CHANGES FOR RELEASE 79.6
SASTSO	15 JUN 1982	THE NEW TSO STATEMENT IN VERSION 796
SEMINAR	03 NOV 1982	A MONTHLY SAS SEMINAR IS SCHEDULED
TECHREP1	15 JUN 1982	LIST OF SAS TECHNICAL REPORTS
TECHREP2	15 APR 1982	MORE TECHNICAL REPORTS BY SAS
USAGE	28 SEP 1982	AVAILABILITY OF THE SAS USAGE NOTES

NOTE: SAS OPTIONS SPECIFIED ARE:
 LS=65

1 PROC NEWS FILE=MAILLIST;

NOTE: NEWS HAS NORMALLY TERMINATED.
 NOTE: THE PROCEDURE NEWS USED 0.26 SECONDS AND 192K
 AND PRINTED PAGE 1.

NOTE: SAS USED 192K MEMORY.
 NOTE: SAS INSTITUTE INC.
 SAS CIRCLE
 BOX 8000
 CARY, N.C. 27511-8000

```

          S T A T I S T I C A L   A N A L Y S I S   S Y S T E M
                    10:18 TUESDAY, DECEMBER 14, 1982
          NEWS IN FILE MAILLIST
*****
TO BE PLACED ON THE SAS INSTITUTE'S MAILING LIST SEND THE FOLLOWING
INFORMATION TO: SAS INSTITUTE, INC.
                BOX 8000
                CARY, NC, 27511-8000
  
```

```

NAME -----
AFFILIATION -----
ADDRESS -----
CITY ----- STATE ----- ZIP -----
COUNTRY ----- BUSINESS TELEPHONE -----
SITE NUMBER 0650. NEW OR UPDATE?
  
```